DEPARTMENT OF TREASURY

Office of the Comptroller of the Currency

12 CFR Parts 3, 6, 32

[Docket ID OCC-XYZ]

RIN XYZ

FEDERAL RESERVE SYSTEM

12 CFR Parts 208, 217, 225, 238, 252

[Docket No. XYZ]

RIN XYZ

FEDERAL DEPOSIT INSURANCE CORPORATION

12 CFR Part 324

RIN 3064-AF29

Regulatory Capital Rule: Category I and II Banking Organizations, Banking Organizations with Significant Trading Activity, and Optional Adoption for Other Banking Organizations

AGENCY: Office of the Comptroller of the Currency (OCC), Treasury; the Board of Governors of the Federal Reserve System (Board); and the Federal Deposit Insurance Corporation (FDIC).

ACTION: Notice of proposed rulemaking.

SUMMARY: The Office of the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, and the Federal Deposit Insurance Corporation are proposing to modernize the capital requirements applicable to Category I and II depository institution holding companies and depository institutions, as well as revise the market risk capital framework for banking organizations with significant trading activity (the proposal). The proposal would improve the regulatory capital framework for covered banking organizations by enhancing its risk sensitivity and consistency and by simplifying core components of its design. The agencies

expect the proposal would support the safety and soundness of covered banking organizations and U.S. financial stability while promoting lending and other financial intermediation activities in the banking system over a range of economic conditions.

DATES: Comments must be received by June 18, 2026.

ADDRESSES: Comments should be directed to:

***OCC*:** Commenters are encouraged to submit comments through the Federal eRulemaking Portal, if possible. Please use the title "Regulatory Capital Rule: Category I and II Banking Organizations, Banking Organizations with Significant Trading Activity, and Optional Adoption for Other Banking Organizations" to facilitate the organization and distribution of the comments and identify the number of the specific question(s) to which you are responding. You may submit comments by any of the following methods:

- *Federal eRulemaking Portal – Regulations.gov:*

Go to *https://regulations.gov/*. Enter "Docket ID OCC-2023-0008" in the Search Box and click "Search." Public comments can be submitted via the "Comment" box below the displayed document information or by clicking on the document title and then clicking the "Comment" box on the top-left side of the screen. For help with submitting effective comments, please click on "Commenter's Checklist." For assistance with the *Regulations.gov* site, please call 1-866-498-2945 (toll free) Monday-Friday, 9 a.m.-5 p.m. ET, or e-mail *regulationshelpdesk@gsa.gov*.

a. *Mail:* Chief Counsel's Office, Attention: Comment Processing, Office of the Comptroller of the Currency, 400 7th Street, SW, suite 3E-218, Washington, DC 20219.

b. *Hand Delivery/Courier:* 400 7th Street, SW, suite 3E-218, Washington, DC 20219.

Instructions: You must include "OCC" as the agency name and "Docket ID OCC-2023-0008" in your comment. In general, the OCC will enter all comments received into the docket and publish the comments on the *Regulations.gov* website without change, including any business or personal information provided such as name and address information, e-mail addresses, or phone numbers. Comments received, including attachments and other supporting materials, are part of the public record and subject to public disclosure. Do not include any information in your comment or supporting materials that you consider confidential or inappropriate for public disclosure.

You may review comments and other related materials that pertain to this action by the following method:

c. *Viewing Comments Electronically – Regulations.gov:*

Go to *https://regulations.gov/*. Enter "Docket ID OCC-2023-0008" in the Search Box and click "Search." Click on the "Dockets" tab and then the document's title. After clicking the document's title, click the "Browse All Comments" tab. Comments can be viewed and filtered by clicking on the "Sort By" drop-down on the right side of the screen or the "Refine Comments Results" options on the left side of the screen. Supporting materials can be viewed by clicking on the "Browse Documents" tab. Click on the "Sort By" drop-down on the right side of the screen or the "Refine Results" options on the left side of the screen checking the "Supporting & Related Material" checkbox. For assistance with the *Regulations.gov* site, please call 1-866-498-2945 (toll free) Monday-Friday, 9 a.m.-5 p.m. ET, or e-mail *regulationshelpdesk@gsa.gov*.

The docket may be viewed after the close of the comment period in the same manner as during the comment period.

***Board*:** You may submit comments, identified by Docket No. R-1813, RIN 7100-AG64 by any of the following methods:

- *Agency Website: https://www.federalreserve.gov/apps/proposals/.* Follow the instructions for submitting comments, including attachments. ***Preferred Method.***
- *Mail:* Benjamin W. McDonough, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue NW, Washington, DC 20551.
- *Hand Delivery/Courier:* Same as mailing address.
- *Other Means: publiccomments@frb.gov.* You must include the docket number in the subject line of the message.

Comments received are subject to public disclosure. In general, comments received will be made available on the Board's website at *https://www.federalreserve.gov/apps/proposals/* without change and will not be modified to remove personal or business information including confidential, contact, or other identifying information. Comments should not include any information such as confidential information that would be not appropriate for public disclosure. Comments should identify the number for the specific question(s) to which they respond. Public comments may also be viewed electronically or in person in Room M–4365A, 2001 C St. NW, Washington, DC 20551, between 9 a.m. and 5 p.m. during Federal business weekdays.

***FDIC*:** You may submit comments to the FDIC, identified by RIN 3064-AF29 and identify the number for the specific question(s) to which you are responding, by any of the following methods:

Agency Website: https:// www.fdic.gov/resources/regulations/federal-register-publications. Follow instructions for submitting comments on the FDIC's website.

Mail: Jennifer M. Jones, Deputy Executive Secretary, Attention: Comments/Legal OES (RIN 3064–AF29), Federal Deposit Insurance Corporation, 550 17th Street NW, Washington, DC 20429.

Hand Delivered/Courier: Comments may be hand-delivered to the guard station at the rear of the 550 17th Street NW, building (located on F Street NW) on business days between 7 a.m. and 5 p.m.

Email: comments@FDIC.gov. Include the RIN 3064-AF29 on the subject line of the message.

Public Inspection: Comments received, including any personal information provided, may be posted without change to https://www.fdic.gov/resources/regulations/federal-register-publications. Commenters should submit only information that the commenter wishes to make available publicly. The FDIC may review, redact, or refrain from posting all or any portion of any comment that it may deem to be inappropriate for publication, such as irrelevant or obscene material. The FDIC may post only a single representative example of identical or substantially identical comments, and in such cases will generally identify the number of identical or substantially identical comments represented by the posted example. All comments that have been redacted, as well as those that have not been posted, that contain comments on the merits of this document will be retained in the public comment file and will be considered as required under all applicable laws. All comments may be accessible under the Freedom of Information Act.

FOR FURTHER INFORMATION CONTACT:

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Counsel, Kevin Korzeniewski, Counsel, Daniel Perez, Counsel, Christopher Rafferty, Counsel, or Joanne Phillips, Counsel, Chief Counsel's Office, (202) 649-5490, Office of the Comptroller of the Currency, 400 7th Street SW., Washington, DC 20219. If you are deaf, hard of hearing, or have a speech disability, please dial 7-1-1 to access telecommunications relay services.

Board: Anna Lee Hewko, Associate Director, (202) 530–6260; Andrew Willis, Manager, (202) 430-1667; Missaka Nuwan Warusawitharana, Manager, (202) 452-3461; Cecily Boggs, Lead Financial Institution Policy Analyst, (202) 530–6209; Marco Migueis, Principal Economist, (202) 452–6447; Diana Iercosan, Principal Economist, (202) 912–4648; Nadya Zeltser, Lead Financial Institution Policy Analyst, (202) 452–3164; Division of Supervision and Regulation; or Jay Schwarz, Deputy Associate General Counsel, (202) 452–2970; Mark Buresh, Senior Special Counsel, (202) 452–5270; Gillian Burgess, Senior Counsel, (202) 736–5564; Jonah Kind, Senior Counsel, (202) 452–2045, Legal Division, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue NW, Washington, DC 20551. For users of TTY–TRS, please call 711 from any telephone, anywhere in the United States.

FDIC: Benedetto Bosco, Chief Capital Policy Section; Bob Charurat, Corporate Expert; Irina Leonova, Corporate Expert; Andrew Carayiannis, Chief, Policy and Risk Analytics Section; Michael Maloney, Senior Policy Analyst; Iris Li, Senior Policy Analyst; Olga Lionakis, Senior Policy Analyst; Richard Smith, Capital Markets Policy Analyst; Ernest Barkett, Financial Analyst; Kyle McCormick, Senior Policy Analyst; Keith Bergstresser, Senior Policy Analyst; Lauren Brown, Senior Risk and Policy Analyst; Rachel Romm-Nisson, Risk Analytics Specialist; Jim Yu, Senior Policy Analyst, Peter Yen, Senior Policy Analyst; Huiyang Zhou, Senior Quantitative Risk Specialist; Soo Jeong Kim, Capital Markets Policy Analyst; Capital Markets and Accounting Policy Branch, Division of Risk Management Supervision; Catherine

Wood, Counsel; Merritt Pardini, Counsel; Kevin Zhao, Senior Attorney; Nicholas Soyer, Attorney, Michael Overmyer, Special Counsel, Legal Division; regulatorycapital@fdic.gov, (202) 898–6888; Federal Deposit Insurance Corporation, 550 17th Street NW, Washington, DC 20429.

SUPPLEMENTARY INFORMATION:

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I. Introduction

The Office of the Comptroller of the Currency (OCC), the Board of Governors of the Federal Reserve System (Board), and the Federal Deposit Insurance Corporation (FDIC) (collectively, the agencies) are proposing to modernize the capital requirements applicable to Category I and II depository institution holding companies and depository institutions (henceforth Category I and II banking organizations) and the market risk capital framework applicable to banking organizations with significant trading activity.[1] The proposal would

[1] In 2019, the agencies adopted rules establishing four categories of capital standards for U.S. banking organizations with $100 billion or more in total consolidated assets and foreign banking organizations with $100 billion or more in combined U.S. assets. Under this framework, Category I standards apply to U.S.-domiciled bank holding companies identified as global systemically important BHCs and their depository institution subsidiaries. Category II standards apply to banking organizations with at least $700 billion in total consolidated assets or at least $75 billion in cross-jurisdictional activity and their depository institution subsidiaries. Category III standards apply to banking organizations with total consolidated assets of at least $250 billion or at least $75 billion in weighted short-term wholesale funding, nonbank assets, or off-balance sheet exposures and their depository institution subsidiaries. Category IV standards apply to banking organizations with total consolidated assets of at least $100 billion that do not meet the thresholds for a higher category and their depository institution subsidiaries. *See* 12 CFR 3.2 (OCC); 12

improve the regulatory capital framework for covered banking organizations by enhancing its risk sensitivity and consistency, as well as by simplifying core components of its design.[2] Improving the risk sensitivity of the regulatory capital framework would mean that a banking organization's capital requirements more readily increase or decrease due to changes in the risk of its business activities. Improving the consistency of the regulatory capital framework would mean that the regulatory capital framework would apply similar capital requirements to exposures with similar risks across different banking organizations.

Elements of the proposal would address comments received from the Economic Growth and Regulatory Paperwork Reduction Act (EGRPRA) public notices.[3] Consistent with other recent efforts to modify the regulatory capital framework, the agencies expect the proposal would support the safety and soundness of covered banking organizations and U.S. financial stability while promoting lending and other financial intermediation activities by covered banking organizations over a range of economic conditions.[4]

CFR 217.400, 238.10, 252.5, (Board); 12 CFR 324.2 (FDIC); "Prudential Standards for Large Bank Holding Companies, Savings and Loan Holding Companies, and Foreign Banking Organizations," 84 FR 59032 (Nov. 1, 2019); "Changes to Applicability Thresholds for Regulatory Capital and Liquidity Requirements," 84 FR 59230 (Nov. 1, 2019).

[2] The term covered banking organizations refers to Category I and II banking organizations, banking organizations with significant trading activity, and banking organizations that elect to use the expanded risk-based approach (as discussed further below).

[3] The agencies, together with the Federal Financial Institutions Examination Council, commenced a review under the Economic Growth and Regulatory Paperwork Reduction Act of 1996 in 2024 to identify outdated or otherwise unnecessary regulatory requirements. The agencies will continue reviewing and considering these comments as part of any final rulemaking. Public Law 104-208, Div. A, Title II, section 2222, 110 Stat. 3009-414, (1996) (codified at 12 U.S.C. 3311). See also Regulatory Publication and Review Under the Economic Growth and Regulatory Paperwork Reduction Act of 1996, 90 FR. 35241 (Jul. 25, 2025).

[4] Other recent initiatives to modernize the capital framework include the finalized changes to the enhanced supplementary leverage ratio standards, which would reinforce the role of leverage requirements as a backstop to risk-based capital requirements and address unintended incentive effects (*see* 90 FR 55248 (Dec. 1, 2025); the community bank leverage ratio proposal, which would reduce regulatory burden while continuing to ensure the safety and soundness of community banks (*see* 90 FR 55048 (Dec. 1, 2025); and recent proposals to revise the Board's stress testing framework, which would improve its transparency and reduce excess volatility in the stress capital buffer requirement (*see* 90 FR 16843 (Apr. 22, 2025) and 90 FR 51856 (Nov. 18, 2025)).

Requirements under the proposal would generally be consistent with international capital standards issued by the Basel Committee on Banking Supervision (Basel Committee).[5] Where appropriate, however, the proposal may differ from the standards published by the Basel Committee (Basel standards) to reflect specific characteristics of U.S. markets, requirements under U.S. generally accepted accounting principles (GAAP),[6] practices of U.S. banking organizations, and U.S. statutory mandates and policy objectives. For example, the proposal would remove the current requirement to deduct mortgage servicing assets (MSAs) from regulatory capital and instead subject all MSAs to a 250 percent risk weight. This aspect of the proposal is intended to remove a regulatory disincentive for residential mortgage servicing and origination, reducing impacts on broader policy objectives regarding the U.S. housing market.

The agencies expect that the proposal would increase the common equity tier 1 capital requirements of Category I and II holding companies by about 1.2 percent, while decreasing corresponding requirements for Category I and II subsidiary depository institutions by 5.1 percent.[7] Together with the GSIB surcharge proposal and the stress testing changes proposed in October 2025,[8] the Board expects that the common equity tier 1 capital requirements for Category I and II holding companies would decline by 5.0 percent (see section VII for additional

[5] The Basel Committee is a committee composed of central banks and banking supervisory authorities, which was established by the central bank governors of the G-10 countries in 1975. The consolidated Basel framework is available at *https:/www.bis.org/basel_framework/*. For additional discussion of the revisions to the Basel framework with which this proposal would align, see also *https://www.bis.org/bcbs/publ/d424.htm*, *https://www.bis.org/bcbs/publ/d457.htm*, and *https://www.bis.org/bcbs/publ/d507.htm*.

[6] GAAP often serve as a foundational measurement component for U.S. capital requirements. *See also* 12 U.S.C. § 1831n (generally requiring that financial reports required by the agencies from banking organizations use U.S. GAAP).

[7] The revisions introduced by the proposal to the calculation of risk-weighted assets would also modify Category I bank holding companies' total loss-absorbing capacity (TLAC) requirements and long-term debt requirements.

[8] *See* 90 FR 51856 (Nov. 18, 2025).

discussion of capital impact).[9] The agencies performed extensive economic analysis to assess the potential effects of the proposal, including together with related proposals (see section VIII). The improvements in risk sensitivity, simplicity, transparency and consistency of risk-based capital requirements expected to result from the proposal justify its expected costs.

The agencies seek comment on all aspects of the proposal.[10]

A. Statutory Authority

Congress has authorized the agencies to establish risk-based capital requirements and standards for banking organizations subject to this proposal. Section 165 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act),[11] as amended by section 401 of the Economic Growth, Regulatory Relief, and Consumer Protection Act,[12] requires the Board to establish enhanced prudential standards that include risk-based capital requirements for bank holding companies with $250 billion or more in total consolidated assets.[13] The prompt corrective action framework in section 38 of the Federal Deposit Insurance Act (FDI Act) requires the agencies to prescribe capital standards for insured depository

[9] A banking organization for which the Board is the primary Federal supervisor must maintain capital ratios above the sum of its minimum requirements and buffer requirements to avoid restrictions on capital distributions and discretionary bonus payments.

[10] In 2023, the agencies published a proposal to revise the capital rule based on the Basel Committee framework. 88 FR 64028 (Sept. 18, 2023). The agencies are rescinding the 2023 proposal. Members of the public that seek to submit comments on the current proposal must submit comments in line with the procedures described in this proposal.

[11] Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111-203, 124 Stat. 1376 (2010).

[12] Economic Growth, Regulatory Relief, and Consumer Protection Act, Public Law 115-174, 132 Stat. 1296 (2018).

[13] *See* 12 U.S.C. 5365(a)(1), (b)(1)(A)(i). Section 165 of the Dodd-Frank Act also provides that the Board may apply any prudential standard established under section 165 to any bank holding company with $100 billion or more in total consolidated assets to which the prudential standard does not otherwise apply, under certain circumstances. 12 U.S.C. 5365(a)(2)(C). Section 165, in relevant part, also applies to foreign banks or companies that are treated as a bank holding company for purposes of the Bank Holding Company Act. *See* 12 U.S.C. 3106(a), 5311(a)(1). *See also* section 401(g) of the Economic Growth, Regulatory Relief, and Consumer Protection Act (regarding the Board's authority to establish enhanced prudential standards for foreign banking organizations with total consolidated assets of $100 billion or more). 12 U.S.C. 5365 note.

institutions that include a risk-based capital requirement and provides that the agencies may establish any additional relevant capital measures to carry out the purpose of that section.[14] Various other statutory authorities provide the agencies with broad discretionary authority to set capital requirements and standards for banking organizations supervised by the agencies, including national banking associations, state-chartered banks, savings associations, and depository institution holding companies.[15]

B. Objectives of the proposal

The proposal aims to improve the capital framework for covered banking organizations by enhancing its risk sensitivity, reducing complexity, and improving transparency and consistency.

Risk sensitivity is a core feature of risk-based capital requirements. The proposed framework aims to improve the alignment of regulatory capital requirements with the risks presented by banking organizations' exposures. Such alignment could help promote safe and sound banking organizations that can lend through a range of economic conditions.

To further improve the capital framework, the proposal seeks to reduce complexity by simplifying its overall design. Redundant or unnecessarily complex requirements, such as multiple risk-based capital frameworks applying to the same banking organization, add costs that outweigh any incremental benefits presented by such an approach, whereas a simpler framework reduces compliance burden and strengthens transparency. Clear and transparent requirements

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[14] *See* 12 U.S.C. 1831o(c)(1)(A), (c)(1)(B)(i).

[15] *See* 12 U.S.C. 93a (national banking associations); 12 U.S.C. 248(i), 324, 327, 329 (state member banks); 12 U.S.C. 1463 (savings associations); 12 U.S.C. 1467a(g)(1) (savings and loan holding companies); 12 U.S.C. 1844(b) (bank holding companies); 12 U.S.C. 3106 (certain U.S. operations of foreign banking organizations); 12 U.S.C. 3902(1)-(2), 3907(a), 3909(a), (c)(1)-(2) (depository institutions; affiliates of depository institutions, including holding companies; and certain U.S. operations of foreign banking organizations); 12 U.S.C. 5371 (insured depository institutions, depository institution holding companies, and nonbank financial companies supervised by the Board). Additional statutory authorities relevant to the agencies' capital rule can be found in the authority citations in the capital rule. *See* 12 CFR part 3 (OCC); 12 CFR part 217 (Board); 12 CFR part 324 (FDIC).

support safety and soundness by making it easier for supervisors, investors, and other stakeholders to assess the financial condition of banking organizations. A central element of the proposal's effort to reduce redundancy is better integration with the Board's stress testing framework, which is achieved by considering jointly the calibrations of this proposal and the proposed stress test model changes that would inform stress capital buffer requirements.

The proposal would also promote consistency. Consistent capital requirements hold banking organizations with similar risk profiles to similar standards, thereby reducing unwarranted divergence. Consistency is also valuable internationally. The proposal is generally aligned with the Basel standards, with some differences as discussed in section II.F of this Supplementary Information. Broadly consistent regulatory frameworks should reduce complexity and compliance costs for banking organizations with cross-border operations, including both U.S. banking organizations operating abroad and foreign banking organizations operating in the United States.

By improving risk-based capital requirements, the proposal would bolster the role of large U.S. banking organizations in supporting the broader economy. The reforms that followed the 2007-09 financial crisis substantially increased the resilience of the U.S. banking system. However, in some cases, these post-crisis reforms have imposed burdens that contributed to the migration of some activities, such as mortgage origination and servicing, outside of the regulated banking sector.[16] Revising the regulatory capital framework to better align requirements with risks – and in so doing easing requirements on some lower-risk, traditional banking activities –

[16] According to the 2024 Financial Stability Oversight Council report on nonbank mortgage servicing, nonbank mortgage companies originated approximately two-thirds of mortgages in the United States and owned the servicing rights on 54 percent of mortgage balances in 2022. In 2008, nonbank mortgage companies only accounted for 39 percent of mortgage originations and owned the servicing rights on 4 percent of mortgage balances. *See* page 3 FSOC Report on Nonbank Mortgage Servicing 2024 at https://home.treasury.gov/system/files/261/FSOC-2024-Nonbank-Mortgage-Servicing-Report.pdf.

would contribute to U.S. banking organizations becoming better positioned to support the economy.

C. Overview of the proposal

The proposal would streamline the risk-based capital requirements applicable to Category I and II banking organizations. Currently, these banking organizations are subject to two sets of risk-based capital ratio requirements: one based on the standardized approach (which also generally applies to other banking organizations) and the other based on an internal models framework, the advanced approaches.[17] Under the proposal, Category I and II banking organizations would be subject to a single set of risk-based capital ratio requirements based on the "expanded risk-based approach" – which would include requirements for credit risk, equity risk, and operational risk – and the revised market risk framework.[18] The standardized approach would no longer apply to these banking organizations, and the advanced approaches would be removed from the regulatory capital framework. As discussed further below, other banking organizations could choose to adopt the expanded risk-based approach that would be required for Category I and II banking organizations.

The expanded risk-based approach is a standardized framework that would promote the simplicity, risk sensitivity, transparency, and consistency objectives of the proposal. This approach would improve risk sensitivity relative to the current standardized approach by varying capital requirements according to several new risk factors, such as loan-to-value ratios for real estate exposures, repayment history for retail exposures, and assessed creditworthiness for

[17] *See* 12 CFR part 3, subparts D and E (OCC); 12 CFR part 217, subparts D and E (Board); 12 CFR part 324, subparts D and E (FDIC).

[18] For purposes of this discussion, unless otherwise noted, the revised market risk framework is inclusive of requirements for credit valuation adjustment risk, as applicable.

corporate exposures. Unlike the current standardized approach, the expanded risk-based approach would include a specific operational risk capital requirement. This difference, in part, supports the different calibration of credit risk weights under the expanded risk-based approach relative to the risk weights under the standardized approach.

The proposal would also revise the market risk framework, which would be applicable to Category I and II depository institution holding companies and to other banking organizations with significant trading activity. Significant trading activity would be defined to mean (1) more than $5 billion in trading activity or (2) trading activity equal to or higher than 10 percent of the banking organization's total assets. The new framework would improve risk sensitivity and consistency by revising the models-based approach for market risk and introducing a standardized approach for market risk. To reduce burden without a meaningful loss in resilience, the proposal would raise the threshold for applicability of the market risk framework from having trading activity of at least $1 billion to having trading activity of at least $5 billion.

As part of the revised market risk framework, the proposal would include a risk-sensitive and consistent framework for capturing the risks associated with credit valuation adjustment risk for derivative exposures.[19] This framework would apply to (1) Category I and II depository institution holding companies, (2) depository institutions that are subsidiaries of Category I or II depository institution holding companies and have significant trading activity, and (3) other banking organizations with significant trading activity that also have at least $1 trillion in notional derivative exposure.

[19] Credit valuation adjustment risk is the exposure to changes in the valuation of derivative contracts driven by changes in counterparty credit risk.

The proposal would retain banking organizations' ability to use internal models, with supervisory approval, to calculate market risk capital requirements. Market risk is more effectively modeled than credit and operational risk because relevant data is observed at a much higher frequency and depth, providing the basis for both model calibration and empirical verification of model appropriateness.

The agencies consider the proposed requirements under the expanded risk-based approach to be appropriate for Category I and II banking organizations given their risk profiles, complexity, risk management resources, and international activities. The agencies recognize that the risk-sensitive requirements under the expanded risk-based approach may appeal to other banking organizations with certain business models and risk management systems. Therefore, the proposal would allow other banking organizations to elect to use the expanded risk-based approach. Banking organizations that choose this option would also be subject to the definition of capital that applies to Category I and II banking organizations.[20]

In addition to the changes to the calculation of risk-weighted assets, the proposal would change the definition of regulatory capital applicable to Category I and II banking organizations by removing the threshold-based deduction for mortgage servicing assets. Thus, all mortgage servicing assets would receive a 250 percent risk weight under the proposal, consistent with the risk weight in the current capital rule for MSAs that do not exceed the deduction thresholds. This proposed revision would eliminate a strong disincentive for mortgage origination and mortgage servicing by banking organizations.

[20] This definition of capital would include the requirement to reflect accumulated other comprehensive income in regulatory capital and to use the deductions framework that applies to Category I and II banking organizations.

The proposal would also amend certain dollar-based regulatory thresholds, where appropriate, to reflect inflation and ensure that such thresholds preserve their intended application in real terms over time.[21] Consistent with this proposal, the agencies are reviewing other thresholds throughout out the regulatory framework..

Finally, the proposal would revise disclosure requirements to facilitate market participants' understanding of the financial condition and risk management practices of banking organizations subject to the expanded risk-based approach.[22] In addition, to align with these revisions, the agencies anticipate proposing revisions to the reporting forms of the Federal Financial Institutions Examination Council (FFIEC) that would apply to covered banking organizations.

In a separate rulemaking, the agencies are proposing modifications to the standardized approach risk-based capital requirements (standardized approach proposal), which would apply to banking organizations that do not use the expanded risk-based approach. Also, the Board is separately issuing a notice of proposed rulemaking that would revise the U.S. global systemically important banking holding company (GSIB) surcharge calculation applicable to Category I bank holding companies and the systemic risk report applicable to large holding companies (GSIB surcharge proposal).

Question 1: The agencies invite comment on the interaction of the revisions in the proposal with other existing rules and with other notices of proposed rulemaking.

Question 2: What would be an appropriate amount of time between the publication of any final rule and its effective date, and why?

[21] Certain thresholds in FDIC regulations are also indexed to reflect inflation. *See* 90 FR 55789 (Dec. 1, 2025).

[22] The disclosure requirements would only apply to the top tier of a consolidated banking organization.

II. Scope, design, and other overarching issues

A. Scope of application

The proposal would require Category I and II banking organizations to use the expanded risk-based approach. These banking organizations present substantial systemic risks due to their size, complexity, interconnectedness, and cross-jurisdictional activity. Application of the expanded risk-based approach to them would provide granular, risk-sensitive, and standardized requirements that align with international standards.

While the expanded risk-based approach was designed for application to banking organizations that operate globally across multiple business lines, such as Category I and II banking organizations, the agencies are aware that the more differentiated treatments for traditional banking exposures such as mortgage, corporate, and retail exposures may appeal to certain smaller banking organizations. Therefore, the proposal would provide all banking organizations subject to the capital rule with the option of adopting the expanded risk-based approach in its entirety.

Under the proposal, a banking organization that chooses to adopt the expanded risk-based approach would become subject to the same definition of capital as Category I and II banking organizations and, therefore, be required to reflect most elements of accumulated other comprehensive income in regulatory capital even if it subsequently changes to the standardized approach. This is consistent with the one-time election to recognize accumulated other comprehensive income in regulatory capital in the current standardized approach and avoids changes in accumulated other comprehensive income recognition based on interest rate cycles. For a banking organization that chooses to adopt the proposed expanded risk-based approach, the inclusion of most elements of other accumulated other comprehensive income in regulatory

capital would be subject to a transition period of five years from the effective date of any final rule.[23]

To align with a banking organization's annual capital planning processes, any change in election between the expanded risk-based approach and the standardized approach would take effect 12 months after the date on which the banking organization provides written notice of the change in election to its primary Federal supervisor. This requirement would help ensure that any change in election reflects structural balance sheet considerations and not short-term capital reductions.

Banking organizations with significant trading activities face an elevated level of market risk and, therefore, would continue to be subject to the market risk framework. The proposal would increase the current dollar-based threshold for the application of market risk capital requirements from $1 billion to $5 billion or more of trading assets and trading liabilities. The proposal would also revise the calculation of the dollar-based threshold amount to be based on four-quarter averages of trading assets and trading liabilities instead of point-in-time amounts. Banking organizations would continue to be subject to market risk capital requirements if their trading assets and trading liabilities represent 10 percent or more of total assets. Banking organizations that do not meet the thresholds for being subject to market risk capital requirements would calculate risk-weighted assets for trading exposures under the standardized approach or the expanded risk-based approach, as applicable. Additionally, under the proposal, Category I and II depository institution holding companies would be subject to market risk capital requirements regardless of the amount of their trading activities.

[23] This transition period would mirror the transition period under the standardized approach proposal provided to Category III and IV banking organizations that do not currently recognize accumulated other comprehensive income in regulatory capital.

The proposal would apply capital requirements for credit valuation adjustment risk to all Category I and II depository institution holding companies, as well as to their subsidiary depository institutions that are subject to the market risk framework. In addition, capital requirements for credit valuation adjustment risk would apply to other banking organizations subject to the market risk framework that have over-the-counter derivative notional amounts of $1 trillion or more. Due to their substantial derivative portfolios, these banking organizations have meaningful exposure to losses resulting from changes to their credit valuation adjustment accounting reserve. This threshold aims to balance coverage of credit valuation adjustment risk and burden. According to data reported in the FR Y-9C form, depository institution holding companies above this threshold accounted for over 98 percent of the over-the-counter derivative exposures of depository institution holding companies as of 2025Q2.

Question 3: What are the advantages and disadvantages of the proposed scope of application of the expanded risk-based approach?

Question 4: What are the advantages and disadvantages of allowing all banking organizations to adopt the expanded risk-based approach? What are the challenges associated with adopting the expanded risk-based approach for Category III, IV, and smaller banking organizations? To what extent would this optionality limit the transparency and consistency of the risk-based capital requirements? What limitations or restrictions on how frequently a banking organization could switch from the expanded risk-based approach to the standardized approach and vice versa should the agencies include and why?

B. Single set of risk-based requirements

Under the proposal, banking organizations would be subject to a single set of risk-based capital ratio requirements.[24] This contrasts with the current framework, which requires Category I and II banking organizations to calculate two sets of risk-based capital ratios: one using the standardized approach and the other using the internal models-based advanced approaches. By employing risk-sensitive, simplified, consistent, and transparent requirements, aligned with international standards, the expanded risk-based approach would result in an appropriate stand-alone requirement.

The capital conservation buffer requirement would apply to the risk-based capital ratios of Category I and II banking organizations in the same manner as it currently applies to the standardized approach ratios. For Category I depository institution holding companies, the capital conservation buffer requirement would continue to consist of the stress capital buffer requirement, the countercyclical capital buffer (if activated), and the GSIB surcharge. For Category II depository institution holding companies, the capital conservation buffer would continue to consist of the stress capital buffer requirement plus the countercyclical capital buffer (if activated). For the subsidiary depository institutions of Category I or II depository institution holding companies, the capital conservation buffer requirement would continue to equal 2.5 percent plus the countercyclical capital buffer requirement (if activated).

C. Removal of internal models for credit and operational risk

The proposal would eliminate the advanced approaches framework and introduce in its place the expanded risk-based approach to improve the consistency and transparency of the risk-based capital requirements applicable to Category I and II banking organizations. This approach

[24] This revision would be consistent with comments received under EGRPRA as commenters requested that banking organizations be required to calculate risk-weighted assets under a single approach.

would help address many of the challenges associated with the use of internal models to calculate risk-based capital requirements for credit risk and operational risk.

In 2007, the agencies jointly issued a final rule requiring large, internationally active banking organizations to calculate risk-based capital requirements for credit risk and operational risk under the advanced approaches.[25] In seeking to ensure that these banking organizations are adequately capitalized, the advanced approaches require banking organizations to estimate their exposure to severe unexpected losses.[26] However, available information since adoption of this rule suggests that the advanced approaches do not always result in consistent minimum requirements across U.S. banking organizations with similar risk profiles.[27] While internal models to calculate risk-based capital requirements for credit risk and operational risk do provide valuable information and may be more accurate in some cases than standardized approaches, as discussed below the severity of the outcomes the advanced approaches rule requires banking organizations to model coupled with data limitations and the subjectivity embedded in modeling assumptions has presented substantial challenges.

[25] *See* Risk-Based Capital Standards: Advanced Capital Adequacy Framework - Basel II, 72 FR 69288 (Dec. 7, 2007). The agencies subsequently revised certain aspects of the advanced approaches framework in the rulemakings that established the current capital rule. *See* 78 FR 62018 (Oct. 11, 2013).

[26] For both credit risk and operational risk, the advanced approaches capital requirements aimed to cover the risk of loss over a one-year window at the 99.9th percentile level. *See* 72 FR 69288 (Dec. 7, 2007); 12 CFR part 3 (OCC); part 217 (Board); part 324 (FDIC).

[27] *See, e.g.,* Tobias Berg, and Philipp Koziol "An analysis of the consistency of banks' internal ratings," Journal of Banking and Finance 78, 27-41 (2017), *https://dx.doi.org/10.1016/j.jbankfin.2017.01.013*; and Barbora Stepankova, and Petr Teply, "Consistency of Banks' Internal Probability of Default Estimates: Empirical Evidence from the COVID-19 crisis," Journal of Banking and Finance 154, 106969 (2023), *https://doi.org/10.1016/j.jbankfin.2023.106969*.

Financial risk models designed to capture severe loss events can suffer from substantial uncertainty.[28] Such uncertainty can result in substantial and unwarranted differences in capital requirements across similar exposures that are unrelated to differences in risk.

The advanced approaches require banking organizations to estimate loss given default conditional on an economic downturn. Ensuring that banking organizations' loss given default estimates are consistent with the risk of their exposures has proven challenging for several reasons, including (1) limited data on loss given default and its drivers under downturn conditions; (2) inconsistencies in constructing the loss given default variables, arising from factors such as methodological differences and difficulties in capturing all cash inflows and outflows after default;[29] and (3) difficulty in verifying certain modeling assumptions, such as the time window used to calculate loss given default in an economic downturn. To a lesser degree, verifying the appropriateness of banking organizations' probability of default models is challenging in some cases due to limited data for certain low default portfolios and varying practices in identifying defaults across banking organizations.[30,31]

For operational risk, banking organizations subject to the advanced approaches are required to estimate the 99.9th percentile of the distribution of the aggregated annual operational losses under the advanced measurement approaches (AMA). This requirement has presented

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[28] *See* Jon Danielsson, "Blame the Models," Journal of Financial Stability, 321-28 (2008), *https://doi.org/10.1016/j.jfs.2008.09.003*.

[29] For example, horizontal supervisory reviews have found material deviations in loss rates at different banking organizations with respect to the same defaulted exposure.

[30] For example, banking organizations have followed different practices regarding whether to count technical defaults (which are situations where the borrower failed to uphold an aspect of the loan agreement but has not failed to make regularly scheduled payments) as defaults for purposes of modeling probability of default.

[31] Various analyses conducted by the Basel Committee, to which the agencies contributed, demonstrated significant divergence across banking organizations in credit risk-weighted assets calculated under the internal models-based approaches that could not be explained by differences in the riskiness of banking organizations' portfolios. *See https://www.bis.org/publ/bcbs256.pdf* and *https://www.bis.org/bcbs/publ/d363.pdf*.

substantial challenges for banking organizations and supervisors as a considerable amount of relevant data would be needed to empirically verify model performance. Given the severe outcome that the requirement is designed to estimate, model and parameter uncertainty can result in substantial divergence in model outcomes and, consequently, substantial divergence in capital requirements.[32] In addition, infrequent large operational loss events tend to have substantial influence on model outcomes and can result in substantial volatility.[33] Together, these factors result in substantial uncertainty in internally modeled operational risk capital requirements and likely inconsistent requirements across banking organizations with similar operational risk profiles.

Taken together, the severe outcomes that the advanced approaches rule expects banking organizations to model, the limitations of available data, and the subjectivity of modeling assumptions contribute to concerns about the reliability of internal model outputs and unwarranted divergences in risk-based capital requirements for credit and operational risk across banking organizations.

The application of the stress capital buffer requirement to Category I and II bank holding companies also reduces the usefulness of retaining the advanced approaches for these banking organizations. Under the proposal, the stress capital buffer requirement would apply to the single set of risk-based capital ratios to which these bank holding companies would be subject,

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[32] *See* G. Mignola, and R. Ugoccioni, "Sources of Uncertainty in Modeling Operational Risk Losses," Journal of Operational Risk 1(2): 33–50 (2006); J. Nešlehová, P. Embrechts, and V. Chavez-Demoulin, "Infinite Mean Models and the LDA for Operational Risk," Journal of Operational Risk 1(1): 3–25 (2006); and E. Cope, G. Mignola, G. Antonini, and R. Ugoccioni, "Challenges and Pitfalls in Measuring Operational Risk from Loss Data," Journal of Operational Risk 4(4): 3–27 (2009).

[33] *See* E. Cope, G. Mignola, G. Antonini, and R. Ugoccioni, "Challenges and Pitfalls in Measuring Operational Risk from Loss Data" Journal of Operational Risk 4(4): 3–27 (2009); and J. Opdyke, and A. Cavallo, "Estimating Operational Risk Capital: The Challenges of Truncation, the Hazards of Maximum Likelihood Estimation, and the Promise of Robust Statistics," Journal of Operational Risk 7(3): 3–90 (2012).

providing risk-sensitive capital requirements that reflect a granular, forward-looking assessment of risks. In this context, removing the advanced approaches simplifies the framework without reducing the resilience of Category I and II bank holding companies.

Under the current capital rule, banking organizations are required to maintain capital commensurate with the level and nature of all risks to which they are exposed[34] and to have a process for assessing their overall capital adequacy in relation to their risk profile and a comprehensive strategy for maintaining an appropriate level of capital.[35] In addition, certain large banking organizations are required to develop and maintain a capital plan[36] and conduct internal stress tests.[37] The proposal would not change these requirements. As discussed above, the advanced approaches have limitations as a means to set consistent minimum risk-based capital requirements. However, internal models can provide valuable information to a banking organization's internal risk management, stress testing, and planning functions and can be used to complement minimum capital requirements in assessing a banking organization's capital adequacy. Category I and II banking organizations, as well as other banking organizations, should continue to employ internal modeling capabilities for sound risk management as appropriate for the complexity of their activities.

The proposal would continue to allow the use of internal models to calculate market risk capital requirements, but only for trading desks where modeling can be demonstrated to be appropriate. Market risk is more easily and effectively modeled than credit and operational risk because data on trading positions are observed at a much higher frequency and depth, in

[34] *See* 12 CFR 3.10(e)(1) (OCC); 12 CFR 217.10(e)(1) (Board); 12 CFR 324.10(e)(1) (FDIC).

[35] *See* 12 CFR 3.10(e)(2) (OCC); 12 CFR 217.10(e)(2) (Board); 12 CFR 324.10(e)(2) (FDIC).

[36] *See* 12 CFR 225.8; 12 CFR 238.170.

[37] *See* 12 CFR part 46 (OCC); 12 CFR part 238, subparts P and R, and 12 CFR part 252, subparts B and F (Board); 12 CFR part 325 (FDIC).

particular for commonly traded instruments. Trading creates price observations, which in turn provide daily feedback on model calibration and performance to support empirical verification through techniques such as back-testing. For these reasons, the benefits of retaining models are larger for market risk than for other exposure types.

Question 5: What are the advantages and disadvantages of removing internal models for credit risk and operational risk? Are there alternatives that the agencies should consider and if so, why?

Question 6: The Basel standards include a floor to risk-weighted assets, the "output floor," which corresponds to 72.5 percent of risk-weighted assets calculated only using standardized approaches. The proposal would not include this output floor because proposed requirements would be almost completely standardized and, therefore, the output floor would be unlikely to bind in most situations. What would be the advantages and disadvantages of including a floor to risk-weighted assets corresponding to 72.5 percent of the risk-weighted assets calculated using only the standardized approaches in the proposal.

D. Overlaps with the stress capital buffer requirement

In proposing these revised risk-based capital requirements for Category I and II banking organizations, the Board is mindful of the overlaps between the capital and stress testing frameworks. Together, this proposal and a recent proposal to enhance the transparency and public accountability of the Board's stress test,[38] which requested public comment on certain revisions to the Board's stress test models, aim to improve risk sensitivity of requirements in a way that considers the cumulative effect of the entire capital framework.

[38] *See* Enhanced Transparency and Public Accountability of the Supervisory Stress Test Models and Scenarios; Modifications to the Capital Planning and Stress Capital Buffer Requirement Rule, Enhanced Prudential Standards Rule, and Regulation LL, 90 FR 51856 (Nov. 18, 2025).

The stress capital buffer requirement represents an explicitly forward-looking element in the risk-based capital requirements of large bank holding companies. Informed by the Board's stress testing framework, the stress capital buffer requirement aims to capture exposures comprehensively and granularly under conditions of severe stress.

Under the current rule, a bank holding company's stress capital buffer requirement is applied to its risk-based capital ratios calculated under the standardized approach, which do not include a specific requirement for operational risk, and is not applied to the bank holding company's requirements under the advanced approaches. This historical choice was motivated, in part, by the goal of limiting redundancy between the stress capital buffer requirement, based on the Board's forward-looking assessment of stress risks, and the bank holding company's modeling of tail risks under the advanced approaches.[39]

Consistent with international standards, the proposed expanded risk-based approach would include a specific measure of operational risk in risk-weighted assets. Also, the proposed changes to the market risk framework would improve the measurement of tail risks in ways that are expected to raise minimum market risk capital requirements for the most complex banking organizations.

The outstanding Board stress testing proposal would introduce meaningful revisions to stress test models and scenarios, including the models for operational risk and trading positions. Operational risk modeling would be enhanced by focusing on the more robust historical simulation model. Similarly, the stress test proposal would improve the modeling of trading positions under the global market shock component of the severely adverse scenario by better

[39] "In addition, both the supervisory stress test and the advanced approaches are calibrated to reflect tail risks; thus it could be duplicative to require a firm to meet the requirements of the advanced approaches on a post-stress basis." 83 FR 18160 (Apr. 25, 2018).

measuring their liquidity horizons. Both proposed revisions, on their own and independent of other factors, are projected to somewhat reduce aggregate projected stress capital buffer requirements.[40]

In summary, this proposal is projected to increase the minimum requirements for operational risk and market risk, while the stress test proposal's analysis of the proposed model changes estimated a decrease in related requirements for these risks, as they inform the stress capital buffer requirement. The Board expects both sets of revisions to improve risk sensitivity and coherence of the capital framework, while the revisions in this proposal would contribute to international consistency. The capital impact of these revisions would largely offset each other, and the Board considers that the combined calibration of these risks would be appropriate (see section VII for additional analysis of the cumulative calibration of requirements by risk type).

Question 7: The current Board stress testing methodology reflects a constant balance sheet assumption and assumes that a banking organization's risk-weighted assets generally remain unchanged over the nine-quarter projection horizon. What would be the advantages and disadvantages of adjusting the stress testing methodology to project changes in risk-weighted

[40] As the Board noted in October 2025, in aggregate, the proposed stress test model and scenario changes inform the Board's determination of a firm's stress capital buffer requirement and are not expected materially change capital requirements for firms subject to the supervisory stress test, across various stress test scenarios and jump-off conditions at the start of the test. That proposal included illustrative analysis that considered the potential effects of the proposed stress test model changes, independent of other factors and components that inform the Board's stress capital buffer determinations for specific firms, within the 2024 and 2025 supervisory stress tests. In that analysis, implementing the proposed model changes and proposed revisions to the global market shock component of the severely adverse scenario in the 2024 and 2025 stress tests would have, independent of other factors, increased the aggregate projected common equity tier 1 (CET1) stress ratio, on average, by 29 basis points, which would have corresponded to a reduction in stress capital buffer requirements of approximately 23 basis points or approximately 2.2 percent of current required capital. *See* 90 Federal Register 51856, 51874-51877 (Nov. 18, 2025). The analysis estimates that the proposed model changes would reduce stress capital buffer requirements by approximately 13 basis points and that the proposed revisions to the global market shock scenario component would reduce stress capital buffer requirements by approximately 10 basis points. For U.S. GSIBs, the analysis estimates a decline of 25 basis points in stress capital buffer requirements. *See also* Federal Reserve Board - Federal Reserve Board requests comment on proposals to enhance the transparency and public accountability of its annual stress test; Dodd-Frank Act Stress Tests 2026 (Dec. 1, 2025).

assets for banking organizations subject to the expanded risk-based approach and banking organizations subject to the market risk framework? For example, what would be the advantages and disadvantages of projecting changes in the risk-weighted assets applicable to credit exposures to better reflect deteriorations in obligors' credit quality during a stress period (such as migrating corporate exposures in the investment grade 65 percent risk weight category into the general corporate category or from the general corporate category into the past due category)? What would be the advantages and disadvantages of adjusting risk-weighted assets for operational risk by projecting lower income amounts during a stress period? What, if any, changes should the Board consider to better project risk-weighted assets for trading positions and derivatives during a stress period in light of the proposed market risk framework, including the proposed credit valuation adjustment risk requirement (these may include revisions to reflect changes in modelability of risk factors and volatility)?

E. Indexing of thresholds

The proposal uses certain thresholds to differentiate requirements based on a banking organization's size, risk profile, and complexity as well as on the characteristics of the exposures. However, static dollar-based thresholds can lead to unintended consequences if threshold levels are not periodically updated or indexed to inflation. For example, banking organizations can become subject to additional requirements and burden over time for reasons unrelated to changes in their risk profile. Under the proposal, certain dollar-based thresholds would be adjusted in the future to reflect inflation, pursuant to a pre-determined indexing methodology.[41] Indexing dollar-based thresholds would preserve threshold levels in real terms,

[41] This revision would also be consistent with comments received under EGRPRA as commenters requested indexing of thresholds going forward to reflect inflation.

which would efficiently and transparently preserve the thresholds' intended application and align with intended policy objectives over time.

The proposed indexing methodology would adjust thresholds based on the consumer price index for urban wage earners and clerical workers (CPI-W) published by the U.S. Bureau of Labor Statistics. The use of CPI-W to index thresholds is consistent with other bank regulations, such as those relating to the Community Reinvestment Act and the Board's Regulation CC.[42] Further, the indexing methodology included under the proposal would generally align with the methodology used to adjust certain thresholds within FDIC regulations.[43] Specifically, certain dollar thresholds would be adjusted at the end of every consecutive two-year period based on the cumulative percent change of the non-seasonally adjusted CPI–W since the effective date of any final rule. This two-year period is intended to provide an appropriate cadence for capturing meaningful changes in inflation on a timely basis while minimizing the burden of adjustment. To address the possibility of periods of unusual inflation, the indexing methodology would also allow for discretionary adjustment to thresholds by the agencies during an off year. The proposal would also not lower thresholds in the event of deflation.[44] Additionally, thresholds adjusted under the proposed indexing methodology would

[42] The agencies' regulations that implement the Community Reinvestment Act define small and intermediate-small banks by reference to asset-size criteria expressed in dollar amounts, which are adjusted annually based on the year-to-year change in inflation through a Federal Register notice. Specifically, this adjustment corresponds to the average of the Consumer Price Index for Urban Wage Earners and Clerical Workers, not seasonally adjusted, for each 12-month period ending in November, with rounding to the nearest million. *See, e.g.,* Community Reinvestment Act Regulations Asset-Size Thresholds, 89 FR 106480, 106481 (Dec. 30, 2024). *See also* 12 CFR 229.11.

[43] *See* Adjusting and Indexing Certain Regulatory Thresholds, 90 FR 55789 (Dec. 1, 2025).

[44] Any periods of deflation would be reflected in future threshold increases, as threshold adjustments in the future would be based on the positive net cumulative change in CPI–W.

be rounded based on the size of the threshold (e.g., billions, millions, thousands), generally, to the nearest two significant digits, as appropriate.[45]

The proposal would index the following thresholds: (1) the $1 million threshold for a retail exposure to qualify as regulatory retail; (2) the $50 million annual revenue threshold for a borrower to qualify as a small or medium-sized entity; (3) the $10 million threshold used to determine whether a company in which a covered banking organization owns equity instruments meets the definition of financial institution; (4) the $1 billion and the $30 billion business indicator thresholds that determine the marginal coefficients applicable for the calculation of the business indicator component in the operational risk capital requirement; (5) the $20,000 threshold for mandatory collection of operational loss events; (6) the $5 billion trading activity threshold for application of the market risk framework; (7) the $1 trillion derivatives exposure threshold for application of the credit valuation adjustment risk requirement; (8) the $20 million threshold above which net short positions must be included in the market risk framework; and (9) the $2 billion threshold for an equity issuer to be classified as having large market capitalization in the market risk standardized approach.

To effectuate threshold changes under the proposal, the agencies would announce threshold adjustments pursuant to the indexing methodology by publishing the updated thresholds. Threshold adjustments would be calculated based on cumulative CPI-W data through August of the year in which the adjustment is made, relative to the same initial baseline.[46]

Question 8: What are the advantages and disadvantages of the proposed approach for indexing thresholds? What alternatives should the agencies consider and why? What are the

[45] For example, a threshold that would otherwise be calculated as $5.964 million would be rounded to $6.0 million, or the nearest $0.1 million.

[46] The U.S. Bureau of Labor Statistics publishes the CPI-W on a monthly basis.

advantages and disadvantages of using a different index for adjusting thresholds, such as nominal GDP or the GDP deflator, instead of CPI-W?

Question 9: Are there specific thresholds within the proposal that can result in an increase in operational burden when indexed? If so, which are they and why?

Question 10: What are the advantages and disadvantages of discretionary off-year adjustments for periods of unusual inflation? Should the agencies consider a framework for adjustment in off years, such as based on inflation or other threshold and, if so, why?

F. The role of international standards in developing U.S. capital requirements

The agencies participate in international fora, including the Basel Committee, that support broadly aligned prudential financial regulation across major economies, consistent with the agencies' mandates and various statutory authorizations.[47] Standards issued by these international fora are not binding under U.S. law. The agencies routinely consider the potential benefits of such standards as part of a reasoned decision-making process when developing domestic rulemakings to implement prudential requirements.

Where appropriate and consistent with the agencies' statutory authorities and policy objectives, maintaining consistency between domestic financial regulatory policy and international standards can generate significant benefits, particularly regarding large, internationally active banking organizations. Large, internationally active banks and the U.S. financial system more broadly are highly interconnected with the global financial system. Promoting the application of suitable and robust prudential standards across jurisdictions can

[47] *See, e.g.*, 12 U.S.C. 1828 note, 3901, 3907, 3911, and 5373; *see also* 22 U.S.C. 9522 note; Federal Deposit Insurance Corporation Improvement Act of 1991 § 305(b)(2), Pub. L. 102-242, 105 Stat. 2236, 2355.

enhance the resilience of the U.S. financial system by reducing the likelihood of distress or other problems that arise in a foreign jurisdiction having negative effects in the United States.[48]

Comparability of standards across jurisdictions can also reduce complexity and compliance costs for banking organizations with significant cross-border operations or activities.[49] In particular, similar prudential standards enable the agencies and foreign supervisors to look to home country capital regimes when such requirements are generally consistent with international standards.[50] For example, similar prudential standards help to facilitate the Board's assessment of the capital adequacy of foreign banking organizations in connection with applications to establish operations within the United States.[51] In addition, consistent standards help ensure that foreign banking organizations with U.S. operations are subject to standards at the consolidated level that promote safety and soundness and competitive equity with U.S. banking organizations. The adoption of similar prudential standards across many jurisdictions means that, consistent with section 165 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act),[52] the Board's enhanced prudential

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[48] The Basel Committee was originally formed after the failure of Herstatt Bank in Germany in 1974, which contributed to serious disruptions to foreign currency and banking markets within and beyond Germany, demonstrating the need for better coordination among bank regulators in different jurisdictions. *See https://www.bis.org/bcbs/history.htm*.

[49] *See* GAO Report "Bank Capital Requirements - Potential Effects of New Changes on Foreign Holding Companies and U.S. Banks Abroad" (Jan. 2012), *https://www.gao.gov/assets/gao-12-235.pdf*; *see also* GAO Report "International Banking - International Coordination of Bank Supervision: The Record to Date" (Feb. 1986), *https://www.gao.gov/assets/nsiad-86-40.pdf*.

[50] *See*, *e.g.*, Board of Governors of the Federal Reserve System and U.S. Department of the Treasury, "Capital Equivalency Report" (June 1992), *https://fraser.stlouisfed.org/title/capital-equivalency-report-9009*; 12 U.S.C. 3105(j).

[51] *See, e.g.*, 12 CFR 211.24, 225.2(r)(3).

[52] Pub. L. 111-203, 124 Stat. 1376 (2010). In applying section 165 to a foreign-based bank holding company, the Dodd-Frank Act directs the Board to give due regard to the principle of national treatment and equality of competitive opportunity, and to take into account the extent to which the foreign banking organization is subject, on a consolidated basis, to home country standards that are comparable to those applied to financial companies in the United States. *See* 12 U.S.C. 5365(b)(2).

standards for large foreign banking organizations may rely on the home country capital and stress testing regimes applicable to a foreign banking organization, avoiding unnecessary duplication of requirements.[53] Additionally, comparability of standards across jurisdictions helps home country and host country supervisors, along with banking organization management and public markets, understand and monitor positions and risks across jurisdictions by providing all parties with a set of shared principles, concepts, and measuring tools.[54]

Notwithstanding these benefits, the agencies have, at various times, concluded that departures from international standards are appropriate and desirable in light of domestic requirements or considerations, or where U.S. regulators simply believe different standards are more appropriate. Consistent with previous rulemakings that implemented aspects of the Basel standards in the United States,[55] the proposal may differ from the Basel standards in certain areas to reflect factors such as specific characteristics of U.S. markets, requirements under GAAP,[56] practices of U.S. banking organizations, and U.S. legal requirements and policy objectives.[57]

G. Treatments retained from the current standardized approach

Taking the current standardized approach as a starting point, the proposal would generally adopt treatments consistent with the Basel standards when they would improve the risk

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[53] *See, e.g.*, 12 CFR 252.143(a). Absent home-country standards consistent with the Basel Capital Framework, a foreign banking organization would be required to demonstrate to the Board's satisfaction that it would meet Basel Capital Framework standards at the consolidated level were those standards to apply. *See* 79 FR 17240 (Mar. 27, 2014).

[54] *See* GAO Report "International Banking - International Coordination of Bank Supervision: The Record to Date" (Feb. 1986), *https://www.gao.gov/assets/nsiad-86-40.pdf*.

[55] For example, the GSIB surcharge framework adopted by the Board includes a second method for calculating GSIB surcharges that is different from the Basel GSIB surcharge methodology. *See* 80 FR 49082 (Aug. 14, 2015). Additionally, alignment with the Basel standards can be achieved without using all methods specified in them and, in the past, the agencies have chosen not to adopt some methods included within the Basel standards. *See, e.g.*, 61 FR 47358 (Sept. 6, 1996), 72 FR 69288 (Dec. 7, 2007), and 78 FR 62018 (Oct. 11, 2013).

[56] *See* 12 U.S.C. 1831n.

[57] *See, e.g.*, 12 U.S.C. 1831bb and 5371; 15 U.S.C. 78o-7 note.

sensitivity and consistency of the requirements applicable to covered banking organizations, do not conflict with existing U.S. law, and are appropriate for U.S. banking organizations. Many elements of the expanded risk-based approach would be consistent with the Basel standards and different in some respects from the treatment under the current standardized approach. In some cases, the current standardized approach is appropriately risk sensitive for application to Category I and II banking organizations and, therefore, the agencies are retaining those treatments with minimal or no change.[58]

III. Definition of capital

Under the proposal, all banking organizations required to apply the expanded risk-based approach, or that choose to adopt the expanded risk-based approach, would be subject to the same definition of capital. The proposal would broadly maintain the definition of capital for Category I and II banking organizations in the current capital rule, with one modification to eliminate the requirement to deduct MSAs [59] above a threshold from common equity tier 1 capital.[60] Banking organizations that choose to adopt the expanded risk-based approach would, therefore, be required to include most components of accumulated other comprehensive income in regulatory capital.

Under the current capital rule, Category I and II banking organizations must deduct from common equity tier 1 capital amounts of MSAs, temporary difference DTAs that the banking

[58] For example, the expanded risk-based approach would treat sovereign exposures, certain exposures to government-sponsored entities, and exposures to public sector entities the same as the current standardized approach.

[59] An MSA arises when a banking organization sells a loan to a third party but retains the obligation to service the loan in exchange for a fee. Banking organizations may also purchase, sell, or transfer MSAs separately from the underlying mortgage loans.

[60] In addition, the proposal would require a banking organization to deduct from common equity tier 1 capital any portion of a credit-enhancing interest only strip that does not constitute an after-tax-gain-on sale, as discussed in section IV.B.5.f. of this **SUPPLEMENTARY INFORMATION**.

organization could not realize through net operating loss carrybacks, and significant investments in the capital of unconsolidated financial institutions in the form of common stock (collectively, threshold items) that individually exceed 10 percent of the banking organization's common equity tier 1 capital minus certain deductions and adjustments. In addition, these banking organizations must deduct from common equity tier 1 capital the aggregate amount of the threshold items that exceeds 15 percent of common equity tier 1 capital.

Under the proposal, Category I and II banking organizations would no longer be required to deduct any amount of MSAs from common equity tier 1 capital and would not consider MSAs when calculating the aggregate deduction amount for temporary difference DTAs and significant investments in the capital of unconsolidated financial institutions in the form of common stock. Instead, MSAs would be subject to a 250 percent risk weight, consistent with the treatment in the current capital rule for MSAs that do not exceed the deduction thresholds.[61] MSAs can be a useful tool for banking organizations to manage interest rate risk. The value of MSAs generally increases when interest rates rise, which extends the expected duration of related servicing fees. As a result, they may provide a hedge against losses on other assets that decline in value in the same interest rate environment.

Moreover, MSAs are important for banking organizations to maintain their relationship with borrowers by retaining customer-facing relationships even after transferring the underlying loans, allowing cross-selling of products. Banking organizations can also improve efficiency by increasing scale. A deduction approach for MSAs can discourage banking organizations from

[61] The agencies' standardized approach proposal would make the same modification to the definition of regulatory capital for all other banking organizations.

creating economies of scale, which can hinder their ability to compete in mortgage underwriting or servicing businesses and to manage risks.

At the same time, MSAs have long been subject to elevated capital requirements because of the high level of uncertainty regarding the ability of banking organizations to realize value from these assets, especially under adverse financial conditions. MSAs may face significant valuation risk, which mainly stems from prepayment risk, default risk, and liquidity risk. For example, increased refinancing of mortgage loans due to lower interest rates can quickly erode the value of MSA portfolios, as can increased incidents of mortgage defaults. MSAs can also be difficult to value, as banking organization portfolios of MSAs can be heterogeneous and MSA valuations rely on assessments of future economic variables. Maintaining the 250 percent risk weight for MSAs would promote regulatory capital requirements that are commensurate with the risk of these assets.[62]

Question 11: What are the advantages and disadvantages of the proposed treatment of MSAs? What are the implications of the proposed treatment of MSAs for banking organizations' mortgage origination business? To what extent does the 250 percent risk weight appropriately reflect the risk of these assets throughout the economic cycle? Given the potential volatility of MSAs under certain circumstances, what are the advantages and disadvantages of the agencies imposing a higher limit on MSA as a percentage of common equity tier 1 capital (for example, 100 percent) and why? What are the advantages and disadvantages of differentiating the

[62] In the 2013 capital rule (78 FR 62069, Oct 11, 2013), in connection with section 475 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (12 U.S.C. 1828 note), the agencies made a finding that the treatment under the capital rule of readily marketable purchased MSAs would not have an adverse effect on the Deposit Insurance Fund or the safety and soundness of insured depository institutions. The proposal would continue to apply a 250 percent risk weight to all MSAs, while removing the threshold deduction, and the agencies continue to consider the proposed treatment to not have an adverse effect on the Deposit Insurance Fund or the safety and soundness of insured depository institutions.

treatment of MSAs based on the size of the banking organization (for example, banking organizations with assets under $10 billion or over $100 billion) or applicable capital framework (for example, banking organizations that elect the community bank leverage ratio framework)?

IV. Calculation of risk-weighted assets under the expanded risk-based approach

A. Credit risk

Credit risk arises from the possibility that an obligor, including a borrower or counterparty, will fail to perform on an obligation. While loans are a significant source of credit risk, other products, activities, and services also expose banking organizations to credit risk, including investments in debt securities and other credit instruments, credit derivatives, and cash management services. Off-balance sheet activities, such as letters of credit, unfunded loan commitments, and the undrawn portion of lines of credit, also expose banking organizations to credit risk. Certain transactions give rise to counterparty credit risk, which generally refers to the risk that a counterparty to a transaction will default before the final settlement of the transaction and will fail to make all the payments required by the transaction. Transactions that give rise to counterparty credit risk include repo-style transactions, eligible margin loans, and derivatives transactions. Counterparty credit exposure is determined by the market value of the transaction, which fluctuates with market conditions. Thus, the current exposure to a counterparty's default continuously changes and the future exposure is uncertain.

Under the proposal, a banking organization subject to the expanded risk-based approach would follow similar mechanics to those in the current standardized approach to determine its risk-weighted assets for credit risk. Such a banking organization would first determine the exposure amount of each on-balance sheet exposure, derivative contract, and off-balance sheet

commitment, trade and transaction-related contingency, guarantee, repo-style transaction, financial standby letter of credit, forward agreement, or other similar transaction (excluding certain transaction types or exposures as specified in the proposed rule). In certain cases, exposure amount is measured at the netting-set level. The banking organization would then multiply the exposure amount by the risk weight appropriate to the exposure based on the exposure type or counterparty. In addition, the proposal would allow for the recognition of certain credit risk mitigants through adjustments to the risk-weighted asset amount for protected exposures.

Section IV.A.1. of this **SUPPLEMENTARY INFORMATION** describes in general terms the approaches for determining exposure amount under the proposal; section IV.A.2. of this **SUPPLEMENTARY INFORMATION** describes the risk-weight treatment for credit exposures under the proposal; section IV.A.3. of this **SUPPLEMENTARY INFORMATION** describes the proposed exposure measurement of off-balance sheet exposures; section IV.A.4. of this **SUPPLEMENTARY INFORMATION** describes the proposed exposure measurement for counterparty credit risk-related exposures; and section IV.A.5. of this **SUPPLEMENTARY INFORMATION** describes the available approaches for recognizing the benefits of credit risk mitigants including certain guarantees, certain credit derivatives, financial collateral, and prepaid credit protection arrangements.

1. Exposure amounts

a. On-balance sheet exposure amount

Under the proposal, as under the current standardized approach, the exposure amount of an on-balance sheet exposure would generally be the banking organization's carrying value[63] of the exposure, consistent with the value of the asset on the balance sheet as determined in accordance with GAAP. Continuing to use the carrying value of an asset under GAAP to determine a banking organization's exposure amount would minimize burden and provide a consistent framework that can be easily applied across all banking organizations because, in most cases, GAAP serves as the basis for the information presented in financial statements and regulatory reports.[64]

b. Off-balance sheet exposure amount

In addition to on-balance sheet exposures, banking organizations are exposed to credit risk associated with off-balance sheet exposures. Banking organizations often enter into contractual arrangements with obligors or counterparties to provide credit or other support. Such arrangements may not be recorded on-balance sheet under GAAP until the arrangement is drawn upon. These off-balance sheet exposures often include commitments, contingent items, guarantees, certain repo-style transactions, financial standby letters of credit, and forward agreements. Under the proposal, consistent with the current standardized approach, in most

[63] *Carrying value* under §__. 2 of the current capital rule means, with respect to an asset, the value of the asset on the balance sheet of the banking organization as determined in accordance with GAAP. For all assets other than available-for-sale debt securities or purchased credit deteriorated assets, the carrying value is not reduced by any associated credit loss allowance that is determined in accordance with GAAP. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC). The exposure amount arising from an OTC derivative contract; a repo-style transaction or an eligible margin loan; a cleared transaction; a default fund contribution; or a securitization exposure would be calculated in accordance with §§__. 113, 121, or 131 of the proposal, respectively, as described in sections IV.A.4, IVA.5.b., and IV.B. of this **Supplementary Information**. The standardized approach proposal also includes a technical amendment that would modify the term adjusted allowance for credit losses (AACL) and carrying value to exclude allowance for credit losses (ACLs) on purchased seasoned loans (PSLs) in addition to those on purchased credit deteriorated (PCD) assets and available-for-sale (AFS) debt securities. The standardized approach proposal also amends the definition of AACL and carrying value to provide the same treatment as PCD assets to other assets that may in the future become subject to the gross approach following a change to GAAP by FASB.

[64] *See* 12 U.S.C. 1831n.

cases a banking organization determines the exposure amount for an off-balance sheet component of an exposure by multiplying the notional amount of the off-balance sheet component by the appropriate credit conversion factor specified in the rule. The proposed credit conversion factors would range from 10 percent to 100 percent to reflect the likelihood that a given off-balance sheet item would become an on-balance sheet credit exposure, taking into account the contractual features of the off-balance sheet item. For example, a 100 percent credit conversion factor would apply to a guarantee provided by a banking organization because the banking organization is effectively assuming the risk of the guaranteed exposure and thus such an off-balance sheet item should be converted at the full amount. In contrast, with respect to commitments, often an obligor does not draw down on the commitment or only draws down a portion of the available credit, so such off-balance sheet items would be converted at less than 100 percent. Thus, the proposal would vary the credit conversion factors according to the likelihood that different types of off-balance sheet items may become on-balance sheet credit exposures.

c. Approaches for determining exposure amount for counterparty credit risk-related transactions

The current capital rule includes several approaches that a banking organization may use to calculate the exposure amount for repo-style transactions, eligible margin loans, derivative transactions, and netting sets of such transactions. These approaches take into account the offsetting of positions and financial collateral that meets the criteria in the rule within a netting set and incorporate both current and potential future exposure. For purposes of the expanded risk-based approach, the proposal would continue to include the collateral haircut approach for eligible margin loans and repo-style transactions, and netting sets of such transactions, and the

standardized approach for counterparty credit risk (SA-CCR) for derivative contracts, netting sets of such transactions, and would expand SA-CCR to qualifying cross-product netting sets of derivative transactions and certain repo-style transactions, with modifications further described below in section IV.A.4. of this **SUPPLEMENTARY INFORMATION**.

To determine the exposure amount for eligible margin loans, repo-style transactions, or the netting sets of such transactions, the proposed expanded risk-based approach would include the collateral haircut approach with two proposed modifications to increase risk sensitivity: (1) adjustments to the market price volatility haircuts; and (2) a modified formula that reflects netting and diversification benefits, each further described below in section IV.A.4.a. of this **SUPPLEMENTARY INFORMATION**. A banking organization would have the option of applying SA-CCR to certain repo-style transactions that are subject to a qualifying cross-product master netting agreement that includes derivative transactions.

To determine the exposure amount for derivative contracts, the proposed expanded risk-based approach would require banking organizations to apply SA-CCR, with certain modifications to better reflect evolving market dynamics and the potential for increased central clearing. The agencies are proposing to revise SA-CCR to permit the netting of collateralized-to-market and settled-to-market client-facing derivative transactions and incorporate non-cleared repo-style transactions. Specifically, the agencies are proposing to permit a banking organization to elect to treat as a derivative contract any non-cleared repo-style transaction subject to a qualifying cross-product master netting agreement that also contains a derivative contract. These proposed amendments and other proposed technical revisions to SA-CCR are described below in section IV.A.4.b. of this **SUPPLEMENTARY INFORMATION**.

As stated earlier, the proposal would increase simplicity, transparency, consistency, and comparability of capital requirements by reducing banking organization's use of models. Therefore, the proposal does not include the internal models methodology (IMM) or the simple value-at-risk (VaR) methodology for measuring counterparty credit risk or the use of a banking organization's own estimates of haircuts for purposes of the collateral haircut approach.

2. Proposed risk weights for credit risk

The proposed expanded risk-based approach would introduce credit risk weights that generally align with the Basel standards and use many of the same definitions in § __.2 of the current capital rule. Some elements of the proposed expanded risk-based approach for credit risk would apply the same risk weights provided in the current standardized approach, including exposures to sovereigns, specified supranational entities[65] and multilateral development banks,[66] government sponsored entities (GSEs) in the form of senior debt and guaranteed exposures, Federal Home Loan Bank (FHLB) and Federal Agricultural Mortgage Corporation (Farmer Mac) equity exposures,[67] public sector entities (PSEs), exposures that are 90 days or more past due or

[65] Under the proposal, specified supranational entities would include the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, and the European Financial Stability Facility. Consistent with the current capital rule, exposures to such entities would continue to be subject to a zero percent risk weight for the purposes of the expanded risk-based approach.

[66] Under the proposal, multilateral development bank would include International Bank for Reconstruction and Development, the Multilateral Investment Guarantee Agency, the International Finance Corporation, the Inter-American Development Bank, the Asian Development Bank, the African Development Bank, the European Bank for Reconstruction and Development, the European Investment Bank, the European Investment Fund, the Nordic Investment Bank, the Caribbean Development Bank, the Islamic Development Bank, the Council of Europe Development Bank, and any other multilateral lending institution or regional development bank in which the U.S. government is a shareholder or contributing member or which the primary Federal supervisor determines poses comparable credit risk. Consistent with the current capital rule, exposures to these entities would continue to be subject to a zero percent risk weight for the purposes of the expanded risk-based approach

[67] For treatment of other exposures to GSEs, see discussion related to equity exposures in section IV.C. and subordinated exposures in section IV.A.2.f. of this **SUPPLEMENTARY INFORMATION**.

in nonaccrual,[68] and certain insurance assets. Consistent with statutory mandates, the proposal would also maintain the same risk-weight treatment provided in the current standardized approach to pre-sold construction loans, statutory multifamily mortgages, and high-volatility commercial real estate (HVCRE) exposures.

Relative to the advanced approaches under the current capital rule, the proposed expanded risk-based approach would result in more consistent and transparent capital requirements for credit risk exposures across banking organizations. The proposal would also facilitate comparisons of capital adequacy across banking organizations by reducing excessive, unwarranted divergence in risk-weighted assets for similar exposures. Relative to the current standardized approach, the proposal would incorporate more granular risk factors to allow for a broader range of risk weights.

Specifically, the expanded risk-based approach would introduce new risk weights for exposures to depository institutions, foreign banks, and credit unions; subordinated exposures, including those to GSEs; and real estate, retail, and corporate exposures. The proposed risk weights for each of these categories are described in the following sections of this **SUPPLEMENTARY INFORMATION**.

Question 12: What are the pros and cons of continuing the risk-weights in the current standardized approach for sovereigns, specified supranational entities and multilateral development banks, GSEs in the form of senior debt and guaranteed exposures, FHLB and Farmer Mac equity exposures, PSEs, exposures that are 90 days or more past due or in nonaccrual, insurance assets, and other exposures?

[68] Certain residential mortgage exposures that are 90 days past due or in nonaccrual would receive a higher risk weight under the proposal. *See* section IV.A.2.c.v of this **SUPPLEMENTARY INFORMATION**.

Question 13: To enhance the risk sensitivity of the rule, what alternatives to "exposures that are 90 days or more past due or in nonaccrual" should the agencies consider to identify exposures in or near default? What are the advantages and disadvantages of using an approach similar to the definition of defaulted exposures in the advanced approaches, that would include exposures where a) the banking organization has taken a partial charge-off, write-down of principal, or negative fair value adjustment on the exposure for credit-related reasons, until the banking organization has reasonable assurance of repayment and performance for all contractual principal and interest payments on the exposure; or b) a distressed restructuring of the exposure was agreed to by the banking organization, until the banking organization has reasonable assurance of repayment and performance for all contractual principal and interest payments on the exposure as demonstrated by a sustained period of repayment performance, provided that a distressed restructuring includes the following made for credit-related reasons: forgiveness or postponement of principal, interest, or fees, or an interest rate reduction?

a. Exposures to government-sponsored enterprises

The proposal would assign a 20 percent risk weight to most GSE[69] exposures, consistent with the current standardized approach. GSE exposures that are subordinated exposures or equity exposures, however, would receive higher risk weights. As discussed later in sections IV.C. and IV.A.2.f. of this **SUPPLEMENTARY INFORMATION**, equity exposures and subordinated exposures would generally be subject to an increased risk weight to reflect their heightened risk relative to senior credit exposures. As an exception to this general rule, the proposal would apply a 20 percent risk weight to all exposures to FHLB or Farmer Mac,

[69] Government-sponsored enterprise (GSE) under § __. 2 of the current capital rule means an entity established or chartered by the U.S. government to serve public purposes specified by the U.S. Congress but whose debt obligations are not explicitly guaranteed by the full faith and credit of the U.S. government. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

including equity exposures and exposures to subordinated debt instruments, which is consistent with the treatment under the current standardized approach.

b. Exposures to depository institutions, foreign banks, and credit unions

The proposal would define the scope of exposures to depository institutions, foreign banks, and credit unions in a manner that is consistent with the definitions and scope of exposures covered under the current capital rule. Under the proposal, a bank exposure would mean an exposure (such as a receivable, guarantee, letter of credit, loan, OTC derivative contract, or senior debt instrument) to a depository institution, foreign bank, or credit union.[70, 71]

The proposed treatment for bank exposures supports the simplicity, transparency, and consistency objectives of the proposal in a manner that is appropriately risk sensitive. The proposal would provide three categories for bank exposures that are ranked from the highest to the lowest in terms of creditworthiness: Grade A, Grade B, and Grade C. The assignment of a bank exposure to a category would be based on the indicators of creditworthiness of the obligor depository institution, foreign bank, or credit union. As outlined below, the proposal would rely on the current capital rule's definition of investment grade and the proposed definition of speculative grade for differentiating the credit risk of bank exposures. In addition, the proposal would incorporate publicly disclosed capital levels to differentiate the financial strength of a

[70] Under §__.2 of the current capital rule, a depository institution means a depository institution as defined in section 3 of the Federal Deposit Insurance Act, a foreign bank means a foreign bank as defined in section 211.2 of the Federal Reserve Board's Regulation K (12 CFR 211.2) (other than a depository institution), and a credit union means an insured credit union as defined under the Federal Credit Union Act (12 U.S.C. 1751 *et seq.*). *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC). Exposures to other financial institutions, such as bank holding companies, savings and loans holding companies, and securities firms, generally would be considered corporate exposures. *See* 78 FR 62087 (Oct. 11, 2013).

[71] The proposal would require banking organizations to apply a 150 percent risk weight to bank exposures that are either subordinated exposures, as described in section IV.A.2.f. of this **SUPPLEMENTARY INFORMATION**, or covered debt instruments that are not deducted.

depository institution, foreign bank, or credit union in a manner that is both objective and transparent to supervisors and the public.

More specifically, a Grade A bank exposure would mean a bank exposure for which the obligor depository institution, foreign bank, or credit union (1) is investment grade, and (2) whose most recent publicly disclosed capital ratios meet or exceed the higher of: (a) the minimum capital requirements and any additional amounts necessary to not be subject to limitations on distributions and discretionary bonus payments under the capital rules established by the prudential supervisor of the depository institution, foreign bank, or credit union, and (b) if applicable, the capital ratio requirements for the well-capitalized category under the agencies' prompt corrective action framework,[72] or under similar rules of the National Credit Union Administration.[73] For a bank exposure to be considered investment grade, a banking organization would have to determine that the obligor has adequate capacity to meet financial commitments, consistent with the current rule.[74] Further, a bank exposure to a depository institution that had opted into the community bank leverage ratio (CBLR) framework and is investment grade would be considered to be a Grade A bank exposure, including if the obligor depository institution were in the grace period under the CBLR framework.[75] As a result, under the proposal, a depository institution that uses the CBLR framework would not be required to

[72] The capital ratios used for this determination are the ratios on the depository institution's most recent quarterly Consolidated Report of Condition and Income (Call Report).

[73] *See* 12 CFR part 702 (National Credit Union Administration).

[74] Under §__.2 of the current capital rule, "investment grade" means that the entity to which the banking organization is exposed through a loan or security, or the reference entity with respect to a credit derivative, has adequate capacity to meet financial commitments for the projected life of the asset or exposure. Such an entity or reference entity has adequate capacity to meet financial commitments if the risk of its default is low and the full and timely repayment of principal and interest is expected.

[75] *See* 12 CFR 3.12(a)(1) (OCC); 12 CFR 217.12(a)(1) (Board); 12 CFR 324.12(a)(1) (FDIC). *See also* 90 FR 55048 (Dec. 1, 2025).

calculate or disclose risk-based capital ratios for purposes of qualifying as a Grade A bank exposure. Additionally, as described further in the next paragraph, a Grade A exposure to depository institutions that have opted into the CBLR framework would receive a reduced risk weight relative to other Grade A exposures.

Certain Grade A exposures to depository institutions, foreign banks, and credit unions would be subject to a 30 percent risk weight, whereas the others would be assigned a 40 percent risk weight. Specifically, a banking organization could assign a 30 percent risk weight to Grade A exposures to: (1) Category I, II, or III depository institutions with a common equity tier 1 capital ratio of 14 percent or higher and a supplementary leverage ratio (SLR) of five percent or higher; (2) depository institutions that have opted into the CBLR framework; and (3) depository institutions not subject to the SLR or CBLR framework with a common equity tier 1 capital ratio of 14 percent or higher and a tier 1 leverage ratio of five percent or higher.[76] To qualify for the 30 percent risk weight, a foreign bank obligor would have to meet the same requirements of having a 14 percent or higher common equity tier 1 capital ratio and a five percent or higher leverage ratio as determined by the applicable capital standards of the foreign bank's home country jurisdiction.[77] Under this proposed criteria, 68.3 percent of U.S. depository institutions would meet the criteria for a highly capitalized bank exposure and be assigned a 30 percent risk weight, based on Call Report data as of June 30, 2025. Grade A exposures to credit unions would be subject to the 30 percent risk weight if the obligor credit union has a net worth ratio of

[76] An exposure to a depository institution that has not opted into the CBLR framework and is not required to calculate a common equity tier 1 ratio and a SLR or tier 1 leverage ratio, as applicable, under the agencies' capital rule would not qualify for the 30 percent risk weight.

[77] The Grade A foreign bank would have to meet the five percent Basel leverage ratio level for the 30 percent risk weight, as implemented by the foreign bank's home country. The Basel leverage ratio is substantially similar to the supplementary leverage ratio under the agencies' capital rule.

9 percent or higher.[78] These requirements would be broadly consistent with those in the Basel standards and provide a preferential risk weight for institutions presenting a materially lower credit risk than other Grade A bank exposures. The 30 percent risk weight for exposures to banks with materially higher capital levels would increase risk sensitivity while maintaining competitive equity across various sizes of obligor institutions.

A Grade B bank exposure would mean a bank exposure that is not a Grade A bank exposure and for which the obligor depository institution, foreign bank, or credit union (1) is speculative grade or investment grade, and (2) whose most recent publicly disclosed capital ratios meet or exceed the higher of: (a) the applicable minimum capital requirements under capital rules established by the prudential supervisor of the depository institution, foreign bank, or credit union, and (b) if applicable, the capital ratio requirements for the adequately-capitalized category[79] under the agencies' prompt corrective action framework, or under similar rules of the National Credit Union Administration.

For a foreign bank to qualify as a Grade A or Grade B bank exposure, the proposal would require the applicable capital standards imposed by the home country supervisor to be broadly consistent with international capital standards issued by the Basel Committee. This requirement aims to maintain competitive equity and recognize creditworthiness of institutions subject to capital standards that are broadly consistent—the capital standards issued by the Basel Committee are comparable to U.S. capital rules.

[78] For comparison, a well-capitalized credit union must have a net worth ratio (NWR) of 7 percent or greater. A NWR of 9 percent was selected given that is the level used in their Complex Credit Union Leverage Ratio (CCULR) framework. The average NWR of Risk-Based Capital reporters was 9.83 percent as of 2025 Q2. *See* Quarterly Credit Union Data Summary 2025 Q2 (Page 20) and Risk-Based Capital Frequently Asked Questions | NCUA.

[79] *See* 12 CFR 6.4(b)(2) (OCC); 12 CFR 208.43(b)(2) (Board); 12 CFR 324.403(b)(2) (FDIC).

Under the proposal, an exposure to a foreign bank that is a Grade A or Grade B bank exposure and is a self-liquidating, trade-related contingent item that arises from the movement of goods and that has a maturity of three months or less may be assigned a risk weight that is lower than the risk weight applicable to other exposures to the same foreign bank. The proposed approach to providing a preferential risk weight for short-term self-liquidating, trade-related contingent items would be consistent with the current standardized approach.

In addition, an exposure would not qualify as a Grade A or Grade B bank exposure if: (1) the obligor depository institution, foreign bank, or credit union does not have capital ratios that are publicly disclosed within the last six months; or (2) the external auditor of the depository institution, foreign bank, or credit union has issued an adverse audit opinion or has expressed substantial doubt about the ability of the depository institution, foreign bank, or credit union to continue as a going concern within the previous 12 months.

A Grade C bank exposure would mean a bank exposure that does not qualify as a Grade A or Grade B bank exposure.

The proposal would address the risk that capital and foreign exchange controls imposed by a sovereign entity in which a foreign bank is located could prevent or materially impede the ability of the foreign bank to convert its currency to meet its obligations or transfer funds. The proposal would, therefore, provide a risk weight floor for foreign bank exposures based on the risk weight applicable to a sovereign exposure for the jurisdiction where the foreign bank is incorporated when (1) the exposure is not in the local currency of the jurisdiction where the foreign bank is incorporated; or (2) for an exposure to a branch of a foreign bank in a foreign jurisdiction that is not the home country of the foreign bank, the exposure is in the local currency

of the jurisdiction in which the foreign branch operates.[80] The risk weight floor would not apply to short-term self-liquidating, trade-related contingent items that arise from the movement of goods.

As provided in Table 1, the proposed risk weights for bank exposures generally would range from 20 percent to 150 percent. The proposal provides more granular and higher risk weights for bank exposures compared to the standardized approach to better reflect the range of credit risks presented by these exposures. In addition, the proposal better accounts for financial system interconnectedness inherent in exposures to depository institutions, foreign banks, and credit unions, which can pose systemic risk to the financial system.

Table 1 — Proposed Risk Weights for Bank Exposures

	Grade A Bank Exposure Meeting Additional Criteria	Grade A Bank Exposure	Grade B Bank Exposure	Grade C Bank Exposure
Base risk weight	30%	40%	75%	150%
Risk weight for a foreign bank exposure that is a self-liquidating, trade-related contingent item that arises from the movement of goods and that has a maturity of three months or less	20%	20%	50%	150%

The proposed risk weights in Table 1 for exposures to depository institutions, credit unions and foreign banks, especially those that are Grade A, reflect that those institutions present

[80] *See* Table 1 in §__.111 for the proposed sovereign risk-weight table, which is identical to Table 1 to §__.32 in the current capital rule.

reduced credit risk relative to exposures to other types of financial institutions or companies. U.S. depository institutions and credit unions are subject to strong capital requirements, are subject to robust federal supervision, and have limitations in the types of riskier financial transactions in which they can engage. Foreign banks that qualify as Grade A would have broadly consistent capital standards as U.S. depository institutions and also would be subject to regulatory and supervisory frameworks broadly equivalent with those in the Basel standards. Additionally, the proposed risk weights for bank exposures under the expanded risk-based approach would be more risk sensitive than the current standardized approach as the expanded risk-based approach incorporates more credit-risk indicators and characteristics of the obligor depository institution, foreign bank, or credit union.

Question 14: What would be the advantages and disadvantages of the agencies treating an exposure to a nonbank financial institution such as foreign holding companies or broker dealer subsidiary institutions that are located in a foreign jurisdiction as a foreign bank exposure, when that foreign jurisdiction has determined that the given type of financial institution is regulated and supervised in that jurisdiction in a manner equivalent to banks?

Question 15: What are the advantages and disadvantages of assigning a 30 percent risk weight to Grade A bank exposures meeting the additional criteria discussed above? To what extent would the lower 30 percent risk weight contribute to the pro-cyclicality of bank capital requirements? To what extent might the risk weight contribute to credit contraction during economic downturns and credit acceleration during economic expansions?

Question 16: The agencies seek comment on the appropriateness of the additional requirements that must be met to for Grade A bank exposures to qualify for a 30 percent risk weight. What alternative calibration of common equity tier 1 capital ratio and supplementary

leverage ratio levels would be appropriate for Category I, II, and III Grade A depository institutions to receive a 30 percent risk weight? What alternative calibration of common equity tier 1 capital ratio and tier 1 leverage ratio levels would be appropriate for depository institutions not subject to the CBLR framework or SLR to receive a 30 percent risk weight? Please provide analytical support.

Question 17: The agencies seek comment on whether the proposed treatment for exposures to depository institutions, foreign banks, and credit unions is appropriate for uninsured trust banks that do not have capital ratios that were publicly disclosed within the last six months, including such entities that issue payment stablecoins. What alternative calibrations or approaches should the agencies consider to differentiate the financial strength of uninsured trust banks that would be appropriately risk-sensitive and consistent with the objective of establishing simple, transparent, and consistent requirements?

Question 18: What would be the advantages and disadvantages of the agencies requiring broadly consistent capital standards in the foreign jurisdiction, as well as robust regulatory and supervisory frameworks that are consistent with international capital standards issued by the Basel Committee for certain foreign banks to qualify as Grade A and Grade B? What are appropriate alternative indicators that could be used to determine whether a foreign bank qualifies for a Grade A classification? What are the advantages and disadvantages of looking to the applicable capital requirements in foreign jurisdictions for determining if a Grade A foreign bank meets the thresholds described above to be eligible to apply a 30 percent risk weight? What alternatives should the agencies consider to determine whether a foreign bank has sufficient capital to warrant applying a 30 percent risk weight to a Grade A foreign bank exposure?

c. Real estate exposures

The proposal would define a real estate exposure as an exposure that is neither a sovereign exposure nor an exposure to a PSE and that is (1) a residential mortgage exposure, (2) primarily secured by collateral in the form of real estate,[81] (3) a pre-sold construction loan,[82] (4) a statutory multifamily mortgage,[83] (5) a high volatility commercial real estate (HVCRE) exposure,[84] or (6) an acquisition, development, or construction (ADC) exposure. A pre-sold construction loan, a statutory multifamily mortgage, and an HVCRE exposure are collectively referred to as statutory real estate exposures for purposes of this **SUPPLEMENTARY INFORMATION**. Under the proposal, the risk weight treatment for statutory real estate exposures would be unchanged from the current standardized approach.

Risks related to exposures secured by real estate depend on what type of real estate secures the exposure. Residential real estate loans generally have lower historical charge off rates than commercial real estate exposures.[85] Residential real estate exposures are generally amortizing, often have stricter underwriting standards for leverage than commercial real estate, and often are easier to value. In addition, residential and commercial real estate exposures that

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[81] For purposes of the proposal, "primarily secured by collateral in the form of real estate" should be interpreted in a manner that is consistent with the current definition for "a loan secured by real estate" in the Call Report and Consolidated Financial Statements for Holding Companies (FR Y–9C) instructions.

[82] The Resolution Trust Corporation Refinancing, Restructuring, and Improvement Act of 1991 (RTCRRI Act) mandates that each agency provide in its capital regulations (i) a 50 percent risk weight for certain one-to-four-family residential pre-sold construction loans that meet specific statutory criteria in the RTCRRI Act and any other underwriting criteria imposed by the agencies, and (ii) a 100 percent risk weight for one-to-four-family residential pre-sold construction loans for residences for which the purchase contract is cancelled. *See* 12 U.S.C. 1831n note.

[83] The RTCRRI Act mandates that each agency provide in its capital regulations a 50 percent risk weight for certain multifamily residential loans that meet specific statutory criteria in the RTCRRI Act and any other underwriting criteria imposed by the agencies. *See* 12 U.S.C. 1831n note.

[84] Section 214 of the Economic Growth, Regulatory Relief, and Consumer Protection Act imposes certain requirements on high volatility commercial real estate acquisition, development, or construction loans. Section 214 of Pub. L. No. 115-174, 132 Stat. 1296 (2018). *See* 12 U.S.C. 1831bb.

[85] *See* "Charge Off Rates for Loans and Leases at Commercial Banks," *https://www.federalreserve.gov/releases/chargeoff/delallsa.htm*.

are deemed prudently underwritten reflect reduced credit risk relative to those real estate exposures that are not prudently underwritten.[86] The proposal would therefore differentiate the credit risk of real estate exposures that are not statutory real estate exposures by introducing the following categories: regulatory residential real estate exposures, regulatory commercial real estate exposures, ADC exposures, and other real estate exposures. The applicable risk weight for these real estate exposures would depend on (1) whether the real estate exposure meets the definitions of regulatory residential real estate exposure, regulatory commercial real estate exposure, ADC exposure, or other real estate exposure, described below; (2) whether the repayment of such exposures is dependent on the cash flows generated by the underlying real estate (such as rental properties, leased properties, and hotels); and (3) in the case of regulatory residential or regulatory commercial real estate exposures, the loan-to-value (LTV) ratio of the exposure.

The proposed criteria for differentiating the credit risk of real estate exposures would be based on information already collected and maintained by a banking organization as part of its mortgage lending activities and underwriting practices. Under the proposal, regulatory residential and regulatory commercial real estate exposures would be required to meet prudential criteria that are intended to reduce the likelihood of default relative to other real estate exposures. These criteria include a requirement that loans are made in accordance with prudent underwriting standards as described in the existing Interagency Guidelines for Real Estate Lending Policies (real estate lending guidelines).[87] Loans that are prudently underwritten are less likely to lead to

[86] *See* sections IV.A.2.c.i. and ii of this **SUPPLEMENTARY INFORMATION** for more information about the prudential criteria differentiating regulatory residential and regulatory commercial real estate exposures.

[87] *See* 12 CFR part 34, appendix A to subpart D (OCC); 12 CFR part 208, appendix C (Board); 12 CFR part 365, appendix A (FDIC).

credit losses. Thus, the risk weights proposed for these exposures are lower than for other real estate exposures.

Moreover, real estate loans for which repayment is dependent on the cash flows generated by the real estate can expose a banking organization to elevated credit risk relative to real estate exposures where repayment is not dependent on cash flows generated by the property,[88] as the obligor may be unable to meet its financial commitments when cash flows from the property decrease, such as when tenants default or properties are unexpectedly vacant.[89] Exposures that are dependent on the cash flows generated by real estate to repay the loan can also be affected by local market conditions and, thus, present elevated credit risk relative to exposures that are serviceable by the income, cash, or other assets of the obligor. For example, an increase in the supply of competitive rental property can lower demand and suppress cash flows needed to support repayment of a loan.

In addition, LTV ratios are a meaningful risk indicator for the credit quality of a real estate exposure because the amount of an obligor's equity in a real estate property is negatively correlated with default risk and provides banking organizations with a degree of protection against losses.[90] LTV ratios are also one of several key factors that market participants,

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[88] Loans secured by real estate where the repayment of the loan does not depend on cash flows generated by the real estate include owner-occupied properties, where repayment of the loan is generally based on the income or revenue of the borrower. *See* additional discussion of dependent on the cash flows generated by the real estate in section IV.A.2.c.iii. of this **SUPPLEMENTARY INFORMATION**.

[89] *See* Board of Governors of the Federal Reserve System, *Financial Stability Report* (November 2020), https://www.federalreserve.gov/publications/files/financial-stability-report-20201109.pdf.

[90] *Id.*, at 30. For evidence on the correlation between LTV and loss rates in mortgage loans, *see* Laurie Goodman and Jun Zhu, "Bank Capital Notice of Proposed Rulemaking – A Look at the Provisions Affecting Mortgage Loans in Bank Portfolios," Urban Institute (2023), *https://www.urban.org/sites/default/files/2023-09/Bank Capital Notice of Proposed Rulemaking.pdf*; and Sewin Chan, Andrew Haughwout, Andrew Hayashi, and Wilbert van der Klaauw, "Determinants of Mortgage Default and Consumer Credit Use: The Effects of Foreclosure Laws and Foreclosure Delays," Federal Reserve Bank of New York, Staff Report No. 732 (2015), *https://www.newyorkfed.org/medialibrary/media/research/staff_reports/sr732.pdf*.

including banking organizations, consider for differentiating credit risk.[91] Therefore, under the proposal, exposures with lower LTV ratios generally would receive a lower risk weight than comparable real estate exposures with higher LTV ratios.

The proposed scope, risk drivers, and risk weights described below are generally consistent with those in the Basel standards.

i. *Regulatory residential real estate exposures*

Under the proposal, a regulatory residential real estate exposure would be defined as a first-lien residential mortgage exposure (as defined in §__.2 of the current capital rule) that is not an ADC exposure, a pre-sold construction loan, a statutory multifamily mortgage, or an HVCRE exposure, provided the exposure meets certain prudential criteria.[92] First, the loan would be required to be secured by a residential property that is either owner-occupied or rented. Second, the exposure would be required to be made in accordance with prudent underwriting standards, including standards relating to the supervisory LTVs as described in the interagency real estate lending guidelines.[93] Third, during the underwriting process, the banking organization would be required to apply underwriting policies that account for the ability of the obligor to repay based on clear and measurable underwriting standards that enable the banking organization to evaluate these credit factors. The agencies expect these underwriting standards to be consistent with the

[91] *See* Avery et al, "Credit Risk, Credit Scoring, and the Performance of Home Mortgages," Federal Reserve Board of Governors, Federal Reserve Bulletin (1996), *https://www.federalreserve.gov/pubs/bulletin/1996/796lead.pdf*. *See also* 12 CFR part 1240.

[92] Consistent with the standardized approach in the capital rule, under the proposal, when a banking organization holds the first-lien and junior-lien(s) residential mortgage exposures and no other party holds an intervening lien, the banking organization must combine the exposures and treat them as a single first-lien regulatory residential real estate exposure, if the first-lien meets all of the criteria for a regulatory residential real estate exposure.

[93] For more information on determining the value of the property, *see* section IV.A.2.c.iv. of this **SUPPLEMENTARY INFORMATION**.

agencies' safety and soundness and real estate lending guidelines.[94] Fourth, the property must be valued in accordance with the proposed requirements included in the proposed LTV ratio calculation, as discussed below in section IV.A.2.c.iv. of this **SUPPLEMENTARY INFORMATION**. Finally, the loan must not have been modified or restructured.[95]

As discussed, residential real estate exposures that meet these criteria present relatively lower credit risk than other residential real estate exposures. Loans on property that are owner-occupied or rented have both a consistent expected flow of payments on the loan, as well as an occupant of the property that is present. Evaluating the ability of the obligor to repay using consistent and transparent metrics allows banking organizations and supervisors to more easily compare the obligor's ability to repay with other borrowers in the banking organization's loan portfolio. Modified or restructured loans reflect that there might be deterioration in the ability of the borrower to repay and, though not necessarily indications of likely default, merit higher applicable risk weights than those that have no such indications of potential deterioration in credit quality.

ii. *Regulatory commercial real estate exposures*

The proposal would define a regulatory commercial real estate exposure as a real estate exposure that is not a regulatory residential real estate exposure, an ADC exposure, a pre-sold construction loan, a statutory multifamily mortgage, or an HVCRE exposure, provided the exposure meets several prudential criteria. First, the exposure would be required to be primarily

[94] *See* 12 CFR part 30, appendix C and 12 CFR Part 34, appendix A to subpart D (OCC); 12 CFR part 208, appendix C (Board); 12 CFR parts 364 and 365 (FDIC).

[95] Consistent with the current standardized approach, a residential real estate loan that is modified or restructured solely pursuant to the U.S. Treasury's Home Affordable Mortgage Program is not modified or restructured under this criterion for regulatory residential real estate exposures.

secured by fully completed real estate.[96] Second, the banking organization would be required to hold a first priority security interest in the property that is legally enforceable in all relevant jurisdictions.[97] Third, the exposure would be required to be made in accordance with prudent underwriting standards, including standards relating to supervisory LTVs. Fourth, during the underwriting process, the banking organization would be required to apply underwriting policies that account for the ability of the obligor to repay in a timely manner based on clear and measurable underwriting standards that enable the banking organization to evaluate these credit factors. The agencies expect that these underwriting standards would be consistent with the agencies' safety and soundness and real estate lending guidelines. The property would be required to be valued in accordance with the requirements included in the proposed LTV ratio calculation, as discussed below. Finally, the loan must not have been modified or restructured.

As previously discussed, commercial real estate exposures that meet these criteria would present relatively lower credit risk than other commercial real estate exposures. Loans on property that is still under construction are reliant on the completion of the property for repayment of the loan, which can be delayed or interrupted by many factors such as changes in market condition or financial difficulty of the obligor.[98] A perfected, first priority security interest would provide the banking organization with priority for repayment in the case of bankruptcy of the obligor.[99] Evaluating the ability of the obligor to repay using consistent and

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[96] Commercial properties where the construction is complete and the property is ready for its intended use.

[97] When the banking organization also holds a junior security interest in the same property and no other party holds an intervening security interest, the banking organization must treat the exposures as a single first-lien regulatory commercial real estate exposure, if the first lien meets all the criteria for a regulatory commercial real estate exposure.

[98] *See*, *e.g.*, *https://www.occ.gov/publications-and-resources/publications/comptrollers-handbook/files/commercial-real-estate-lending/pub-ch-commercial-real-estate.pdf*.

[99] *See*, *e.g.*, *https://www.occ.treas.gov/static/ots/exam-handbook/ots-exam-handbook-214aa.pdf*.

transparent metrics allows banking organizations and supervisors to more easily compare the obligor's ability to repay with other borrowers in the banking organization's loan portfolio. As with residential exposures, permanent commercial real estate loans that have been modified or restructured indicate there might be a deterioration in the ability of the borrower to repay, meriting higher applicable risk weights than those that have no such indications.

Question 19: What are the pros and cons of the proposed requirements for real estate exposures to qualify as regulatory commercial real estate exposures? How would the requirement for the banking organization to hold a first-priority security interest in the property that is legally enforceable in all relevant jurisdictions impact loans to different types of commercial borrowers? For those commercial real estate exposures where banking organizations do not hold a first priority security interest in the underlying property, what, if any, alternatives should the agencies consider that would result in the same priority for repayment in the case of bankruptcy of the obligor?

iii. *Exposures that are dependent on the cash flows generated by the real estate*

As noted above, the proposal would differentiate the risk weight of regulatory residential, regulatory commercial, and other real estate exposures based on whether the obligor's ability to service the loan is dependent on cash flows generated by the real estate.

If the underwriting process at origination of the real estate exposure considers any cash flows generated by the real estate securing the loan, such as from lease or rental payments or from the sale of the real estate, as a source of repayment, then the exposure would meet the proposal's definition of dependent on the cash flows generated by the real estate. Evaluating the dependence on cash flows generated from the real estate is a conservative and straightforward measure of credit risk. Reliance on cash flows from the property for repayment of a loan

indicates increased risk of nonpayment relative to when the borrower has sufficient funds from other sources, such as income or business profits, for full repayment of the loan. Given their increased credit risk, the proposal would assign higher risk weights to exposures that are dependent on proceeds or cash flows generated from the real estate itself to service the loan.

Under the proposal, additional loan characteristics can affect whether an exposure would be considered dependent on cash flows generated by the real estate. The proposal's definition of dependent on the cash flows generated by the real estate would exclude any residential mortgage exposure that is secured by the obligor's principal residence, as such mortgage exposures present reduced credit risk relative to real estate exposures that are secured by the obligor's non-principal residence.[100] For residential properties that are not the obligor's principal residence, including vacation homes and other second homes, such properties would be considered dependent on the cash flows generated by the real estate unless the banking organization has relied solely on the obligor's personal income and resources, rather than rental income (or resale or refinance of the property), to ascertain the obligor's capacity to repay the loan.[101]

For regulatory commercial real estate exposures, the applicable risk weights similarly would be determined based on whether repayment is dependent on the cash flows generated by the real estate. For example, the agencies would expect that rental office buildings, hotels, and

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[100] *See* Breck Robinson, Federal Reserve Bank of Richmond, and Richard M. Todd, Federal Reserve Bank of Minneapolis, "The Role of Non-Owner-Occupied Homes in the Current Housing and Foreclosure Cycle," Pg. 6, which cites multiple studies that loans on non-owner occupied properties have higher loss rates on mortgages to non-occupant owners than on mortgages to owner-occupants, at least after controlling for credit scores and other standard underwriting criteria.
https://www.richmondfed.org/~/media/richmondfedorg/publications/research/working_papers/2010/pdf/wp10-11.pdf.

[101] For example, if (1) a borrower purchases a two-unit property with the intention of making one unit their principal residence, (2) the borrower intends to rent out the second unit to a third party, and (3) the banking organization considered the cash flows from the rental unit as a source of repayment, the exposure would not meet the proposal's definition of dependent on the cash flows generated by the real estate because the property securing the exposure is the borrower's principal residence.

shopping centers leased to tenants are often dependent on the cash flows generated by the real estate for repayment of the loan. In the case of a loan to an obligor to purchase or refinance real estate where the obligor will operate a business, such as a retail store or factory, and rely solely on the revenues from the business or resources of the obligor other than rental, resale, or other income from the real estate for repayment, the exposure would not be considered dependent on the cash flows generated by the real estate under the proposal. Similarly, a loan to the owner-operator of a farm would not be considered dependent on the cash flows generated by the real estate under the proposal if the obligor will rely solely on the sale of products from the farm or other resources of the obligor other than rental, resale, or other income from the real estate for repayment.

Question 20: What are the pros and cons of the agencies establishing a "materially" dependent on cash flows test that would consider the source of repayment to be partly from the borrower's own resources and partly from the cash flows/income generated by the real estate? What, if any, quantitative threshold should the agencies consider in determining whether a real estate exposure is dependent on cash flows generated by the real estate (for example, the cash flows generated from real estate reflect between 5 and 50 percent of amount needed for repayment of the loan)? Further, if the agencies decide to adopt a quantitative threshold, either for regulatory residential or regulatory commercial real estate exposures, what should the agencies consider when calibrating such a threshold for regulatory residential, and separately for regulatory commercial real estate exposures, and what would be the appropriate calibration levels for each? Provide specific examples, including calculations and supporting data. Relatedly, please provide views on how to define cash flows and what expenses, if any, the agencies should consider.

iv. *Calculating the loan-to-value ratio*

The proposal would require a banking organization to use LTV ratios to assign a risk weight to a regulatory residential or regulatory commercial real estate exposure. The proposed calculation of the LTV ratio would be generally consistent with the real estate lending guidelines except with respect to the recognition of private mortgage insurance, as described below.

Under the proposal, an LTV ratio would be calculated as the extension of credit divided by the value of the property. The extension of credit would mean the total outstanding amount of the loan including the notional total of any undrawn committed amount of the loan. The total outstanding amount of the loan would reflect the current amortized balance as the loan pays down, which would allow a banking organization to assign a lower risk weight to a loan over time as the principal is repaid. Similarly, if an extension of credit increases, a banking organization would reflect that increase in the LTV ratio.

For purposes of the LTV ratios in Tables 2, 3, 4, 5 below, a banking organization would calculate the loan amount without making any adjustments for credit loss provisions or private mortgage insurance. Not recognizing private mortgage insurance for these purposes would be consistent with the current capital rule's definition of eligible guarantor, which does not recognize an insurance company engaged predominately in the business of providing credit protection (such as a monoline bond insurer or re-insurer).[102] During the 2007-2009 housing market stress, the performance of private mortgage insurance deteriorated at the same time as the underlying exposures.[103] Under the proposal and consistent with the current capital rule, private

[102] A guarantor is not an eligible guarantor under the current capital rule if the guarantor's creditworthiness is positively correlated with the credit risk of the exposures for which it has provided guarantees. 78 FR 62141 (Oct.11, 2013).

[103] *See* Laurie Goodman and Karan Kuhl, "Sixty Years of Private Mortgage Insurance in the United States," The Urban Institute Housing Finance Policy Center, August 2017. Pg. 7, *https://www.urban.org/sites/default/files/publication/92676/2017_08_18_sixty_years_of_pmi_finalizedv3_3.pdf*.

mortgage insurance is considered when banking organizations identify if a residential mortgage exposure is made in accordance with prudent underwriting standards. As discussed earlier, under the proposal a residential mortgage exposure must be made in accordance with prudent underwriting standards and must meet other requirements to be considered regulatory residential real estate exposures and therefore eligible to be risk weighted according to the LTV table described below.[104]

The value of the property would mean the value at the time of origination of all real estate properties securing the extension of credit, including the increased estimated value of the property if the property is being improved by an extension of credit. The value of the property would also include the fair value of any readily marketable collateral and other acceptable collateral, as defined in the real estate lending guidelines, that secures the extension of credit.

For exposures subject to the Real Estate Lending, Appraisal Standards, and Minimum Requirements for Appraisal Management Companies or Appraisal Standards for Federally Related Transactions (collectively, the appraisal rule),[105] the market value of real estate would be a valuation that meets all requirements of that rule. For exposures not subject to the appraisal rule, the proposal would require that (1) the market value of real estate be obtained from an independent valuation of the property using prudently conservative valuation criteria; and (2) the valuation be done independently from the banking organization's origination and underwriting process. Most real estate exposures held by insured depository institutions are subject to the agencies' appraisal rule, which also provides for evaluations in some cases, and provides for

[104] As described in section IV.A.2.c.i. of this **SUPPLEMENTARY INFORMATION**, regulatory residential mortgage exposures must be made in accordance with prudent underwriting standards, including standards relating to supervisory LTVs, which allow for the consideration of private mortgage insurance for permanent mortgage or home equity loans on owner-occupied, 1- to 4-family residential properties.

[105] *See* 12 CFR part 34, subpart C or subpart G (OCC); 12 CFR part 208, subpart E or 12 CFR part 225, subpart G (Board); 12 CFR part 323 (FDIC).

certain exceptions, such as where a lien on real estate is taken out of an abundance of caution. To help ensure that the value of the real estate is determined in a prudently conservative manner, the proposal would also provide that, for exposures not subject to the appraisal rule, the valuations of the real estate properties would need to exclude expectations of price increases and be adjusted downward to take into account the potential for the current market prices to be significantly above the values that would be sustainable over the life of the loan.

In addition, when the real estate exposure finances the purchase of the property, the value would be the lower of (1) the actual acquisition cost of the property and (2) the market value obtained from either (i) the valuation requirements under the appraisal rule (if applicable) or (ii) as described above, an independent valuation of the property using prudently conservative valuation criteria and that is separate from the banking organization's origination and underwriting process.

Using the value of a property at origination when calculating the LTV ratio protects against volatility risk or short-term market price inflation. For purposes of the LTV ratio calculation, the proposal would require banking organizations to use the value of the property at the time of origination, except under the following circumstances: (1) the banking organization's primary Federal supervisor requires the banking organization to revise the property value downward; (2) an extraordinary event occurs resulting in a permanent reduction of the property value (for example, a natural disaster); or (3) modifications are made to the property that increase its market value and are supported by a new appraisal or independent evaluation using prudently conservative criteria. These proposed exceptions are intended to constrain the use of values other than the value of the property at loan origination only to exceptional circumstances that are sufficiently material to warrant use of a revised valuation.

For purposes of determining the value of the property, the proposal would use the definition of readily marketable collateral and other acceptable collateral from the real estate lending guidelines. Therefore, readily marketable collateral would mean insured deposits, financial instruments, and bullion in which the banking organization has a perfected security interest. Financial instruments and bullion would need to be salable under ordinary circumstances with reasonable promptness at a fair market value determined by quotations based on actual transactions, by an auction, or by a similarly available daily bid and ask price market. Other acceptable collateral would mean any collateral in which the banking organization has a perfected security interest that has a quantifiable value and is accepted by the banking organization in accordance with safe and sound lending practices. Under the proposal, other acceptable collateral would include, among other items, unconditional irrevocable standby letters of credit for the benefit of the banking organization. Readily marketable collateral and other acceptable collateral must be appropriately discounted by the banking organization consistent with the banking organization's usual practices for making loans secured by such collateral. The reasonableness of a banking organization's underwriting criteria would continue to be reviewed through the supervisory process to help ensure its real estate lending policies are consistent with safe and sound banking practices.

Question 21: What other approaches should the agencies consider to recognize private mortgage insurance in the determination of the risk weight of residential mortgage exposures? What would be the pros and cons of providing explicit recognition of private mortgage insurance in the calculation of LTV ratio for purposes of determining the risk weights for regulatory real estate exposures? What, if any, increases in procyclicality and incentives for increased risk-taking by banking organizations might such recognition create? What conditions could the

agencies impose on such recognition to mitigate concerns about the wrong-way risk of monoline credit insurance? In recognition that private mortgage insurance may not provide protection under all relevant stress events, what are the advantages and disadvantages of recognizing a portion (such as 50 percent) of the value of the private mortgage insurance in determining the total outstanding amount of the loan in the calculation of the LTV ratio? Please provide any data and analysis supporting alternative approaches.

v. *Risk weights for regulatory residential real estate exposures*

Under the proposal, a banking organization would assign a risk weight to a regulatory residential real estate exposure based on the exposure's LTV ratio without PMI and whether the exposure is dependent on the cash flows generated by the real estate, in accordance with Tables 2 and 3 below.[106] LTV ratios and dependence on cash flows generated by the real estate would factor into the risk-weight treatment for real estate exposures under the proposal because these risk factors are meaningful determinants of credit risk for real estate exposures. The proposed risk weights in each LTV ratio category are intended to reflect differences in the credit risk of these exposures.[107]

Table 2. Proposed Risk Weights for Regulatory Residential Real Estate Exposures That Are Not Dependent on the Cash Flows of the Real Estate

	LTV Ratio ≤ 50%	50% < LTV Ratio ≤ 60%	60% < LTV Ratio ≤ 80%	80% < LTV Ratio ≤ 90%	90% < LTV Ratio ≤ 100%	LTV Ratio > 100%
Risk Weight	**20%**	**25%**	**30%**	**40%**	**50%**	**70%**

[106] Residential real estate exposures that are 90 days past due or in nonaccrual would be assigned a 150 percent risk weight, unless the exposure is a residential mortgage exposure that is not dependent on the cash flows generated by the real estate, which would be assigned a 100 percent risk weight.

[107] The risk weight assigned to loans does not impact the appropriate treatment of loans under the agencies' other regulations and guidance, such as the supervisory LTV limits under the real estate lending guidelines.

Table 3. Proposed Risk Weights for Regulatory Residential Real Estate Exposures That Are Dependent on the Cash Flows of the Real Estate

	LTV Ratio ≤ 50%	50% < LTV Ratio ≤ 60%	60% < LTV Ratio ≤ 80%	80% < LTV Ratio ≤ 90%	90% < LTV Ratio ≤ 100%	LTV Ratio > 100%
Risk Weight	**30%**	**35%**	**45%**	**60%**	**75%**	**105%**

The proposed risk weights in Tables 2 and 3 would appropriately balance the benefits of risk sensitivity, transparency, and consistency in the risk weight for real estate exposures across banking organizations subject to the expanded risk-based approach. Applying lower risk weights to loans with lower LTVs aligns the credit risk of the loan with the applicable risk weight, and relying on cash flows from the property for repayment has historically indicated increased credit risk that merits higher risk weights.

The proposal would also recognize the reduction in credit risk of regulatory residential real estate exposures due to amortization, as the obligor pays down principal and builds equity.[108] The risk weights for such exposures could decrease throughout the life of the respective loans as obligors make payments. For example, analysis by the agencies indicates that residential mortgage loans issued in the 90 percent to 100 percent LTV ratio category would have a lifetime average risk weight approximately five percentage points lower than the applicable risk weight at origination.[109]

[108] For purposes of the LTV ratio calculation, the proposal would require banking organizations to use the value of the property at the time of origination, except under limited circumstances. *See also* Luis Otero González, Pablo Durán Santomil, Milagros Vivel Búa and Rubén Lado Sestayo, "The Impact of Loan-to-Value on The Default Rate of Residential MBS" Journal of Credit Risk (July 2016), *https://www.risk.net/journal-of-credit-risk/2465626/the-impact-of-loan-to-value-on-the-default-rate-of-residential-mortgage-backed-securities*.

[109] *See* section VII of this **SUPPLEMENTARY INFORMATION** for more information explaining the analysis of the estimated "effective" risk weights applicable to residential mortgage exposures under the proposal.

The agencies recognize that some home buyers, especially low- and moderate-income home buyers or those in historically underserved markets, are more likely to be obligors of loans with higher LTV ratios and thus higher risk weights under the approach described above. As a result, borrowing costs for some low- and moderate-income home buyers could be higher relative to obligors with lower LTV ratios. However, many low-to-moderate income borrowers obtain mortgages through loan programs administered by the Federal Housing Administration (FHA) or Department of Veterans Affairs (VA). Consistent with the current capital rule, banking organizations generally would apply a 20 percent risk weight to real estate exposures guaranteed by the U.S. government through the FHA or VA under the proposal. In addition, the proposed risk weights applicable to regulatory residential real estate exposures that have high LTV ratios would be generally consistent with the applicable risk weights under the current standardized approach for residential real estate exposures. The agencies estimate that the proposed risk-based capital requirements for regulatory residential real estate exposures that are not dependent on the cash flows of the real estate—reflecting both credit risk weights and estimated operational risk requirements—would be lower than the applicable risk-based capital requirements for residential real estate mortgages exposures under the current standardized approach for exposures with LTV ratios at or below 90 percent and very similar for such exposures with LTV ratios between 90 and 99 percent.[110]

[110] According to agency analysis, effective risk weights, which reflect both credit risk weights and estimated add-ons to reflect operational risk, are relatively constant or falling for almost all types of mortgage obligors relative to the applicable 50 percent risk weight for prudently underwritten residential mortgage exposures in the current standardized framework. For instance, for low-to-moderate income obligors, the total equivalent risk weight under the proposal is estimated to be 46 percent (42 percent from credit risk and 4 percent from operational risk). *See* the economic analysis presented in section VIII.D.2 of this **SUPPLEMENTARY INFORMATION**.

Question 22: Given the proposed treatment of residential real estate exposures, how, if at all, would the proposed risk weights impact home affordability and home ownership opportunities, particularly for low-to-moderate income obligors or customers in other historically underserved markets? Please provide supporting data.

Question 23: What alternative approaches for determining applicable risk weights to residential real estate exposures should the agencies consider and why? Please provide data supporting alternative approaches, including factors that were the basis for underwriting the loans and the historical repayment performance of the loans.

vi. *Risk weights for regulatory commercial real estate exposures*

Similar to the proposed approach to regulatory residential real estate exposure, the proposal would require a banking organization to assign a risk weight to a regulatory commercial real estate exposure based on the exposure's LTV ratio and whether the exposure is dependent on the cash flows generated by the real estate, in accordance with Tables 4 and 5 below. Further, in the case of a regulatory commercial real estate exposure that is not dependent on cash flows generated by the real estate for repayment, a banking organization would be required to assign the risk weight applicable to the obligor, as reflected in Table 4. If the LTV ratio of such an exposure is greater than 60 percent, and the banking organization does not have sufficient information about the exposure to determine what the risk weight applicable to the obligor would be, the banking organization would be required to assign a 100 percent risk weight to the exposure unless the exposures is 90 days more past due or in nonaccrual.[111]

[111] Commercial real estate exposures that are 90 days past due or in nonaccrual would be assigned a 150 percent risk weight.

Table 4: Proposed Risk Weights for Regulatory Commercial Real Estate Exposures That Are Not Dependent on the Cash Flows of the Real Estate

	LTV ratio ≤ 60%	LTV ratio > 60%
Risk weight	Lesser of 60% risk weight or the risk weight applicable to the obligor	Risk weight applicable to the obligor

Table 5: Proposed Risk Weights for Regulatory Commercial Real Estate Exposures That Are Dependent on the Cash Flows of the Real Estate

	LTV ratio ≤ 60%	60% < LTV ratio ≤ 80%	LTV ratio > 80%
Risk weight	70%	90%	110%

Regulatory commercial real estate exposures not dependent on cash flows generated by the real estate often involve situations where the borrowing entity occupies the property or the obligor has significant other cash flows to repay the loan that the banking organization considered when underwriting the loan. While these exposures generally present lower credit risk relative to exposures to commercial real estate dependent on cash flows generated by the real estate, or other types of corporate exposures where real estate collateral is not present, the risk profile of the obligor impacts the applicable risk weight to appropriately reflect the credit quality of the obligor in addition to the real estate collateral. Therefore, the applicable risk weights in Table 4 for regulatory commercial real estate exposures not dependent on cash flows generated by the real estate reflect both the LTV ratio and the risk profile of the obligor. In contrast, because the risks of commercial real estate exposures dependent on cash flows generated by the real estate are more dependent on the property, the risk weights in Table 5 reflect only the LTV ratio as a risk driver and generally are higher relative to Table 4.

vii. *ADC exposures that are not HVCRE exposures*

Under the proposal, the agencies would define an ADC exposure as an exposure secured by real estate for the purpose of acquiring, developing, or constructing residential or commercial real estate properties, as well as all land development loans, and all other land loans. Some ADC exposures meet the definition of HVCRE exposure in §__.2 of the capital rule and would be assigned a 150 percent risk weight.[112] Real estate exposures that meet the definition of ADC exposure but do not meet the definition of HVCRE exposure and are not 90 days past due or in nonaccrual would be assigned a 100 percent risk weight under the proposal. The proposed regulatory treatment for ADC exposures would not take into consideration cash flow dependency or the LTV ratio. ADC exposures are mostly short-term or bridge loans to cover construction or development, or lease up or sales phases of a real estate project, rather than amortizing permanent loans for completed residential or commercial real estate. ADC exposures have heightened risk compared to permanent commercial real estate exposures, reflecting uncertainty for unforeseen issues with construction or market conditions, compared to the expected cash flow on a fully leased and constructed commercial property. The proposal would be consistent with the current standardized approach, as ADC exposures are generally subject to a risk weight of 100 percent or more under the current standardized approach.[113]

viii. *Other real estate exposures*

[112] Section 214 of the Economic Growth, Regulatory Relief, and Consumer Protection Act (EGRRCPA) imposes certain requirements on high volatility commercial real estate acquisition, development, or construction loans. Section 214 of Pub. L. No. 115-174, 132 Stat. 1296 (2018); 12 U.S.C. 1831bb.

[113] OCC Commercial Real Estate Lending Handbook 2.0, *https://www.occ.gov/publications-and-resources/publications/comptrollers-handbook/files/commercial-real-estate-lending/pub-ch-commercial-real-estate.pdf*.

The proposal would define other real estate exposures as real estate exposures that are not regulatory commercial real estate exposures, regulatory residential real estate exposures, ADC exposures, or any of the statutory real estate exposures.

An exposure meeting the proposed definition of other real estate exposure poses heightened credit risk as a result of not meeting the definitions of regulatory residential and regulatory commercial real estate, respectively, and accordingly would be assigned a higher risk weight. Specifically, the proposal would require a banking organization to assign a 150 percent risk weight to an other real estate exposure, unless the exposure is a residential mortgage exposure that is not dependent on the cash flows generated by the real estate, which would be assigned a 100 percent risk weight.

For example, a banking organization would assign a 150 percent risk weight to real estate exposures that are dependent on the cash flows generated by the underlying real estate, such as a rental property, and that do not meet the regulatory residential or regulatory commercial real estate exposure definitions. Loans for the purpose of acquiring real estate and reselling it at higher value that do not qualify as ADC loans and do not meet the definition of regulatory residential real estate exposures would be assigned a 150 percent risk weight as other real estate exposures. The proposed 150 percent risk weight also would provide a regulatory capital incentive for banking organizations to originate real estate exposures in accordance with the prudential qualification requirements for regulatory residential and commercial real estate exposures, respectively.

The 100 percent risk weight would apply to other real estate exposures that are a residential mortgage exposure that is not dependent on the cash flows generated by the real estate, which could include junior lien home equity lines of credit (where the banking

organization does not also hold the first lien) and other second mortgages, as these exposures reflect heightened credit risk compared to first-lien exposures because the banking organization would receive repayment only after more senior creditors in the instance of the obligor defaulting. In addition, if a banking organization does not adequately evaluate the creditworthiness of an obligor for an owner-occupied residential mortgage exposure, or if the obligor has inadequate creditworthiness or capacity to repay the loan, the exposure would not be considered prudently underwritten and would be assigned a 100 percent risk weight instead of the lower risk weights included in Table 2 for regulatory residential mortgage exposures not dependent on the cash flows generated by the real estate.

d. Retail exposures

The proposal would increase the credit risk sensitivity of the capital requirements applicable to retail exposures by assigning risk weights that would vary depending on product type and the degree of portfolio diversification. The proposal would introduce a new definition of retail exposure, which would be defined as an exposure that is not a real estate exposure, and is an exposure to a natural person or persons or an exposure to a small or medium-sized entity (SME)[114] that meets the proposed definition of a regulatory retail exposure described below. Including an exposure to an SME in the definition of a retail exposure recognizes that many small companies have characteristics more similar to those of a natural person than of a larger corporation with respect to financial resources and the time horizon under which it operates. The proposed definition of a retail exposure would be narrower in scope than the current capital

[114] Under the proposal, an SME would mean an entity in which the reported annual revenues or sales for the consolidated group of which the entity is a part are less than or equal to $50 million for the most recent fiscal year. This scope is generally consistent with the definition of an SME under the Basel standards and also corresponds with the maximum receipts-based size standard for small businesses set by the Small Business Administration, which varies by industry and does not exceed $47 million per year. *See* 13 CFR part 121.

rule's existing definition of a retail exposure under the advanced approaches, which includes a broader range of exposures, including residential real estate-related exposures. Because the proposal would include separate risk-weight treatments for real estate exposures that account for the underlying collateral, the proposed definition of a retail exposure would not include real estate exposures.

The proposal would differentiate the risk-weight treatment for retail exposures based on whether the exposure (1) qualifies as a regulatory retail exposure, (2) further qualifies as a transactor exposure; or (3) does not qualify for either of the previous categories and therefore is treated as an other retail exposure. The proposed risk weights assigned to retail exposures consider characteristics such as payment history and exposure size the latter of which is individually generally small in dollar-per-loan volume for exposures captured within the scope of the proposal's retail exposure definition. The proposed definitions of a regulatory retail exposure and a transactor exposure outlined below include key criteria for broadly categorizing the relative credit risk of retail exposures.

To qualify as a regulatory retail exposure, the proposal would require an exposure to be in the form of any of the following credit products: a revolving credit or line of credit (such as a credit card, charge card, or overdraft) or a term loan or lease (such as an installment loan, auto loan or lease, or student or educational loan). In addition, under the proposal, the amount of retail exposures to a single obligor and its affiliates that a banking organization could treat as regulatory retail exposures would be limited. Specifically, the regulatory retail exposure category would exclude any retail exposure to a single obligor and its affiliates that, in the aggregate with any other retail exposures to that obligor or its affiliates, including both on- and

off-balance sheet exposures, exceeds a combined total of $1 million (aggregate limit).[115] Limiting the types of products and the dollar amount of exposures to a single obligor that would qualify as regulatory retail exposures under the proposal would help ensure that the regulatory retail treatment applies only to a set of small exposures to a diversified group of obligors. A banking organization would include all outstanding and committed but unfunded regulatory retail exposures in determining the aggregated total to a single obligor and its affiliates.

Under the proposal, if an exposure to an SME does not meet the eligible product criterion and the aggregate limit criterion described above, then none of the exposures to that SME would qualify as retail exposures and all the exposures to that SME would be treated as corporate exposures.

The proposal would define a transactor exposure as a regulatory retail exposure that is a credit facility where the balance has been repaid in full at each scheduled repayment date for the previous twelve months or an overdraft facility where there has been no drawdown over the previous twelve months. If a single obligor had both a credit facility and an overdraft facility from the same banking organization, the banking organization would separately evaluate each facility to determine whether it meets the definition of a transactor exposure. An exposure would not be a transactor exposure if the credit facility has a balance or the facility includes installment payments, even if the obligor was not required to make a payment, including when the credit facility had a promotional offer such as a zero percent interest.

[115] The $1 million threshold for a retail exposure to qualify as regulatory retail would be indexed using CPI-W. *See* section II.E. of this **SUPPLEMENTARY INFORMATION**. For an off-balance sheet exposure, the full notional amount of the exposure would apply towards the $1 million threshold. If a retail exposure to a single obligor and its affiliates does exceed the $1 million threshold, then none of the exposures to that obligor would qualify as regulatory retail exposures.

Under the proposal, a banking organization would assign a risk weight of 45 percent to a regulatory retail exposure that is a transactor exposure and a 75 percent risk to a regulatory retail exposure that is not a transactor exposure. All other retail exposures would be assigned a 100 percent risk weight. The proposed relatively low 45 percent risk weight for a transactor exposure is appropriate because such obligors have a demonstrated history of full and timely repayment. A regulatory retail exposure that is not a transactor exposure warrants the proposed 75 percent risk weight, which would be lower than the proposed 100 percent risk weight for all other retail exposures, due to mitigating factors related to size or concentration risk. Any retail exposure that would not qualify as a regulatory retail or a transactor exposure warrants a risk weight of 100 percent. The proposed retail categories, risk weights, and risk indicators are largely consistent with the Basel standards.

Question 24: What, if any, additional criteria or alternatives should the agencies consider to help ensure that the regulatory retail treatment is limited to a group of diversified retail obligors? What alternative thresholds or calibrations should the agencies consider for purposes of retail exposures? Please provide supporting data in your response.

Question 25: What, if any, changes to the methodology for the aggregate limit calculation should the agencies consider? What are the pros and cons of treating the amount of retail exposures to a single obligor, when aggregated, below $1 million as regulatory retail exposures, while the amount of exposures above $1 million to the same obligor in aggregate would be treated as other retail exposures? The agencies seek comment on whether there is a differentiation of risk to the same obligor for exposures above and below the aggregate limit.

e. Corporate exposures

A corporate exposure under the proposal would be an exposure to a company that does not fall under any other exposure category under the proposal. This scope would be consistent with the definition found in §__.2 of the current capital rule. For example, an exposure to a company that also meets the proposed definition of a real estate exposure would be a real estate exposure rather than a corporate exposure for purposes of the proposal.

As described in more detail below, the proposal would differentiate the risk weights of corporate exposures based on credit risk by considering such factors as the general creditworthiness of the obligor; each exposure's level of subordination and the expected source of repayment.[116] First, a banking organization would be permitted to assign a 65 percent risk weight to a corporate exposure that is an exposure to a company that is investment grade based on the banking organization's internal ratings system, subject to the criteria outlined further below. Second, consistent with the current standardized approach, a banking organization would assign risk weights of 2 percent or 4 percent to certain exposures to a qualifying central counterparty.[117] Third, a banking organization would assign a 100 percent risk weight to a project finance exposure that is in the operational phase; otherwise, such an exposure would receive a 130 percent risk weight.

Fourth, a banking organization would assign a 100 percent risk weight to a corporate exposure that is for the purpose of acquiring or financing equipment or physical commodities where repayment of the exposure is dependent on the physical assets being financed or acquired.

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[116] The proposal would require banking organizations to apply a 150 percent risk weight to corporate exposures that are either subordinated exposures, as described in section IV.A.2.f. of this **SUPPLEMENTARY INFORMATION**, or covered debt instruments that are not deducted. *See* the Federal Reserve Board's rule on "Total Loss-Absorbing Capacity, Long-Term Debt, and Clean Holding Company Requirements for Systemically Important U.S. Bank Holding Companies and Intermediate Holding Companies of Systemically Important Foreign Banking Organizations" 12 CFR part 252.

[117] *See* 12 CFR 3.32(f)(2) and (3) (OCC); 12 CFR 217.32(f)(2) and (3) (Board); 12 CFR 324.32(f)(2) and (3) (FDIC).

This would include exposures that finance income-producing assets or projects that engage in non-real estate activities where the obligor entity itself has no independent capacity to repay the loan.

Finally, a banking organization would assign a 100 percent risk weight to all other corporate exposures. Assigning a 100 percent risk weight to all other corporate exposures broadly reflects the relative risk of such corporate exposures, as exposures not deemed investment grade generally pose greater credit risk than that of investment grade corporate exposures.

i. *Investment grade companies*

Under the proposal, a banking organization would be permitted to assign a 65 percent risk weight to a corporate exposure that is not a subordinated exposure and is an exposure to a company that the banking organization, using one or more internal credit risk rating systems that meet certain requirements, determines is investment grade, as that term is defined in §__.2 of the capital rule. The definition of investment grade, which would remain unchanged under the proposal, requires that the entity has adequate capacity to meet its financial commitments for the projected life of the asset or exposure.[118] The rule further provides that an entity has adequate capacity to meet financial commitments if the risk of its default is low and the full and timely repayment of principal and interest is expected. Thus, the investment grade classification is intended to apply to companies of high credit quality. [119]

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[118] *See* 12 CFR 3.2 (definition of investment grade) (OCC); 12 CFR 217.2 (definition of investment grade) (Board); 12 CFR 324.2 (definition of investment grade) (FDIC).

[119] The use of the investment grade definition in the current capital rule was expanded in 2013 as part of a set of alternatives to external credit ratings for calculating risk-weighted assets for certain exposures, to implement section 939A of the Dodd Frank Act. These alternative creditworthiness standards were designed to be consistent with safety and soundness while also exhibiting risk sensitivity similar to external credit rating categories. *See* 15 U.S.C. 78o-7 note. Prior to the 2013 capital rule, investment grade was used in several areas of the capital rule, including in

Corporate exposures typically exhibit significant differences in default probabilities, loss severities, and correlation with broader economic conditions based on many factors including the financial strength and stability of the obligor. An investment grade designation would provide a mechanism to increase risk sensitivity in the capital framework by subdividing corporate exposures by credit risk. Further, assigning separate risk weights for corporate exposures to investment grade companies and non-investment grade companies would align capital requirements more closely with actual risk.

To help promote the consistency and reliability of a banking organization's investment grade determinations for purposes of assigning a 65 percent risk weight to a corporate exposure and to promote comparability in such determinations across banking organizations, the proposal would set forth requirements for any internal credit risk rating system used by banking organizations for such purposes. Additionally, a banking organization would have to meet proposed requirements when validating such systems.

The proposal would require that the internal credit risk rating system that a banking organization would rely upon to make investment grade determinations also be used to inform material business or risk management decisions, such as those related to accounting, regulatory reporting, risk management and measurement, loan loss reserve estimation, capital planning, loan pricing, or supporting board of directors' decision making. Using existing systems would allow banking organizations to leverage existing data on obligors that are used for other purposes to support their investment grade determinations under the proposal, thus reducing regulatory

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the market risk framework, the treatment of securitization and equity exposures, and in the requirements for recognizing certain guarantees and collateral in the calculation of risk-weighted assets. *See* Risk-Based Capital Guidelines: Market Risk, 77 FR 53060 (Aug. 30, 2012) (when the concept was initially introduced). In the now-superseded capital rule that contained such references, a long-term credit rating of BBB- or better and a short-term credit rating of A3 or better were provided as examples of credit ratings considered to be investment grade. *See* Risk-Based Capital Standards: Advanced Capital Adequacy Framework – Basel II, 72 FR 69288, (Dec. 7, 2007).

burden. In addition, given their importance in fundamental business processes, such systems are subject to internal controls, oversight, and validation processes that help ensure their reliability.

The banking organization would be required to define which obligor rating grades within its internal credit risk rating system(s) are considered to be investment grade, as that term is defined in § __.2 of the capital rule. Because the rating assessment and the corresponding determination of investment grade would occur at the obligor level, such determinations would not include exposure level loss given default factors, such as credit enhancements, transaction structure, and collateral.[120] The proposal would require the internal credit risk rating system to assign a rating grade for each obligor in an accurate and timely manner, no less frequently than annually and whenever the banking organization receives new material information regarding the creditworthiness of the obligor. The proposal would also require the internal credit risk rating system to incorporate both quantitative and qualitative factors relating to the historical and projected patterns of payment behaviors, the financial situation and performance of each obligor, and any relevant developments that affect the investment grade determination. Examples of quantitative risk factors fitting these characteristics include, but are not limited to, metrics relating to cash flow available to cover debt obligations, levels of equity relative to debt, and quantities of liquid assets relative to liabilities. Qualitative risk factors could include the business model and economic sector of the obligor, the obligor's willingness to repay, and market conditions. A banking organization would not be permitted to rely solely on third-party assessments of credit risk in its rating of obligors for purposes of determining investment grade status. The proposal would require a banking organization, at least annually, to validate the

[120] Under the proposal, credit risk mitigation techniques could not be used to support investment grade determinations. *See* section IV.A.5. of this **SUPPLEMENTARY INFORMATION** for a description of how credit risk mitigants, such as guarantees and collateral, can reduce the risk-weighted asset amount for certain exposures.

robustness, consistency, and reliability of its internal credit risk rating system, using data from at least one full credit cycle and taking care to ensure that benign and stressful periods are appropriately represented.

As part of the validation of the internal credit rating system, the proposal would require a banking organization to evaluate whether the performance of the obligors identified by the internal credit risk rating system as investment grade is consistent with the definition of investment grade in § __.2 of the capital rule, including by benchmarking the investment grade ratings resulting from the internal credit risk rating system with external information relating to the creditworthiness of obligors. Such benchmarking may include comparisons to external credit ratings of obligors produced by third parties. Using external information as part of validating the internal credit risk rating system could identify areas for improvement in the system and may enhance consistency in investment grade determinations across banking organizations.

Also, as part of the validation, the proposal would require a banking organization to assess the reliability, accuracy, completeness, timeliness, and appropriateness of the data sources used as part of the investment grade determinations. The proposal would require a banking organization to incorporate available information that is reasonably expected to support a robust evaluation of the internal credit rating system, including information regarding the performance of companies that have ceased operations or that have been sold to a third party to address potential survivorship bias. Properly accounting for obligors that are sold to a third party or that cease operations would reduce the likelihood of rating grades being skewed.

The proposal also would require a banking organization to ensure that the validation process is independent of the internal credit risk system's development, implementation, and operation, or subject the validation process to an independent review of its adequacy and

effectiveness. These requirements around independence would help ensure the objectivity, reliability, and integrity of the validation process.

Consistent with requirements under the current advanced approaches, the proposal would require the validation process to incorporate default data covering a period of at least five years and include a period of stress. If the banking organization has relevant data that extends beyond the five-year period, it would be required to incorporate that data into the validation process. The banking organization also would not be permitted to place undue weight on data from periods of favorable or benign economic conditions relative to economic downturn conditions. Appropriately reflecting and balancing all relevant data over at least five years would help support an accurate credit assessment.

Question 26: The agencies seek comment on the proposed treatment of corporate exposures to companies that the banking organization determines are investment grade. What, if any, operational challenges might the proposed approach pose for banking organizations? How should the agencies consider addressing such challenges?

Question 27: The agencies seek comment on the pros and cons of an alternative approach to determining eligibility for the 65 percent risk weight that would include requirements that banking organizations demonstrate that the obligors meet certain quantitative thresholds using commonly defined metrics such as probability of default in order to demonstrate if the obligor merits an investment grade rating. What, if any, operational challenges or limitations might numerical threshold requirements pose for banking organizations in meeting the proposed ratings criteria?

Question 28: What would be the pros and cons of requiring a banking organization to receive prior approval of its internal credit risk rating system from its primary Federal

supervisor before applying the preferential 65 percent risk weight compared to evaluation of its compliance with the capital rule requirements by its primary Federal supervisor during routine supervisory review processes? The agencies are seeking feedback on the benefits that a preapproval process may provide versus the operational burden imposed by such a process.

ii. *Project finance exposures*

The proposal would define a project finance exposure as a corporate exposure for which the banking organization relies on the revenues generated by a single project (typically a large and complex installation, such as a power plant, manufacturing plant, transportation infrastructure, telecommunications installation, or other similar installation), both as the source of repayment and as security for the exposure. A project finance exposure could take the form of financing the construction of a new installation or a refinancing of an existing installation, with or without improvements. In addition, a project finance exposure also must: (1) be to an obligor entity that was created specifically to finance the project, operate the physical assets of the project, or do both, and (2) the borrowing entity must only have an immaterial amount of assets, activities, or sources of income, apart from revenues from the activities of the project being financed. The primary determinant of credit risk for a project finance exposure is the variability of the cash flows expected to be generated by the project being financed rather than the general creditworthiness of the borrowing entity or the market value or sale of the project or the real estate on which the project sits.[121]

Under the proposal, a project finance exposure would receive a 130 percent risk weight during the pre-operational phase and a 100 percent risk weight during the operational phase of

[121] Exposures that are guaranteed by the government or considered a general obligation or revenue obligation exposure to a PSE would not qualify as a project finance exposure.

the project. The proposal would define a project finance operational phase exposure as a project finance exposure for which the project has a positive net cash flow that is sufficient to support the debt service and expenses of the project and any other remaining contractual obligations, in accordance with the banking organization's applicable loan underwriting criteria for permanent financings, and for which the outstanding long-term debt of the project is declining. Prior to the operational phase classification, the proposal would require a banking organization to treat a project finance exposure as being in the pre-operational phase and assign a 130 percent risk weight to the exposure. The pre-operational phase would be the period between the origination of the loan and the time at which the banking organization determines that the project has entered the operational phase. Relative to the operational phase, the pre-operational phase presents increased uncertainty that the project will be completed in a timely and cost-effective manner, and produce expected revenue, which warrants the application of a higher risk weight. For example, market conditions could change significantly between commencement and completion of the project. In addition, unanticipated supply shortages or other challenges could disrupt timely completion of the project and the expected timing of the transition to the operational phase. These unanticipated changes could impact the ability of the project to generate cash flows as projected and to repay creditors.

Under the proposal, an exposure that is considered to be secured by collateral in the form of real estate[122] where the banking organization relies on real estate collateral to grant credit,

[122] Although it is common for the banking organization to take a mortgage over the real property and a lien against other assets of the project for security and lender control purposes, a project finance exposure would not be considered a real estate exposure because the banking organization does not rely on real estate collateral to grant credit. As noted in section IV.A.2.c of this Supplementary Information, for purposes of the proposal, "secured by collateral in the form of real estate" in the context of the proposed real estate exposure definition should be interpreted in a manner that is consistent with the current definition for "a loan secured by real estate" in the Call Report and FR Y–9C instructions.

would not be considered a project finance exposure and would be assigned a risk weight as described in section IV.A.2.c. of this **SUPPLEMENTARY INFORMATION**.

f. Subordinated exposures

The proposal would introduce a definition and risk weight treatment for subordinated exposures. Subordinated exposures present a greater risk of loss to an investing banking organization relative to more senior exposures to the same issuer or borrower because subordinated exposures have a lower priority of repayment in the event of default. The proposed definition of a subordinated exposure would capture exposures that are financial instruments, such as debt securities and loans, and present heightened credit risk but are not equity exposures, as outlined in section IV.C. of this **SUPPLEMENTARY INFORMATION**. The proposal would define a subordinated exposure as a corporate exposure, a bank exposure, or an exposure to a GSE, that is subordinated by its terms or separate intercreditor agreement to the general creditors of the obligor, or an exposure to preferred stock that is not an equity exposure. A subordinated exposure would not include a retail exposure or a debt security issued by a sovereign, public sector entity, multilateral development bank, or supranational entity, or an exposure that would be captured under the securitization framework.

For these purposes, an exposure would be subordinated if the documentation creating or evidencing such indebtedness (or a separate intercreditor agreement) provides for the issuer's or obligor's general creditors to rank senior to the payment of such indebtedness in the event the issuer or obligor becomes the subject of a bankruptcy or other insolvency proceeding. The scope of the definition of a subordinated exposure is meant to capture the types of entities that issue subordinated instruments and for which the level of subordination is a meaningful determinant of the credit risk of the instrument. The definition also captures instances where a banking

organization makes or purchases a loan that is subordinated to the general creditors of the obligor. Limiting the scope of subordinated exposures to those junior to general creditors, as proposed, would apply a heightened risk weight to only those exposures for which subordination results in a heightened credit risk relative to general creditors.

The proposal would apply a 150 percent risk weight to exposures that meet the definition of a subordinated exposure, consistent with the Basel standards. Relative to the current standardized approach, the proposal provides more risk-sensitive approaches for several exposure categories, including bank exposures, corporate exposures, and exposures to GSEs, as described above in sections IV.A.2.a.-c. of this **SUPPLEMENTARY INFORMATION**. The relative risk associated with those exposures and the applicable risk weights for those exposures are based on those exposures being in a senior loss position. Therefore, the applicable risk weights for a subordinated exposure should reflect the heightened credit risk of such exposures.

Question 29: The agencies seek comment on the scope of the proposed definition of a subordinated exposure. What, if any, operational challenges might the proposed definition pose for banking organizations, and how should the agencies consider addressing such challenges? The agencies seek comment on what, if any, exposures the proposed definition would capture that commenters believe would not reflect heightened credit risk that merits a heightened risk weight? The agencies also seek comment on what, if any, subordinated exposures the agencies have excluded from the proposed definition that merit a heightened risk weight?

3. Off-balance sheet exposures

The proposal would better capture the risk of certain off-balance sheet exposures relative to the current standardized approach by revising the definition of commitment to clarify the off-balance sheet exposures that would be subject to risk-based capital requirements, modifying the

credit conversion factors applicable to commitments, and introducing an exposure methodology for commitments without pre-set limits.

a. Definition of commitment

The current capital rule defines a commitment as any legally binding arrangement that obligates a banking organization to extend credit or to purchase assets.[123] Such an arrangement is treated as a commitment even when the banking organization has the unilateral right to cancel the arrangement at any time. The agencies have received questions from banking organizations regarding whether certain types of arrangements, such as advised credit lines and uncommitted lines, would be commitments even if they are unconditionally cancelable. In addition, the agencies have observed an inconsistent application of the current definition of commitment. The proposal would revise the definition of commitment to clarify that any contractual arrangement under which a banking organization and an obligor agree to the terms applicable to one or more future extensions of credit, purchases of assets, or issuances of credit substitutes by the banking organization is a commitment, whether or not the arrangement is unconditionally cancelable. Consistent with the current capital rule, an unconditionally cancelable commitment would include a commitment that permits a banking organization to, at any time, with or without cause, refuse to extend credit, purchase assets, or issue credit substitutes under the arrangement (to the extent permitted under applicable law). Similarly, the proposal clarifies that a contractual arrangement to extend credit, purchase assets, or issue credit substitutes, but which does not obligate the banking organization to do so, is also considered a commitment that is

[123] *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

unconditionally cancelable.[124] This approach would promote comparable treatment across banking organizations subject to the capital rule.

Commitments represent an arrangement where the banking organization could expect to purchase assets or to extend credit to an obligor, in which case the credit becomes an on-balance sheet asset. The scope of the definition is, therefore, not intended to be limited to those situations in which the banking organization is obligated to provide some amount of credit to an obligor. The agencies do not, however, intend for the definition of commitment to include arrangements where a banking organization has merely offered potential terms to a potential obligor or that continue to be subject to negotiation between the parties. For the purpose of the regulatory capital rule, a commitment does not and would not include pre-approval letters for residential mortgage loans, credit card offers, or other offers that have not yet been agreed upon by both parties to the transaction.

Examples of arrangements that would generally be considered commitments under the proposal include fronting commitments, where a banking organization agrees to fund the obligations of other members of a syndicate of lenders, and commitment letters, where a banking organization agrees to provide financing in connection with an acquisition or other transaction to be entered into by the obligor. The proposal would also include other off-balance sheet activities such as advised lines or "uncommitted" facilities as commitments (even if they are unconditionally cancelable or provide that the banking organization is not obligated to perform). For example, an arrangement under which a banking organization retains full discretion as to whether to extend credit to a potential borrower, but under which the banking organization and

[124] The proposal would remove the definition of "unconditionally cancelable," and revise the definition of "commitment" to indicate which commitments are considered unconditionally cancelable.

the potential borrower have agreed to the material terms on which such lending would take place if the banking organization chose to extend credit, is an unconditionally cancelable commitment under the proposal. An unconditionally cancelable commitment also includes an arrangement where a banking organization provides an initial line of credit with an additional amount that the banking organization may extend in the future subject to prior approval by the banking organization, with the agreed upon terms of the future unconditionally cancelable line.

Exposures without pre-set limits on the amount of credit that can be extended would also be unconditionally cancelable commitments under the proposal. With some retail products, such as with charge cards, the banking organization does not disclose a pre-set credit limit to its obligors. For charge cards, or similar types of off-balance sheet exposures, each attempt to borrow by an obligor is individually underwritten at the time of purchase and requires the approval of the banking organization. Nevertheless, because the banking organization and the borrower have agreed to the material terms on which such lending would take place, such arrangements meet the definition of commitment and, therefore, should be treated as unconditionally cancelable commitments for regulatory capital purposes.[125]

Question 30: The agencies seek comment on the proposed definition of commitment. Does the proposal appropriately capture as off-balance sheet exposures arrangements where the banking organization is not legally obligated to extend credit, purchase assets, or issue credit substitutes but which nonetheless arise out of a contractual arrangement to extend credit or purchase assets? To what extent would the proposed definition affect a banking organization's business practices regarding commitments and similar arrangements, including how banking

[125] *See* section IV.A.3.c. of this **SUPPLEMENTARY INFORMATION** for the proposed methodology to determine the exposure amount for retail exposures with no pre-set limit.

organizations treat such arrangements for regulatory capital and reporting purposes? Please provide any rationale or data that may be helpful for the agencies to consider.

b. Credit conversion factors

Consistent with the current rule, under the proposed rule a banking organization would calculate the exposure amount of an off-balance sheet exposure by multiplying the off-balance sheet component, which is usually the contractual amount, by the applicable credit conversion factor. The resulting exposure amount would then be assigned to the relevant risk-weight category for the exposure. The proposed expanded risk-based approach would incorporate the same credit conversion factors from the current capital rule, except with respect to commitments.[126]

Relative to the current standardized approach and consistent with the Basel standards, the proposal would simplify the credit conversion factors applicable to the unused portion of a commitment that is not unconditionally cancelable relative to the current standardized approach. For these commitments, the proposal would no longer differentiate credit conversion factors by original maturity of one year or less and greater than one year.[127] Under the proposal, a commitment that is not unconditionally cancelable would be subject to a credit conversion factor

[126] Note issuance facilities and revolving underwriting facilities are forms of revolving credit. Notes issued under note issuance facilities and revolving underwriting facilities are short-term instruments issued under a legally binding medium-term contractual arrangement. Under a revolving underwriting facility, the underwriting banking organization agrees to provide loans should the issue fail, but under a note issuance facility the banking organization could either lend to the issuer or purchase the outstanding notes. Consistent with the current rule and with the Basel standards, the proposal would require banking organizations to apply a 50 percent credit conversion factor to the off-balance sheet amount of note issuance facilities and revolving underwriting facilities, regardless of whether a lower credit conversion factor would otherwise apply.

[127] Currently, commitments that are not unconditionally cancelable with an original maturity of one year or less receive a 20 percent credit conversion factor and those with an original maturity of more than one year receive a 50 percent credit conversion factor. 12 CFR 3.33(b)(2) (OCC); 12 CFR 217.33(b)(2) (Board); 12 CFR 324.33(b)(2) (FDIC).

of 40 percent regardless of the maturity of the facility.[128] This would remove the one-year mark as a dividing line between substantially different treatments, which would remove any regulatory incentive to structure transactions around that line. The 40 percent credit conversion factor would align with international standards and reflect that most outstanding commitments that are not unconditionally cancelable have a maturity greater than one year. [129]

For the unused portion of a commitment that is unconditionally cancelable[130] by the banking organization, the proposal would require a banking organization to apply a credit conversion factor of 10 percent. Under the current capital rule, unconditionally cancelable commitments receive a credit conversion factor of zero percent. Although unconditionally cancelable commitments allow banking organizations to cancel such commitments at any time without prior notice, subject to compliance with consumer protection laws, in practice, risk management practices of the banking organization may constrain the organization's willingness to cancel such commitments.[131] In addition, banking organizations may extend credit or provide funding to support the viability of obligors to which the banking organization has significant ongoing exposure, even when obligors are under economic stress. For example, banking organizations may have incentives to preserve substantial or core customer relationships when

[128] Under the proposal, a 40 percent CCF would also apply to commitments that are not unconditionally cancelable commitments for purposes of calculating the total leverage exposure for the supplementary leverage ratio framework and for the calculation of the Size Category of the FR Y-15 Systemic Risk Report form.

[129] The FR Y-9C indicates (see HC-R Part II items 18.a and b) that prior to application of the credit conversion factor, as of Q2 2025, 84 percent of the exposure and 85 percent of the standardized risk-weighted assets of Category I and II bank holding companies have original maturity exceeding one year.

[130] As discussed in section IV.A.3.a. of this **SUPPLEMENTARY INFORMATION**, the proposal would provide that a commitment is unconditionally cancelable if by its terms, it either: (a) provides that a banking organization is not obligated to extend credit, purchase assets, or issue credit substitutes; or (b) permits a banking organization to, at any time, with or without cause, refuse to extend credit, purchase assets, or issue credit substitutes under the arrangement (to the extent permitted under applicable law).

[131] *See*, e.g., 12 CFR 1002.9 (adverse action notices), 12 CFR 1026.9(c) (subsequent disclosure requirements for open-end credit), and 12 CFR 1026.40(f) (limitations on changes to home equity lines of credit).

there is a deterioration in creditworthiness that may otherwise, such as for less substantial customer relationships, cause the banking organization to cancel a commitment. For these reasons, the agencies are proposing nonzero credit conversion factors for unconditionally cancelable commitments.

Under the proposal, certain retail credit card exposures would be subject to reduced risk-weights relative to the current standardized approach, as discussed in section IV.A.2.d. of this **SUPPLEMENTARY INFORMATION**. However, the overall risk-weighted asset amount associated with such exposures may be higher relative to the current standardized approach due to the increase in the credit conversion factors described above.[132]

Question 31: What additional factors, if any, should the agencies consider for determining the applicable credit conversion factors for commitments?

Question 32: What other approaches to setting a credit conversion factor for unconditionally cancelable commitments should the agencies consider and why? To what extent and under what circumstances should an obligor's historical usage patterns for unconditionally cancelable commitments that are transactor exposures affect the credit conversion factor for such exposures? What average utilization rate (for example, 10 percent) over what time period (for example, 24 months) would support a credit conversion factor lower than 10 percent? Please include any relevant data.

Question 33: What are the advantages and disadvantages relative to the proposal of using the current treatment for commitments, that are not unconditionally cancelable which

[132] For additional considerations of the proposed approach, data on credit conversion factors, and on the impact of the proposal on credit cards, *see* the economic analysis presented in section VIII.E.1. of this **SUPPLEMENTARY INFORMATION.**

differentiates credit conversion factors based on maturity, and would apply a 20 percent credit conversion factor to those commitments with an original maturity of one year or less, and a 50 percent credit conversion factor to those with an original maturity of more than one year?

Question 34: What are the advantages and disadvantages of applying the proposed 40 percent credit conversion factor for commitments regardless of maturity that are not unconditionally cancelable to the supplementary leverage ratio framework and to the Size Category of the FR Y-15?

c. Commitments with no pre-set limit

Most off-balance sheet exposures, such as credit card lines, allow obligors to borrow up to a specified amount. However, some off-balance sheet exposures such as charge cards do not have an explicit contractual pre-set credit limit. For commitments that are retail exposures that do not have an express contractual maximum amount or pre-set limit, the proposal would include an approach to calculate a proxy for the committed but undrawn amount of the commitment (undrawn exposure amount).

For commitments that are retail exposures, the undrawn exposure amount would be calculated by using the exposure's highest drawn amount over the previous 24 months as an indicator of the amount of credit a banking organization is likely to extend to an obligor in the future. Specifically, under the proposal, a banking organization would first identify the largest drawn amount by a retail obligor over the prior 24 months or, if the banking organization has offered the product to the obligor for fewer than 24 months, the largest drawn amount since the commitment was first issued. The off-balance sheet exposure amount would be calculated by first subtracting the current drawn amount from the largest drawn amount and then multiplying

this difference by the applicable credit conversion factor.[133] The risk-weighted asset amount would be the off-balance sheet exposure amount multiplied by the applicable risk weight for the obligor.

A substantial share of uncapped commitments are in the form of retail charge cards, and these exposures have characteristics that suggest the highest drawn balance method described above is a reasonable proxy to estimate the undrawn exposure amount. A charge card does not have a pre-set credit limit, its balance is generally required to be paid in full at the end of each statement period, and charge card transactions are generally underwritten separately and reviewed by the issuing banking organization for approval or denial. Therefore, a charge card obligor's spending pattern, which reflects a banking organization's approval of the charge card obligor's usage, is indicative of the off-balance sheet exposure amount for a retail charge card.

As an example of the proposed treatment, assume a retail obligor's charge card had a maximum drawn amount of $4,000 during the period of the prior 24 months and a current drawn amount of $3,000.[134] To determine the off-balance sheet exposure amount of the charge card, a banking organization would (1) identify the maximum drawn amount over the prior 24 months ($4,000), (2) subtract the applicable drawn amount of $3,000 from $4,000 ($1,000), and (3) multiply $1,000 by the applicable credit conversion factor (assuming a credit conversion factor of 10 percent, $100). For this example, assume the obligor's charge card would qualify as a regulatory retail exposure that is a transactor exposure. Applying the proposed 45 percent risk weight for transactor exposures to the off-balance sheet exposure amount of $100 would result in

[133] Under the proposal, the methodology for calculating the undrawn exposures amount for retail commitments with no explicit contractual pre-set limit would also apply for purposes of calculating total leverage exposure for the supplementary leverage ratio.

[134] The maximum balance would reflect the highest drawn amount on any date during the previous 24 months for the retail account with no pre-set limit over the period.

a risk-weighted asset amount of $45, which would apply in addition to the risk-weighted asset amount of $1,350 for the on-balance sheet exposure (the drawn amount of $3,000).

Question 35: What are the advantages and disadvantages of the proposed treatment for commitments to retail obligors with no express contractual maximum amount or pre-set limit? What other time period or approach should the agencies consider for calculating the highest drawn amount (for example, using month-end balance or statement balances), and why?

Question 36: What would be the advantages and disadvantages of applying a multiplier to the highest drawn amount to calculate the off-balance sheet exposure amount (for example, multiplying the highest drawn balance by a figure between 1.5 and 3) to calculate the off-balance sheet exposure amount?[135] *If applied, how should such multiplier be calibrated? What data should the agencies use to calibrate such a multiplier?*

Question 37: The agencies seek feedback on commitments that contain no express contractual maximum amount but also contain features such as a "pay over time" limit, which allows a borrower to carry a balance with interest on certain charges. What would be the advantages and disadvantages of incorporating the "pay over time" limit as a floor when calculating the highest drawn amount under the proposal? For example, assume the maximum drawn amount over the prior 24 months is $4,000 and the "pay over time" limit is $5,000. Under this alternative, the applicable drawn amount would be subtracted from $5,000 instead of $4,000.

Question 38: The proposal would apply the specific treatment described above to commitments to retail obligors with no contractual maximum or pre-set limit. The agencies seek

[135] If a multiplier of two were applied to the maximum drawn amount over the prior 24 months, under the example presented above, the off-balance sheet exposure amount would equal $5,000, which corresponds to $4,000 times two minus $3,000. The other steps of the process would remain unchanged and would result in a risk-weight asset amount of $225 for the off-balance sheet exposure.

comment on the appropriate treatment for commitments to non-retail obligors with no contractual maximum amount or pre-set limit. The agencies request comment on the product types, structures, risks, materiality, and loss history of commitments to non-retail obligors with no contractual maximum amount or pre-set limit. Please provide specific product examples and relevant data. What would be the advantages and disadvantages of applying the proposed treatment for commitments to retail obligors with no pre-set limit to such commitments to non-retail obligors? What would be the advantages and disadvantages of using the average total drawn amount over the period since the commitment to a non-retail obligor was created or the prior 24 months, whichever period is shorter, for the committed but undrawn amount? What would be the advantages and disadvantages of applying a multiplier to the highest drawn amount (for example, multiplying the highest drawn balance by a figure between 1.5 and 3) to calculate the off-balance sheet exposure amount? If applied, how should such multiplier be calibrated? What other alternative treatments should the agencies consider, and why? Please provide any rationale or data that may be helpful for the agencies to consider.

4. Counterparty credit risk-related exposures

Under the current capital rule, a covered banking organization is required to use the standardized approach to counterparty credit risk (SA-CCR) to calculate the exposure amount of derivative contracts. The proposal would retain this treatment, with the following modification. For noncleared repo-style transactions that are included in a qualifying cross-product netting set that includes derivatives, a banking organization may elect to use SA-CCR to calculate the exposure amount of the netting set. Where a banking organization does not make such an election, it would use the collateral haircut approach to calculate the exposure amount for a repo-style transaction. Consistent with the current capital rule, the proposal would continue to allow

banking organizations to use either the collateral haircut approach or the simple approach to calculate the exposure amount for eligible margin loans and repo-style transactions, provided that the banking organization uses the same approach for similar exposures or transactions.

a. Collateral haircut approach

Under the proposal, as under the current capital rule, a banking organization would be permitted to recognize the credit risk-mitigation benefits of collateral supporting repo-style transactions, eligible margin loans, and netting sets of such transactions by adjusting its exposure amount to its counterparty to recognize financial collateral received and any collateral posted to the counterparty. The expanded risk-based approach would incorporate the collateral haircut approach in the current standardized approach with some modifications that are generally consistent with the Basel standards. The collateral haircut approach would continue to require a banking organization to adjust the fair value of the collateral received and posted to account for any potential market price volatility in the value of the collateral during the margin period of risk, as well as to address any currency mismatch. To increase the risk-sensitivity of the collateral haircut approach, the proposal would modify certain of the standard market price volatility haircuts. At the same time, to reduce unwarranted divergence in risk-weighted assets, the proposal would no longer allow a banking organization to use its own internal estimates for calculating haircuts.

i. *Formula for determining exposure amount*

The proposal would introduce a new formula for calculating the exposure amount of eligible margin loans, repo-style transactions, or netting sets thereof. The proposed exposure amount equation is revised from the current formula to improve the recognition of the risk-mitigating benefits of netting and portfolio diversification. The proposed formula would revert

to the current collateral haircut approach formula in cases where there are no variables to populate the second and the third components as described below. The modification would increase the risk sensitivity of the capital requirement for such transactions relative to the current collateral haircut approach. Under the proposal, the exposure amount (E*) of a netting set of eligible margin loans or repo-style transactions or an individual transaction that is not part of a netting set would be determined according to the following formula:

$$E^* = max\left\{0; \left(\sum_i E_i - \sum_i C_i\right) + \left(0.4 \times net_{exposure}\right) + \left(0.6 \times \frac{gross_{exposure}}{\sqrt{N}}\right) + \left(\sum_{fx}\left(E_{fx} \times H_{fx}\right)\right)\right\}$$

Where:

- E^* is the exposure amount of the eligible margin loan, repo-style transaction, or netting set after credit risk mitigation.
- E_i is the current fair value of the instrument, cash, or gold the banking organization has lent, sold subject to repurchase, or posted as collateral to the counterparty.
- C_i is the current fair value of the instrument, cash, or gold the banking organization has borrowed, purchased subject to resale, or taken as collateral from the counterparty.
- $net_{exposure} = |\sum_s E_s H_s|$
- $gross_{exposure} = \sum_s E_s |H_s|$
- E_s is the absolute value of the net position in a given instrument or in gold (where the net position in a given instrument or gold equals the sum of the current fair

values of the instrument or gold the banking organization has lent, sold subject to repurchase, or posted as collateral to the counterparty, minus the sum of the current fair values of that same instrument or gold the banking organization has borrowed, purchased subject to resale, or taken as collateral from the counterparty).

- H_s is the haircut appropriate to E_s as described in Table 1 to § __.115, as applicable. H_s has a positive sign if the instrument or gold is net lent, sold subject to repurchase, or posted as collateral to the counterparty; H_s has a negative sign if the instrument or gold is net borrowed, purchased subject to resale, or taken as collateral from the counterparty.
- N is the number of instruments with a unique Committee on Uniform Securities Identification Procedures (CUSIP) designation or foreign equivalent, with certain exceptions. N includes any instrument with a unique CUSIP that the banking organization lends, sells subject to repurchase, or posts as collateral, as well as any instrument with a unique CUSIP that the banking organization borrows, purchases subject to resale, or takes as collateral. However, N would not include collateral instruments that the banking organization is not permitted to include within the credit risk mitigation framework (such as nonfinancial collateral that is not part of a repo-style transaction included in the banking organization's market risk weighted assets) or elects not to include within the credit risk mitigation framework. The number of instruments for N would also not include any instrument (or gold) for which the value E_s is less than one-tenth of the value of

the largest E_s in the netting set. Any amount of gold would be given a value of one.

- E_{fx} is the absolute value of the net position in each currency fx different from the settlement currency.
- H_{fx} is the haircut appropriate for currency mismatch of currency fx.

The first component in the above formula $(\Sigma_i E_i - \Sigma_i C_i)$ would capture the baseline exposure of eligible margin loans, repo-style transactions, or netting sets thereof, after accounting for the value of any collateral received. The second $(0.4 \times net_{\text{exposure}})$ and third $(0.6 \times (\text{gross}_{\text{exposure}}/\sqrt{N}))$ components in the above formula would allow for the partial recognition of the netting and diversification benefit of instruments exchanged between a banking organization and a given counterparty within a netting set. The net exposure component partially recognizes the offsetting of gross exposures between a given instrument that is both lent and received as collateral within a netting set. Additionally, because the contribution from the gross exposure component to the exposure amount would decrease proportionally with an increase in the number of unique instruments by CUSIP designations or foreign equivalent, the gross exposure component would capture the impact of diversification in the types of instruments lent or received. The fourth component $(\Sigma_{fx} (E_{fx} \times \mathrm{H}_{fx}))$ would capture any adjustment to reflect currency mismatch, if applicable.

When determining the market price volatility and currency mismatch haircuts, the banking organization would use the market price volatility haircuts described in the following section and a standard 8 percent currency mismatch haircut, subject to certain adjustments.

Question 39: What are the pros and cons of basing N for purposes of the collateral haircut approach on the number of unique CUSIPs in a netting set? What alternatives should the agencies consider and how would such alternatives align with the goal of identifying the number of instruments for purposes of measuring diversification in the pool?

ii. *Market price volatility haircuts*

Under the proposal, a banking organization would apply the market price volatility haircut appropriate for the type of collateral, as provided in Table 1 to § __.115 below, when calculating the exposure amount for repo-style transactions, eligible margin loans, and netting sets thereof using the collateral haircut approach and in the calculation of the net independent collateral amount and the variation margin amount for collateralized derivative transactions using SA-CCR. Consistent with the current capital rule, the proposal would require banking organizations to apply an 8 percent supervisory haircut, subject to adjustments, to the absolute value of the net position in each currency that is different from the settlement currency.

Proposed Table 1 to §__.115

Market Price Volatility Haircuts
(Haircuts in percent)

Residual Maturity		Securities issued by a sovereign or an issuer described in *§__.111(b)*[136] (percent)			Other investment-grade securities (percent)		
		Issuer risk weight of zero	Issuer risk weight of 20 or 50	Issuer risk weight of 100	GSE exposures	Exposures other than GSE or securitization exposures	Senior securitization exposures with risk weight <100
Debt Securities	Less than or equal to 1 year	0.5	1.0	15.0	1.0	2.0	4.0
	Greater than 1 year and less	2.0	3.0	15.0	4.0	4.0	12.0

[136] Includes a foreign PSE that receives a zero percent risk weight.

	than or equal to 3 years	4.0	6.0	15.0	8.0		24.0
	Greater than 3 years and less than or equal to 5 years					6.0	
	Greater than 5 years and less than or equal to 10 years					12.0	
	Greater than 10 years					20.0	
Main index equities (including convertible bonds) and gold					20.0		
Other publicly traded equities and convertible bonds					30.0		
Mutual funds and exchange traded funds					Highest haircut applicable to any security in which the fund can invest, unless the banking organization can apply the full look-through approach for equity exposures to investment funds in §__.142(b), in which case the banking organization may use a weighted average of haircuts applicable to the securities held by the fund.		
Cash on deposit					0.0		
Other exposure types[137]					30.0		

The proposed haircuts would strike a balance between simplicity and risk sensitivity relative to the supervisory haircuts in the current capital rule by introducing additional granularity with respect to residual maturity, which is a meaningful driver for distinguishing between the market price volatility of different instruments, and by streamlining other aspects of the collateral haircut approach where the exposure's risk weight figures less prominently in the instrument's market price volatility, as described below.

[137] Includes senior securitization exposures with a risk weight greater than or equal to 100 percent and sovereign exposures with a risk weight greater than 100 percent.

The proposal would apply haircuts primarily based on residual maturity, rather than a combination of residual maturity and underlying risk weight as under the current capital rule, for non-sovereign investment grade debt securities. These haircuts are derived from observed stress volatilities during 10-business day periods during the 2008 financial crisis. Debt securities with longer maturities are subject to higher price volatility from changes in both interest rates and the creditworthiness of the issuer.

Because securitization exposures tend to be more volatile than corporate debt, the proposal would provide a distinct category of market price volatility haircuts for certain securitization exposures consistent with the current capital rule. The proposal would distinguish between non-senior and senior securitization exposures to enhance risk sensitivity. Because senior securitization exposures absorb losses only after more junior securitization exposures, these exposures have an added layer of security and distinct market price volatility. Therefore, the proposal would only specify term-based haircuts for investment grade senior securitization exposures that receive a risk weight of less than 100 percent under the securitization framework. Other securitization exposures would receive the 30 percent market price volatility haircut applicable to "other" exposure types.

The proposal would require a banking organization to apply market price volatility haircuts of 20 percent for main index equities (including convertible bonds) and gold, 30 percent for other publicly traded equities and convertible bonds, and 30 percent for other exposure types. Equities in a main index typically are more liquid than those that are not included in a main index, in part because investors may seek to replicate the index by purchasing the referenced equities or engaging in derivative transactions involving the index or equities within the index. The lower haircuts for equities included in a main index under the proposal would reflect the

higher liquidity of those securities compared to other publicly traded equities or exposure types, which would generally help to reduce losses to banking organizations when liquidating those securities during stress conditions.

For collateral in the form of mutual fund shares, the proposal would be consistent with the current collateral haircut approach in which a banking organization would apply the highest haircut applicable to any security in which the fund can invest. Under the proposal, a banking organization could treat exchange traded fund (ETF) shares in the same manner as mutual fund shares and apply haircuts based on the underlying instruments in the fund. Given that ETFs (like mutual funds) benefit from diversification and tend to have lower levels of price volatility compared to non-pooled investment vehicles, a look-through approach is more risk sensitive than applying the publicly traded equities haircut for ETF shares. The proposal also would include an alternative method available to a banking organization if the mutual fund or ETF qualifies for the full look-through approach described in section IV.C. of this **SUPPLEMENTARY INFORMATION**. This alternative method would provide a more risk-sensitive calculation of the haircut on fund shares collateral by using the weighted average of haircuts applicable to the instruments held by the fund.[138]

In addition, consistent with the Basel standards, the proposal would require a banking organization to apply a market price volatility haircut of 30 percent to address the potential market price volatility for any instruments that the banking organization has lent, sold subject to repurchase, or posted as collateral that is not of a type otherwise specified in Table 1 to § __.115.

[138] If the mutual fund qualifies for the full look-through approach under the proposed equity framework, as described in section IV.C. of this **SUPPLEMENTARY INFORMATION**, but would be treated as a market risk covered position as described in section V.A.4. of this **SUPPLEMENTARY INFORMATION** if the banking organization held the mutual fund directly, the banking organization is permitted to apply the alternative method to calculate the haircut.

b. Standardized Approach to Counterparty Credit Risk

The agencies incorporated SA-CCR for calculating the exposure amount of derivative contracts into the capital rule in 2020.[139] This change required advanced approaches banking organizations to use SA-CCR instead of the current exposure methodology when calculating standardized total risk-weighted assets and total leverage exposure. Similarly, the proposal would require a covered banking organization to use SA-CCR to determine the exposure amount for derivatives under the expanded risk-based approach and the supplementary leverage ratio.[140] The proposal would also revise SA-CCR in certain ways to better reflect risks associated with evolving market practices. Specifically, for risk-based capital purposes, the proposal would revise SA-CCR to recognize qualifying cross-product master netting agreements for non-cleared transactions and incorporate certain non-cleared (such as client-facing) repo-style transactions. Additionally, the proposal would revise SA-CCR to permit the netting of collateralized-to-market and settled-to-market client-facing derivative transactions. The agencies are also proposing technical revisions to assist banking organizations in implementing SA-CCR in a consistent manner and more appropriately reflect the counterparty credit risk posed by derivative transactions.

Question 40: Consistent with the current rule, the proposal would require a banking organization to multiply the sum of the replacement cost of a netting set, calculated as stipulated by the SA-CCR framework, and the potential future exposure of a netting set by a factor of 1.4 if the relevant counterparty is not a commercial end-user, versus a factor of 1.0 if the counterparty is a commercial end-user. Currently, the SA-CCR framework of the capital rule requires

[139] 85 FR 4362 (Jan. 24, 2020).

[140] 12 CFR 3.10(c)(2)(ii)-(iii), 12 CFR 3.34(a) (OCC); 12 CFR 217.10(c)(2)(ii)-(iii), 12 CFR 217.34(a) (Board); 12 CFR 324.10(c)(2)(ii)-(iii), 12 CFR 324.34(a)(a) (FDIC).

banking organizations to identify whether counterparties are commercial end-users. What would be the advantages or disadvantages of allowing banking organizations to apply the higher factor of 1.4 for all derivative transactions, rather than having to distinguish based on whether the counterparty qualifies as a commercial end-user? Please provide any rationale or data that may be helpful for the agencies to consider.

Question 41: For purposes of the supplementary leverage ratio, the proposal would not modify SA-CCR to recognize qualifying cross-product master netting agreements for non-cleared transactions or to incorporate certain non-cleared (including client-facing) repo-style transactions, given that it is meant to serve as a non-risk-based measure. What are the advantages and disadvantages of modifying the supplementary leverage ratio to recognize such cross-product netting? If the agencies were to consider such recognition, what if any adjustments to the measure should be considered to align with the supplementary leverage ratio's non-risk-based nature and why?

i. *Amend SA-CCR to recognize the netting of non-cleared repo-style transactions and derivative transactions*

A netting set refers to a group of transactions between a banking organization and a single counterparty governed by a qualifying master netting agreement. Qualifying master netting agreements create a single net legal obligation for all individual transactions covered by the agreement and allow for close-out netting upon the event of default. By treating all transactions under the agreement as one combined obligation, these agreements recognize risk-offsets between transactions.

Cross-product netting is a risk management technique that involves the inclusion of multiple types of financial products in one netting set. Generally, cross-product netting reduces

risk exposure by allowing banking organizations to recognize offsets between positive and negative exposures across different financial product types and to calculate a single net exposure amount for collateral and default management. Cross-product netting sets allow the benefits of qualifying master netting agreements (such as close-out netting) to apply for a broader set of transactions than those included in a single-product netting set.[141] For example, if a banking organization has a $5 million positive exposure to a counterparty under one swap transaction and a $2 million negative exposure to the same counterparty under a repo-style transaction, cross-product netting would allow for a net exposure of only $3 million to be recognized, rather than two separate exposures of $5 million and $2 million. Recognizing the risk-mitigating benefits of cross-product netting better aligns capital requirements with risk because it allows offsetting risks between products to be recognized and capitalized jointly rather than separately.

Consolidating exposures across products into a single netting set can also simplify risk management processes for banking organizations and reduce operational burden. The quantity of netting sets would generally be reduced, as banking organizations would be able to net transactions with multiple products together. Thus, a banking organization's net exposure to a single counterparty typically would be lower, reducing counterparty credit risk. Additionally, cross-product netting allows banking organizations to improve collateral management and expand liquidity efficiency across different product types. Instead of calculating collateral requirements and posting collateral for transactions of each product type (such as derivative and repo-style transactions) separately, cross-product netting allows for collateral requirements to be determined on a net basis for all transaction types in the same netting set.

[141] Under the proposal, cross-product netting sets would be governed by qualifying cross-product master netting agreements as described below.

The capital rule currently recognizes cross-product netting in the advanced approaches, under which banking organizations can measure counterparty credit exposure of a cross-product netting set using the internal models methodology (IMM). Since the agencies' are proposing to remove the IMM from the capital rule, the proposed revisions to SA-CCR to recognize qualifying cross-product master netting agreements and incorporate certain repo-style transactions for risk-based capital purposes would provide an avenue for banking organizations to recognize the benefits of cross-product netting in a standardized, transparent manner rather than through a banking organization's internal model. The proposed modifications to the exposure amount calculation in SA-CCR would recognize the risk-mitigating benefits of cross-product netting for banking organizations helping to facilitate market liquidity.

Recognizing the benefits of cross-product netting in SA-CCR would also allow banking organizations to better serve in their role as clearing members. Many clients of clearing members do not meet the requirements to become a clearing member of a central counterparty. As a result, without a clearing member stepping in to act as an intermediary, money market funds, pension funds, insurance funds, hedge funds, and other clients may not have access to central counterparty services and market access more broadly. The proposed revision to permit the netting of derivatives and non-cleared repo-style transactions would include clearing members' intermediation-related transactions, which are typically considered client-facing transactions under the capital rule.[142] Permitting cross-product netting for derivative transactions and repo-style transactions in SA-CCR promotes smooth market functioning and liquidity and

[142] Client-facing transactions are not considered cleared transactions under the capital rule. *See* 12 CFR 3.2 cleared transaction, (2) (OCC); 12 CFR 217.2 cleared transaction, (2) (Board); 12 CFR 324.2 cleared transaction, (2) (FDIC).

better aligns the risk-based capital treatment of intermediation-related transactions with their economics.

To incorporate non-cleared repo-style transactions subject to a qualifying cross-product master netting agreement in SA-CCR, the proposal would treat them as forward derivative transactions with the security underlying the repo-style transaction determining the SA-CCR asset class.[143]

The agencies are proposing to include a restriction on the amount of offsetting for recognized between derivatives and repo-style transactions within SA-CCR to capture the mismatch between maturities of repo-style transactions and those of derivative contracts.[144] In addition, for an entire cross-product netting set, banking organizations would have to calculate the exposure amount for the subset of the cross-product netting set that includes only derivative contracts and the exposure amount for the subset of the cross-product netting set that includes only repo-style transactions. The exposure amount for the entire cross-product netting set would

[143] Under the current capital rule, a qualifying cross-product master netting agreement is generally defined, as a qualifying master netting agreement that provides for termination and close-out netting rights across multiple types of financial transactions. As a type of qualifying master netting agreement, a qualifying cross-product master netting agreement would be required, among other provisions, to create, upon an event of default, a single legal obligation for all individual transactions covered by the agreement and to provide the banking organization with the right to liquidate or set-off any collateral provided in respect of any of the transactions covered by the agreement against the net amount owed across all the individual transactions. Accordingly, if a banking organization's rights upon an event of default to net certain transaction types (e.g., derivatives) against other transaction types (e.g., repo-style transactions), or to apply collateral provided in respect of one type of transaction against amounts owed on other types of transactions, were restricted or limited under the relevant contractual agreements or applicable law, a banking organization would not be permitted recognize cross-product netting.

[144] The SA-CCR framework allows for offsetting positions to net for purposes of measuring exposure. In general, such netting can occur at a particular moment in time, so no short-term transaction can have any impact on exposure at long time horizons. Because of this, time averaging for the purposes of exposure calculation should be performed after exposure contributions of individual transactions are aggregated to the netting set exposure for each future time point. However, to simplify calculations, SA-CCR performs time averaging for each transaction in the netting set prior to the aggregation. This leads to a possibility of short-term transactions materially offsetting the risk of long-term transactions. This is not a major concern for netting sets of derivatives, which often have medium and long-term durations. However, because repo-style transactions are primarily short-term (often overnight), applying SA-CCR to a cross-product netting set would likely overstate the impact of repo-style transactions on the netting set exposure. The proposed maturity mismatch restriction on cross-product netting would mitigate this overstatement.

be a weighted average of two exposure numbers. One exposure amount would be the combined exposure for repo-style transactions and derivatives in the cross-product netting set using SA-CCR, weighted by a maturity ratio (MR). The other exposure amount would be the sum of the exposure amounts of the repo-style transactions in the netting set using the collateral haircut approach and the exposure amounts of derivatives transactions in the netting set using SA-CCR, weighted by (1-MR). MR would be the maturity ratio factor determined by the ratio of the notional average weighted maturity of the repo-style transactions to the notional average weighted maturity of the derivatives contracts or repo-style transactions within the cross-product netting set, whichever is longer. The maturities calculated this way would be floored by 10 business days and capped by 1 year. The MR would be capped at 1.

Permitting the netting of repo-style transactions and derivative transactions subject to qualifying cross-product master netting agreements in SA-CCR and the proposed limitation on offsetting transactions promotes responsible counterparty credit risk mitigation and ensures the capital requirement better reflects such transactions' risk profile and economic relationship. Recognizing cross-product netting in SA-CCR would create capital efficiency for banking organizations, align with banking organizations' risk management practices for counterparty credit risk, and promote smooth market functioning and liquidity.

The agencies have proposed to permit the netting of repo-style transactions and derivative transactions subject to qualifying master netting agreements in SA-CCR, and not to recognize cross product netting of eligible margin loans. Although eligible margin loans have similarities to repo-style transactions, such as both being collateralized by liquid and readily marketable securities, they differ from repo-style and derivative transactions in that eligible margin loans are not typically included in qualifying master netting arrangements. The agencies are seeking input

on whether and how cross-product netting should be recognized for eligible margin loans. The proposal also would not permit cross-product netting for cleared transactions, as cleared transactions are typically not included in netting sets with non-cleared transactions. The agencies are seeking feedback on the scope of the proposed recognition of cross-product netting, including whether the scope of cross-product netting should be expanded to include cleared transactions.

Question 42: The agencies seek comment on what, if any, challenges banking organizations may face in using SA-CCR to determine exposure amounts for counterparty credit risk (e.g., whether SA-CCR could underestimate or overstate the exposure amount for some portfolios). What are the advantages and disadvantages of retaining the IMM for counterparty credit risk? If the IMM were retained, what corresponding modifications should the agencies make to the current version of the IMM to maintain appropriate alignment between SA-CCR and IMM?

Question 43: What, if any, additional changes should be made to the scope of cross-product netting recognition under SA-CCR? For example, if the scope of cross-product netting recognition in SA-CCR were expanded to eligible margin loans, what would be the advantages and disadvantages of this expanded scope? What are the advantages and disadvantages of extending cross-product netting recognition in SA-CCR to cleared transactions?

Question 44: Are there any modifications to the operational requirements for qualifying cross-product master netting agreements that the agencies should consider in connection with the recognition of netting of certain repo-style transactions in SA-CCR?

ii. *Netting of collateralized-to-market (CTM) and settled-to-market (STM) client-facing derivative transactions*

Under SA-CCR in the current capital rule, the exposure amount of a derivative netting set is calculated as the sum of replacement cost and potential future exposure (PFE) multiplied by an alpha factor. While the capital rule allows netting of all derivative contracts within a netting set in the replacement cost calculations, netting across margined and unmargined derivative contracts in the same netting set is limited to cleared transactions for purposes of the PFE calculations.

Settled-to-market derivative contracts are those in which daily payments are made to settle the mark-to-market exposure. These payments are made on a periodic basis to reflect changes in exposure that arise from marking a derivative contract to fair value, and they are similar to traditional exchanges of variation margin, except that, in a settled-to-market contract, the payment to the receiving party extinguishes the amount owed to the receiving party arising from the change in fair value and thus effectively settles the outstanding amount due on the contract. In contrast, a collateralized-to-market derivative contract is a form of derivative transaction for which exchanges of variation margin that occur on a periodic (often daily) basis collateralize any outstanding payment obligation of a counterparty. The counterparties in a collateralized-to-market contract secure, but do not settle, mark-to-market exposures as they arise. Settled-to-market derivative contracts and collateralized-to-market derivative contracts are functionally and economically similar from a counterparty credit risk perspective. SA-CCR therefore allows a clearing member banking organization to elect, at the netting set level, to treat all cleared settled-to-market derivative contracts within the netting set as subject to a variation margin agreement and receive the benefits of netting with cleared collateralized-to-market

derivative contracts for the purposes of PFE calculations, provided that both sets of contracts share the same margin period of risk.[145]

The exposure of a clearing member to its client when facilitating a client's cleared transaction (a client-facing derivative transaction) is treated as a non-cleared transaction under the capital rule because the clearing member's exposure is to the client, not the central counterparty. Because some clearing members enter into client-facing derivative transactions in the form of settled-to-market and collateralized-to-market transactions, there can be situations where both types of derivatives are a part of the same netting set. Because client-facing derivative transactions are not cleared transactions, banking organizations currently do not have the option to treat client-facing derivative transactions that are settled-to-market contracts as if subject to a variation margin agreement, and clearing member banking organizations therefore cannot net client-facing settled-to-market derivative contracts and collateralized-to-market derivative contracts for purposes of SA-CCR.

The proposal would amend SA-CCR to allow clearing member banking organizations the option to treat client-facing settled-to-market derivative contracts as collateralized-to-market (i.e., margined) derivative contracts, thus permitting netting between client-facing settled-to-market and collateralized-to-market contracts for the purposes of PFE calculations. This proposed approach would align the netting treatment of cleared derivative exposures with the netting treatment of their related client-facing derivative exposures, as well as facilitate efficient hedging. This proposed revision is also important for cross-product netting, as certain derivative

[145] 12 CFR 3.132(c)(5)(v) (OCC); 12 CFR 217.132(c)(5)(v) (Board); 12 CFR 324.132(c)(5)(v) (FDIC). This would also be consistent with comments received under EGRPRA as commenters requested allowance of netting of settled-to-market and collateralized-to-market.

transactions are settled-to-market, whereas repo-style transactions are often collateralized-to-market.

Question 45: What are the advantages and disadvantages of permitting banking organizations to treat bilateral settled-to-market derivative transactions as collateralized-to-market derivative transactions for purposes of SA-CCR?

iii. *Potential change to the hypothetical capital requirement for QCCP default fund contribution calculation*

Financial market participants are increasingly exploring cross-margining arrangements, which facilitate the aggregation of positions across multiple central counterparties and allow for initial margin to be determined on a net basis, with recognition of risk-offsets that exist among different positions.[146] Cross-margining agreements generally allow a clearing member to post initial margin to multiple central counterparties on a net basis, taking into account offsetting positions the clearing member holds with each central counterparty. As a result, cross-margining agreements may more accurately reflect the economic risk of the transactions associated with each central counterparty subject to the relevant cross-margining agreement. Although cross-margining has historical precedent, in recent years there have been significant developments, refinements, and increased adoption of cross-margining practices across the financial industry. Cross-margining arrangements may involve netting sets that contain multiple products, as central counterparties in the United States generally specialize in clearing a single specific product type such as repo-style transactions or derivatives.[147] For example, under a cross-margining

[146] *See https://www.dtcc.com/news/2025/december/15/dtcc-files-to-expand-cme-group-cross-margining-arrangement.*

[147] *See https://investor.cmegroup.com/news-releases/news-release-details/cme-group-and-dtcc-launch-enhanced-treasury-cross-margining.*

agreement, a clearing member with an agreement to sell a U.S. Treasury security at one QCCP could recognize risk-offsets that exist with an interest rate future at a different QCCP in determining the margin it posts at each QCCP. Cross-margining agreements also generally include policies and procedures for QCCPs participating in such agreements to manage the default of a clearing member.

Central counterparties use default funds, to which clearing members contribute, to cover potential losses that may arise if a clearing member defaults. Clearing members are generally required to contribute to the default funds in proportion to each clearing member's share of the central counterparty's transactions, whether in the form of bilateral transactions or clearing member client transactions guaranteed by the clearing member. The capital rule defines such default fund contributions as the funds contributed to, or commitments made by a clearing member, to a central counterparty's mutualized loss sharing arrangement. Banking organizations that are clearing members are required to include in risk-weighted assets an amount representing the risk of their default fund contributions. For contributions to qualifying central counterparties (QCCPs), the risk-weighted asset amount is derived using the hypothetical capital requirement of a qualifying central counterparty, Kccp, representing its counterparty credit risk exposures to all its clearing members and their clients. Kccp incorporates an exposure amount for each transaction cleared by the QCCP, reduced by initial margin, variation margin, and funded default fund contributions.

Under the current capital rule, clearing member banking organizations are not able to reflect the risk-offsets recognized by cross-margining programs in their Kccp calculations. Together with lower margin requirements resulting from cross-margining programs, this may result in banking organizations being required to hold additional capital when engaging in

offsetting activities. As cross-margining arrangements are increasingly adopted, this potential misalignment could become increasingly consequential.

Without revisions to the default fund contribution framework's Kccp formula, clearing member banking organizations would not be able to reflect potential risk-reductions recognized by cross-margining arrangements in their hypothetical capital requirement calculation. A consequence could be that banking organizations may be less likely to intermediate transactions as clearing members, which could be problematic for money market funds, pension funds, insurance funds, hedge funds, and other clients that may not have direct access to central counterparty services and market access more broadly.

The agencies are therefore seeking comment on potential modifications to the capital rule's requirements related to default fund contributions to recognize cross-margining arrangements among QCCPs that meet certain criteria. QCCPs are either regulated and supervised as designated financial market utilities, or, if the QCCP is located outside of the United States, in a manner equivalent to a designated financial market utility. Such supervision and regulations can include evaluation of margining practices. Accordingly, the agencies are seeking feedback on proposed revisions to the Kccp formula described below, if a QCCP's cross-margining arrangements are subject to appropriate oversight by the QCCP's primary regulators.

More specifically, the agencies are requesting comment on the below potential approach for calculating the exposure amount for derivatives and repo-style transactions that are subject to a valid cross-margining agreement for purposes of Kccp. The formula used in this approach would allow for the recognition of the risk-mitigating benefits of cross-margining programs and portfolio diversification relative to the current Kccp formula.

$$K_{CCP_i} = \sum_j exposure_{QCCP_{i,j}} * 1.6\%$$

$$exposure_{QCCP_{i,j}} = exposure_{Non-XM_{i,j}} + Allocation\ Factor_{i,j} * exposure_{XM_{i,j}}$$

Where:

$exposure_{QCCP_{i,j}}$ represents the exposure amount of $QCCP_i$ to each of its clearing members j,

$exposure_{Non-XM_{i,j}}$ represents the exposure amount for positions not subject to a cross-margining agreement at $QCCP_i$ for clearing member j

$exposure_{XM_{i,j}}$ represents the exposure amount for positions subject to a cross-margining agreement at $QCCP_i$ for clearing member j.

$Allocation\ Factor_{i,j}$ is the allocation factor for clearing member j at $QCCP_i$ which is assigned based on the ratio of gross notional positions held at $QCCP_i$ divided by the sum of all gross notional positions held across all QCCPs subject to the cross-margining agreement. This allocation factor must be between 0 and 1.

Question 46: What are the advantages and disadvantages of recognizing the benefits of cross-margining arrangements, for Kccp purposes, under the capital rule?

Question 47: If the agencies were to permit recognition of offsetting positions that are facilitated by cross-margining agreements among QCCPs that satisfy certain criteria, what criteria and operational requirements should the agencies establish for a qualifying cross-margining agreement? For example, should the agencies require that a qualifying cross-margining agreement be approved by the QCCPs' primary regulator or regulators? Alternatively, should the agencies require that banking organizations receive a legal opinion verifying the validity and enforceability of the agreement under applicable law of the relevant jurisdictions, or that banking organizations conduct sufficient legal review, including ongoing

due diligence, to have a well-founded basis for concluding the agreement would be enforceable under applicable law?

Question 48: What revisions, if any, should the agencies make to the cleared transactions framework in consideration of cross-margining agreements? What are the advantages and disadvantages of extending recognition of cross-margining agreements for default fund contribution capital requirements to cleared transaction capital requirements?

Question 49: What alternatives to the allocation factor described in the proposed formula for the hypothetical capital requirement for cross-margined portfolios should the agencies consider and why?

iv. *Proposed technical revisions*

I. *Treatment of collateral held by a qualifying central counterparty (QCCP)*

Under the current capital rule, a clearing member banking organization using SA-CCR must determine its capital requirement for a default fund contribution to a QCCP based on the hypothetical capital requirement for the QCCP (K_{CCP}) using SA-CCR.[148] The calculation of K_{CCP} requires calculating the exposure amount of the QCCP to each of its clearing members. In the calculation of the exposure amount, the capital rule allows the exposure amount of the QCCP to each clearing member to be reduced by all collateral held by the QCCP posted by the clearing member and by the amount of prefunded default fund contributions provided by the clearing member to the QCCP. However, this treatment is inconsistent with the calculation of the exposure amount for a netting set, because collateral is a component of the calculations of both the replacement cost and PFE. It does not make sense to reduce that exposure amount further by subtracting collateral held by the QCCP.

[148] *See* 12 CFR 3.133(d) (OCC); 12 CFR 217.133(d) (Board); 12 CFR 324.133(d) (FDIC).

The proposal would therefore change how collateral posted to a QCCP by clearing members and the amount of clearing members' prefunded default fund contributions factor into the calculation of K_{CCP}. This treatment would allow for the appropriate recognition of collateral in calculating the exposure amount of a QCCP to its clearing members and would be consistent with the calculation of the exposure amount for a netting set. Specifically, for the purpose of calculating the exposure amount of a QCCP to a clearing member, the net independent collateral amount that appears in the replacement cost and PFE calculations would be replaced by the sum of:

1) the fair value amount of the independent collateral posted to a QCCP by a clearing member;

2) the fair value amount of the independent collateral posted to a QCCP by a clearing member on behalf of a client, in connection with derivative contracts for which the clearing member has provided a guarantee to the QCCP; and

3) the amount of the prefunded default fund contribution of the clearing member to the QCCP.

Both the amount of independent collateral and the prefunded default fund contribution would be adjusted by the standard market price volatility haircuts under Table 1 to § __.115 of the proposal, as applicable.

II. *Treatment of collateral held in a bankruptcy-remote manner*

Both the standardized approach and the advanced approaches under the current capital rule require a banking organization to determine the trade exposure amount for cleared derivative transactions.

When calculating its trade exposure amount for a cleared transaction, a banking organization under the current capital rule may exclude collateral posted to the CCP that is held in a bankruptcy-remote manner by the CCP or a custodian. In the SA-CCR framework of the capital rule, the agencies inadvertently imposed heightened requirements for the exclusion of collateral from the trade exposure amount posted by a clearing member banking organizations to a CCP under the advanced approaches.[149] The expanded risk-based approach would not include these heightened requirements and would align the requirements for the exclusion of collateral from the trade exposure amount of banking organizations under the expanded risk-based approach with the standardized approach.

III. *Supervisory delta for collateralized debt obligation (CDO) tranches*

Under the capital rule, a banking organization must apply a supervisory delta adjustment to account for the sensitivity of a derivative contract (scaled to unit size) to the underlying primary risk factor, including the correct sign (positive or negative) to account for the direction of the derivative contract amount relative to the primary risk factor.[150]

For a derivative contract that is a CDO tranche, the supervisory delta adjustment is calculated using the formula below:

$$\text{Supervisory delta adjustment} = \frac{15}{(1+14*A) * (1+14*D)}$$

where A is the attachment point and D is the detachment point.

[149] 12 CFR 3.133(c)(4)(i) (OCC); 12 CFR 217.133(c)(4)(i) (Board); 12 CFR 324.133(c)(4)(i)(FDIC).

[150] For the supervisory delta adjustment, a banking organization applies a positive sign to the derivative contract amount if the derivative contract is long the risk factor and a negative sign if the derivative contract is short the risk factor. A derivative contract is long the primary risk factor if the fair value of the instrument increases when the value of the primary risk factor increases. A derivative contract is short the primary risk factor if the fair value of the instrument decreases when the value of the primary risk factor increases.

The capital rule applies a positive sign to the resulting amount if the banking organization purchased the CDO tranche and applies a negative sign if the banking organization sold the CDO tranche. However, the appropriate sign to account for the purchase or sale of CDO tranches can be ambiguous: purchasing a CDO tranche can be interpreted as selling credit protection, while selling a CDO tranche can be interpreted as purchasing credit protection. In order to ensure the correct sign of the supervisory delta adjustment for CDO tranches the proposal would revise the sign specification for the supervisory delta adjustment for CDO tranches as follows: positive if the CDO tranches were used by the banking organization to purchase credit protection and negative if the CDO tranches were used by the banking organization to sell credit protection.

IV. *Supervisory delta for options contracts*

The supervisory delta adjustment for option contracts in SA-CCR is calculated based on the Black-Scholes formulas for delta sensitivity of European call and put option contracts. The original Black-Scholes formula for a European option contract's delta sensitivity assumes a lognormal probability distribution for the value of the instrument or risk factor underlying the option contract, thus precluding negative values for both the current value of the underlying instrument or risk factor and the strike price of the option contract. SA-CCR uses modified Black-Scholes formulas that are based on a shifted lognormal probability distribution, which allows negative values of the underlying instrument or risk factor with the magnitude not exceeding the value of a shift parameter λ (lambda). The capital rule sets λ to zero (thus precluding negative values) for all asset classes except the interest rate asset class, which has exhibited negative values in some currencies in recent years. For the interest rate asset class, a banking organization must set the value of λ for a given currency equal to the greater of (i) the negative of the lowest value of the strike prices and the current values of the interest rate

underlying all interest rate options in a given currency that the banking organization has with all counterparties plus 0.1 percent; and (ii) zero.

Negative values of the instrument or risk factor underlying an option contract can occur in other asset classes as well. For example, whenever an option contract references the difference between the values of two instruments or risk factors, the underlying spread of this option contract can be negative. Such option contracts include option contracts on the spread between two commodity prices and on the difference in performance across two equity indices. Under the current capital rule, banking organizations cannot calculate the supervisory delta adjustment for any option contract other than an interest rate derivative contract if the strike price or the current value of the underlying instrument or risk factor is negative because the capital rule only allows a non-zero value for λ for interest rate derivative contracts.

To ensure that a banking organization is able to calculate the supervisory delta adjustment for option contracts when the underlying instrument or risk factor has a negative value, the proposal would extend the use of the shift parameter λ to all asset classes. More specifically, for non-interest-rate asset classes, the proposal would require a banking organization to use the same value of λ for all option contracts that reference the same underlying instrument or risk factor. If the value of the underlying instrument or risk factor cannot be negative, the value of λ would be set to zero. Otherwise, to determine the value of λ for a given risk factor or instrument, the proposal would require a banking organization to find the lowest value L of the strike price and the current value of the underlying instrument or risk factor of all option contracts that reference this instrument or risk factor with all counterparties. The proposal would require a banking organization to set λ for this instrument or risk factor according to the formula $\lambda=\max\{-1.1\cdot L,0\}$. The purpose of multiplying negative L by 1.1 (thus,

resulting in -1.1·L) is the same as that for adding 0.1 percent in the case of interest rate derivative contracts under the capital rule: to set the lowest possible value of the underlying instrument or risk factor slightly below the lowest observed value. Because non-interest-rate instruments and risk factors can have vastly different magnitudes and, moreover, be expressed in different units (e.g., different currencies), it is challenging to determine a universal additive offset value for all values of non-interest-rate instruments and risk factors. Because of this, the offset would be performed via multiplication for asset classes other than the interest rate asset class.

The proposal would also permit a banking organization, with the prior approval of its primary Federal supervisor, to specify a different value for λ for purposes of the supervisory delta adjustment for option contracts other than interest rate option contracts, if a different value for λ would be more appropriate, considering the range of values for the instrument or risk factor underlying option contracts. A banking organization that specifies a different value for λ would be required to assign the same value for λ to all option contracts with the same underlying instrument or risk factor, as applicable, with all counterparties. This proposed provision is intended to permit a banking organization, with approval from its primary Federal supervisor, to account for unanticipated outcomes in the supervisory delta adjustment of certain asset classes while avoiding arbitrage between assets in that class.

Question 50: What other approaches should the agencies consider to calibrate the lambda parameter for non-interest-rate asset classes, such as a formula that is different from the proposed formula of $\lambda=\max\{-1.1\cdot L,0\}$, and why? What values besides 1.1, if any, should the agencies consider for the value of the multiplier in the proposed formula? Why?

V. *Decomposition of credit, equity, and commodity indices*

Under SA-CCR, banking organizations are permitted to decompose indices within credit, equity, and commodity asset classes, such that a banking organization would treat each component of the index as a separate single-name derivative contract.[151] The capital rule requires that if a banking organization elects to decompose indices within the credit, equity, and commodity asset classes, the banking organization must perform all calculations in determining the exposure amount based on the underlying instrument rather than the index. While this is possible for linear indices, for non-linear index contracts (for example, those with optionality and CDS index tranches) it is not mathematically possible to calculate the supervisory delta for an underlying component, as the delta associated with the non-linear index applies at the instrument level. In recognition of this fact, the agencies are clarifying that the option to decompose a non-linear index is not available under SA-CCR. Additionally, the agencies are clarifying that if electing to decompose a linear index, banking organizations must apply the weights used by the index when determining the exposure amounts for the underlying instrument.

5. Credit risk mitigation

The current capital rule permits banking organizations to recognize certain types of credit risk mitigants, such as guarantees, credit derivatives, and collateral, for risk-based capital purposes provided the credit risk mitigants satisfy the qualification standards under the rule.[152] Credit derivatives and guarantees can reduce the credit risk of an exposure by placing a legal obligation on a third-party protection provider to compensate the banking organization for losses

[151] *See* 12 CFR 3.132(c)(5)(vi) (OCC); 12 CFR 217.132(c)(5)(vi) (Board); 12 CFR 324.132(c)(5)(vi) (FDIC).

[152] Consistent with the current capital rule, the proposal would not require banking organizations to recognize a credit risk mitigant that it has obtained. Credit derivatives that a banking organization cannot or chooses not to recognize as a credit risk mitigant would be subject to a separate counterparty credit risk capital requirement.

associated with a credit event of the original obligor.[153] Similarly, the use of collateral often can reduce the credit risk of an exposure by creating the right of a banking organization to take ownership of and liquidate the collateral in the event of a default by the counterparty. Prudent use of such mitigants can help a banking organization reduce the credit risk of an exposure and in some circumstances reduce the risk-based capital requirement associated with that exposure.

Credit risk mitigants recognized for risk-based capital purposes must be of sufficiently high quality to effectively reduce credit risk. For guarantees and credit derivatives, the current capital rule primarily looks to the creditworthiness of the guarantor and the features of the underlying contract to determine whether these forms of credit risk mitigation may be recognized for risk-based capital purposes (eligible guarantee or eligible credit derivative). With respect to collateralized transactions, the current capital rule primarily looks to the liquidity profile and quality of the collateral received (such as the creditworthiness of the issuer of the collateral) and the nature of the banking organization's security interest to determine whether the collateral qualifies as financial collateral that may be recognized for purposes of risk-based capital.[154]

The proposal would largely incorporate the treatments for collateralized transactions, guarantees, and credit derivatives from the current capital rule's standardized approach with enhancements to increase risk sensitivity. For eligible guarantees and eligible credit derivatives, the proposal would generally retain the substitution approach from the standardized approach of the current capital rule with two modifications. Specifically, the proposal would modify the

[153] Credit events are defined in the documents governing the credit risk mitigant and often include events such as failure to pay principal and interest and entry into insolvency or similar proceedings.

[154] *See* 12 CFR 3.2, 217.2, and 324.2 for the definition of financial collateral.

treatment for eligible credit derivatives that do not include restructuring as a credit event and no longer permit the recognition of credit protection from nth-to-default credit derivatives.[155]

For collateralized transactions where financial collateral secures exposures that are not derivative contracts or netting sets of derivative contracts, the proposal would generally retain the simple approach from the current capital rule's standardized approach with the following two modifications.[156] First, the proposal would replace the requirement that financial collateral be subject to a collateral agreement with conditions including the requirement that the banking organization have the right to liquidate or take legal possession of the collateral upon an event of default. Second, the proposal would permit banking organizations to recognize, under the simple approach, the credit risk mitigation benefits of financial collateral with a maturity or currency mismatch, after applying certain adjustments.

The proposal would also introduce eligible prepaid credit protection arrangements as a credit risk mitigant available to all exposure types, including securitizations, and permit banking organizations to recognize the credit risk mitigation benefits of the protection amount of the prepaid credit protection arrangement, discounted to reflect any applicable maturity and currency mismatch adjustments.

a. Guarantees and credit derivatives

i. *Substitution approach*

Consistent with the standardized approach in the current capital rule, the proposal would permit a banking organization to recognize the credit-risk-mitigation benefits of eligible

[155] *See* section IV.B.5.b. of this Supplementary Information.

[156] The collateral haircut approach also would be available to banking organizations to recognize the benefits of collateral for eligible margin loans and for repo-style transactions. For netting sets containing certain repo-style transactions and derivative contracts that are subject to a qualifying cross product master netting agreement, a banking organization also would be able to determine its exposure amount using SA-CCR as described in section IV.A.4.b. of this **SUPPLEMENTARY INFORMATION**.

guarantees and eligible credit derivatives by substituting the risk weight applicable to the eligible guarantor or counterparty to the eligible credit derivative (protection provider) for the risk weight applicable to the hedged exposure. To recognize the risk mitigating benefits of a guarantee or credit derivative for risk-based capital purposes, the proposal would continue to require the issuer of or counterparty to the eligible guarantee or eligible credit derivative, respectively, to be an eligible guarantor.[157] The proposal would rely on the definition of eligible guarantor in §__.2 of the capital rule, which, among other criteria, requires an entity to have issued and outstanding an unsecured debt security without credit enhancement that is investment grade at the time the guarantee is issued or anytime thereafter.[158]

Question 51: The agencies seek comment on the requirement that the entity has issued and outstanding an unsecured debt security without credit enhancement that is investment grade to meet the definition of an eligible guarantor. What, if any, alternatives to this requirement should the agencies consider to help to ensure that eligible guarantors can be expected to perform on guarantees and what would the pros and cons of those alternatives be?

ii. *Adjustment for credit derivatives without restructuring as a credit event*

Credit derivative contracts in certain jurisdictions include debt restructuring as a credit event that triggers a payment obligation by the protection provider to the protection purchaser. Such restructurings of the hedged exposure may involve forgiveness or postponement of principal, interest, or fees that results in a loss to investors. Consistent with the current capital

[157] Under the advanced approaches framework in the current capital rule, an eligible guarantee need not be issued by an eligible guarantor unless the exposure is a securitization exposure. Under the proposal, an eligible guarantee would need to be issued by an eligible guarantor.

[158] A banking organization would not have to apply the proposed internal credit risk rating system criteria, as described in section IV.A.2.e. of this **SUPPLEMENTARY INFORMATION**, in order to determine whether an entity satisfies the investment grade requirement included in in the definition of eligible guarantor. The proposed internal credit risk rating system criteria would be required in order for the 65 percent risk weight to be available for purposes of the substitution approach.

rule, the proposal would generally require a banking organization that seeks to recognize the credit risk-mitigation benefits of an eligible credit derivative that does not include a restructuring of the reference exposure as a credit event to reduce the effective notional amount of the credit derivative by 40 percent to account for any unmitigated losses that could occur as a result of a restructuring of the hedged exposure.

Under the proposal, however, the 40 percent adjustment would not apply to eligible credit derivatives without restructuring as a credit event if both of the following requirements are satisfied: (1) the terms of the hedged exposure (and the reference exposure, if different from the hedged exposure) allow the maturity, principal, coupon, currency, or seniority status to be amended outside of receivership, insolvency, liquidation, or similar proceeding only by unanimous consent of all parties; and (2) the banking organization has conducted sufficient legal review to conclude with a well-founded basis (and maintains sufficient written documentation of that legal review) that the hedged exposure is subject to the U.S. Bankruptcy Code or a domestic or foreign insolvency regime with similar features that allows for a company to reorganize or restructure and provides for an orderly settlement of creditor claims.

The unanimous consent requirement would mean that, for restructurings occurring outside of an insolvency proceeding, all holders of the hedged exposure (and the reference exposure, if different from the hedged exposure) must agree to any restructuring for the restructuring to occur, and no holder can vote against the restructuring or abstain. This unanimous consent requirement would reduce the risk that a banking organization would suffer a credit loss on the hedged exposure that would not be offset by a payment under the eligible credit derivative. Banking organizations generally would only be incentivized to vote for a restructuring if the terms of the restructuring provide a more beneficial outcome to the banking

organization relative to insolvency proceedings that would trigger payment under the eligible credit derivative. Additionally, the unanimous consent requirement for the reference exposure, if different from the hedged exposure, would provide an additional layer of security by significantly reducing the probability of reaching a restructuring agreement that results in a loss of principal or interest for creditors without triggering payment under the eligible credit derivative. The unanimous consent requirement would need to be satisfied through the terms of the hedged exposure (and the reference exposure, if different from the hedged exposure), which could be accomplished through a contractual provision of the exposure or the operation of the applicable law.

The requirement that the hedged exposure be subject to the U.S. Bankruptcy Code or a similar domestic or foreign insolvency regime would help to ensure that any restructuring is done in an orderly, predictable, and regulated process. In the event that the obligor of the hedged exposure defaults and the default is not cured, the obligor would either be required to enter insolvency proceedings, which would trigger payment under the credit derivative, or the obligor would be required to pursue restructuring outside of insolvency, which could not occur without the banking organization's consent. Together, the proposed conditions are intended to ensure that credit derivatives that do not include restructuring as a credit event but provide similarly effective protection as those that do contain such provisions would be afforded similar recognition under the capital framework.

Question 52: The agencies seek comment on allowing banking organizations to recognize in full the effective notional amount of credit derivatives that do not include restructuring as a credit event, if certain conditions are met. What are the cost and benefits of this approach? What, if any, less restrictive conditions for receiving full recognition should the

agencies consider that would more appropriately capture credit derivatives that provide similar protection as those that include restructuring as a credit event receive and why? For example, what would be the advantages and disadvantages of requiring the consent of all parties directly and adversely affected by a restructuring, rather than the unanimous consent of all parties? What would be the advantages and disadvantages of requiring the consent of all parties affected by any change in lien position or priority in the hedged or referenced exposure?

Question 53: To what extent is the proposed treatment of eligible credit derivatives that do not include restructuring of the reference exposure as a credit event relevant outside of the United States and how should this be considered for purposes of the proposal?

Question 54: In order for a banking organization to recognize the credit risk mitigation benefits of an eligible credit derivative, the current capital rule requires that legally-enforceable cross-default or cross-acceleration clauses be in place and that the reference exposure and the hedged exposure be to the same legal entity. What would be the advantages and disadvantages of allowing recognition of credit derivatives where (1) the reference exposure is to a different legal entity than the hedged exposure, (2) the reference exposure's legal entity is guaranteed by its parent company, and (3) the parent company is subject to a binding cross-default or cross-acceleration provision related to the hedged exposure's debt.

b. Collateralized transactions

Consistent with the current capital rule, a banking organization would be permitted to recognize the risk-mitigating benefits of financial collateral using the simple approach by

substituting the risk weight applicable to an exposure with the risk weight applicable to the financial collateral securing the exposure, generally subject to a 20 percent floor.[159]

Under the current capital rule, a requirement for recognizing the credit risk mitigation benefit of financial collateral under the simple approach is that the collateral must be subject to a collateral agreement for at least the life of the exposure. The proposal would not include this requirement under the simple approach because the requirement is overly broad and not relevant for certain transaction types. For example, while the right to close out a transaction would be relevant with respect to a repurchase agreement, it may not be relevant with respect to a loan. Instead, the proposal would require that the legal mechanism by which the financial collateral is pledged or transferred be enforceable and provide the banking organization with an ability to exercise its applicable legal rights with respect to the collateral in a timely manner upon an event of default. Depending on the characteristics of the type of exposure and the financial collateral in question, those rights may include the right to liquidate or take legal possession of the financial collateral, to set off amounts owed by the banking organization against amounts owed by the obligor, and to close out the underlying transaction. However, not all of these rights may be applicable with respect to all types of exposures and financial collateral, and a banking organization would only be required to have those rights that are applicable for the type of exposure and financial collateral in question. This requirement, in combination with the definition of financial collateral—which, in part, requires a banking organization to have a perfected, first-priority security interest (or the legal equivalent thereof) in the collateral—and

[159] A banking organization would not have to apply the proposed internal credit risk rating system criteria in order to determine whether the issuer of long-term or short-term debt securities that are not resecuritization exposures is investment grade and are eligible to be considered financial collateral under the capital rule. However, the proposed internal credit risk rating system criteria would be required in order for the 65 percent risk weight to be available for purposes of risk weight substitution. *See* definition of financial collateral in §__.2 of the capital rule. 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

the other requirements of §__.121(b)(1) would provide a sufficient basis for recognizing the collateral under the simple approach.

The requirement under the current capital rule that financial collateral be subject to a collateral agreement often prevents a banking organization from recognizing financial collateral as a credit risk mitigant under the simple approach if the banking organization's exercise of its rights may be stayed in a bankruptcy of the obligor. This has generally meant that a banking organization could not use the simple approach to recognize financial collateral in respect of collateralized loans because the exercise of a banking organization's collateral rights with respect to a loan would often be subject to a stay in the bankruptcy or insolvency of a borrower under the applicable law. Under the proposal, the fact that a banking organization's rights may be subject to a stay in the event of an obligor's bankruptcy would not preclude the banking organization from recognizing the credit risk mitigation benefits of financial collateral, provided the banking organization has a well-founded basis for concluding that it will be able to exercise its rights in a timely manner. The proposed change would permit banking organizations to recognize the credit risk mitigation benefits of financial collateral that protects exposures arising from many types of loans and traditional credit products. Other elements of the simple approach, such as the 20 percent risk-weight floor, help to address the risk of declines in the value of collateral.

Typically, financial collateral in respect of a collateralized transaction is pledged by the obligor of that exposure. In some cases, collateral may be pledged or transferred by a party other than the obligor. A third-party pledgor may be the parent or an affiliate of an obligor or an unrelated party that is providing credit risk protection to the banking organization. While collateral provided by a third party may be an effective credit risk mitigant, it may also pose unique risks. In particular, depending on the laws of the applicable jurisdictions and the terms of

the relevant legal agreements, the bankruptcy or insolvency of a pledgor prior to an event of default of the obligor may terminate or impair the banking organization's rights to the collateral. In these circumstances, financial collateral does not provide an effective credit risk mitigant.. Consequently, the proposal would require that the bankruptcy or insolvency of a third-party pledgor not result in the termination or impairment of the banking organization's rights in respect of the financial collateral.

There may be situations where obligors have the ability to remove collateral that they are contractually obligated to maintain when a banking organization is experiencing stress. This risk is most apparent when financial collateral takes the form of cash on deposit at a banking organization, where a banking organization's deposit systems may not reflect the obligor's contractual obligation to maintain the deposit at the banking organization. It may also arise, in respect of other types of financial collateral, depending on the custody arrangement and associated controls in respect of the collateral. Financial collateral is not an effective credit risk mitigant if a banking organization cannot appropriately safeguard its rights in respect of such financial collateral. Consequently, the proposal would also require a banking organization to be able to reasonably demonstrate the ability to protect and enforce its rights in respect of any financial collateral.

Other safeguards relating to the simple approach are intended to sufficiently calibrate the benefits of the proposal's recognition of financial collateral for a broader scope of products. For example, the maturity mismatch adjustment, which is described in greater detail below, reduces the benefit of financial collateral based on the difference between the residual maturity of the legal mechanism by which financial collateral is pledged and that of the secured exposure. Additionally, for a situation with a maturity mismatch, the proposal would only allow for

recognition of the credit risk mitigant where the original maturity of the legal mechanism is greater than or equal to one year and the residual maturity of the legal mechanism is greater than three months. These requirements, taken together with the other requirements in section _.121 of the proposal, would incentivize banking organizations to utilize credit risk mitigants that provide effective credit risk transfer.

Question 55: Under the simple approach, the current capital rule requires that collateral be revalued at least every six months. The agencies recognize that, in practice, most collateral agreements for liquid collateral provide for more frequent valuation. The proposal would remove the requirement for collateral agreements. Given that financial collateral is generally liquid, what would be the advantages and disadvantages of requiring a more frequent minimum revaluation interval—such as quarterly—under the simple approach? Please provide rationale supporting or opposing a more frequent revaluation requirement.

Question 56: The proposal would maintain the current capital rule's definition of financial collateral and allow banking organizations to recognize the risk-mitigating benefits of cash on deposit, including cash held by a third-party custodian or trustee. The agencies invite comment on whether the definition of financial collateral is sufficiently clear with respect to cash collateral held for a banking organization by a third-party custodian or trustee. What would be the advantages or disadvantages of revising the "cash on deposit" prong of the definition of financial collateral to explicitly recognize cash on deposit at any third-party depository institution, regardless of whether it is a custodian or trustee? In addition, what would be the appropriate risk weight for the collateralized exposure where the financial collateral is, directly or indirectly, in the form of a deposit claim on a third-party depository institution and why? What would be the advantages and disadvantages of subjecting the collateralized exposure to the

20 percent risk weight floor? What, if any, other alternative approaches should the agencies consider and why?

Question 57: The agencies seek comment on the appropriateness of the calibration of the market price volatility haircuts. Commenters are encouraged to submit data with their response.

c. Prepaid credit protection

The proposal would introduce eligible prepaid credit protection arrangements as an additional type of credit risk mitigant. The proposal would define a prepaid credit protection arrangement as a contractual agreement in which a protection purchaser receives an initial amount in cash from a protection provider that the protection purchaser is required to repay, less any losses that the protection purchaser incurs due to a credit event on the protected exposures, such as borrower default on the protected exposures. In this type of arrangement, the amount paid by the protection provider is not collateral that secures a future obligation of the protection provider; rather, it is consideration for a right to future payments, contingent on the performance of the protected exposure(s), from the protection purchaser. This form of credit risk mitigant effectively transfers credit risk to the protection provider, as the banking organization's liability created by the prepaid credit protection arrangement generally would be reduced at the same time the banking organization incurs a loss on the protected exposure(s). A common example of a prepaid credit protection arrangement are fully funded credit-linked notes issued by a banking organization that transfer the credit risk of a reference exposure or portfolio of reference exposures to third party investors.[160]

[160] *See, e.g.,* Frequently Asked Questions, 12 CFR Part 217, Q2 and Q3, *https://www.federalreserve.gov/supervisionreg/legalinterpretations/reg-q-frequently-asked-questions.htm*. This revision would also be consistent with comments received under EGRPRA as commenters requested recognition of the risk-mitigation benefits of credit-linked notes.

Under the proposal, a prepaid credit protection arrangement would be required to meet specific requirements to be recognized for risk-based capital purposes as an eligible prepaid credit protection arrangement. Specifically, the proposal would define an eligible prepaid credit protection arrangement as a prepaid credit protection arrangement that:

(1) Is written;

(2) Is unconditional;

(3) Covers all or a pro rata portion of all contractual payments due to be paid on the reference exposure or reference exposures;

(4) Provides that the amount and timing of payments due from the protection purchaser to the protection provider are incorporated into the arrangement and the arrangement only allows these terms to change in the event of a breach of the arrangement by the protection purchaser;

(5) Provides that entry of the protection provider into receivership, insolvency, liquidation, conservatorship, or similar proceeding does not change the amounts or timing of payments due by the protection purchaser under the arrangement;

(6) Is legally valid and enforceable under applicable law of the relevant jurisdictions;

(7) Upon a failure by the obligor on the one or more reference exposures to make a contractually required payment, or the occurrence of other credit events as described in the arrangement, allows the protection purchaser promptly to reduce the outstanding balance of the initial principal amount due to the protection provider by the loss of the protection purchaser on the reference exposures without input from the protection provider; and

(8) Does not increase the protection purchaser’s cost of credit protection in response to deterioration in the credit quality of any of the reference exposures.

The protection amount of an eligible prepaid credit protection arrangement would be the effective notional amount of the prepaid credit protection, reduced to reflect any currency mismatch or maturity mismatch. The effective notional amount for an eligible prepaid credit protection arrangement would be the lesser of the contractual notional amount of the credit risk mitigant and the exposure amount of the reference exposure(s), multiplied by the percentage coverage of the credit risk mitigant.

Under the proposal, if the protection amount of the eligible prepaid credit protection arrangement is greater than or equal to the exposure amount of the reference exposure, a banking organization would be allowed to assign a zero percent risk weight to the exposure.

If the protection amount of the eligible prepaid credit protection arrangement is less than the exposure amount of the reference exposure(s) and any losses are shared on a pro rata basis between the banking organization and the protection provider,[161] the proposal would require the banking organization to treat the reference exposure(s) as two separate exposures, protected and unprotected, in order to recognize the credit risk mitigation benefit of the eligible prepaid credit protection arrangement. In such cases, a banking organization would apply a zero percent risk weight to the protected exposure. The banking organization would calculate its risk-weighted asset amount for the unprotected exposure under the expanded risk-based approach using the risk weight assigned to the exposure and an exposure amount equal to the exposure amount of the original reference exposure minus the protection amount.

Question 58: Under the definition of eligible prepaid credit protection arrangement, the proposal would require that a protection purchaser be able to reduce the outstanding balance

[161] Exposures on which there is a tranching of credit risk (reflecting at least two different levels of seniority) generally are securitization exposures, as described in section IV.B. of this Supplementary Information.

due to the protection provider promptly upon realizing or otherwise recognizing a loss on the reference exposure, in the event that the obligor on one or more reference exposures fails to make a contractually required payment, or the occurrence of other credit events as described in the arrangement. What, if any, are the exposure types in respect of which, or circumstances when, a protection purchaser may be exposed to losses before such losses are manifested in a way that would permit a reduction in the protection purchaser's repayment obligation? For example, what would be the instances where nonpayment or other loss on the reference exposure may not always result in an accounting write-down of the eligible prepaid credit protection arrangement at the same time? What, if any, changes to the proposed definitions of prepaid credit protection arrangement and eligible prepaid credit protection arrangement should the agencies consider to further ensure that a protection purchaser would be able to reduce its repayment obligation on a prepaid credit protection arrangement as contemporaneously as possible with the manifestation of losses in respect of a reference exposure?

Question 59: The proposal would define the protection amount of an eligible prepaid credit protection arrangement to mean the effective notional amount of the prepaid credit protection. Certain credit-linked notes that may qualify as eligible prepaid credit protection under the proposal, are sometimes accounted for on a fair value basis. The fair value of such credit-linked notes may be affected by factors other than losses or credit events (for example, a change in interest rates) in respect of the reference exposure. As a result, at the time that credit losses in respect of the reference exposure are realized, the fair value of the credit-linked note, and the amount by which the banking organization may set off its losses in respect of the reference exposure, may be less than the notional amount of the note. What, if any, modifications to the proposal should the agencies consider to address the risk that a banking

organization may not be able to set off losses on a reference exposure against the full notional amount of a prepaid credit protection instrument? What would be the advantages and disadvantages of defining the protection amount of an eligible prepaid credit protection instrument to be the instrument's carrying value (For example, the fair value if the banking organizations elects this accounting treatment)?

Question 60: The definition of prepaid credit protection requires that the protection purchaser is obligated to repay the initial principal amount to the protection provider on or before the maturity date of the transaction, less any losses that the protection purchaser realizes or otherwise recognizes due to nonpayment of all contractual payments due to be paid on the reference exposure by the obligors. The agencies seek comment as to whether the definition is sufficiently broad to capture the types of prepaid credit protection arrangements that banking organizations may enter into to transfer credit risk. For example, may prepaid credit protection arrangements be structured to allow for a reduction in the initial principal amount of the arrangement upon the recognition of losses on one or more reference exposures due to credit quality deterioration of the exposures, even in the absence of any nonpayment. If so, what if any changes to the definition of prepaid credit protection should the agencies consider?

d. Maturity and currency mismatch adjustment

The simple approach in the current capital rule does not permit a banking organization to recognize credit risk mitigation benefits where the transaction is subject to a collateral agreement that has a shorter tenor than that of the secured exposure.[162] To improve the risk-sensitivity of

[162] For determining maturity mismatch, the comparison is between the remaining maturity of the protected exposure against the remaining maturity of the legal mechanism by which financial collateral is pledged. For example, if the legal mechanism by which financial collateral is pledged to a 5-year loan has a 5-year term, even if the remaining maturity of the collateral is 2 years, there would be no maturity mismatch under the proposal as long as the security interest transfers without any breaks to the proceeds of the matured collateral or replacement collateral.

the simple approach, the proposal would permit banking organizations to recognize financial collateral and prepaid credit protection with a maturity mismatch after adjusting the fair value of the financial collateral or the effective notional amount of the eligible prepaid credit protection arrangement to reflect any maturity mismatch.[163]

Under the proposal, the residual maturity of an eligible prepaid credit protection arrangement would be determined in the same manner as applies to eligible credit derivatives and eligible guarantees under the current capital rule. For financial collateral that is not cash on deposit at the banking organization, but including cash held for the banking organization by a third-party custodian or trustee, the residual maturity of any amount of such financial collateral would be the earliest date on which the banking organization's rights in respect of such amount of financial collateral may be terminated without the pledgor being subject to a contemporaneous requirement to pledge additional financial collateral. For financial collateral that is cash on deposit at the banking organization, the residual maturity of any amount of such collateral would be the earliest date on which a depositor may withdraw such amount, notwithstanding any notice requirements or early withdrawal fees or penalties. For example, if an obligor is subject to a loan covenant requiring the obligor to maintain a certain deposit balance at the banking organization until the maturity of the loan, the residual maturity of the cash on deposit would be the remaining maturity of the loan. Any amount of a deposit balance that an obligor is contractually permitted to withdraw, however, would have a residual maturity of the earliest date on which the deposit

[163] The proposal would define residual maturity as the longest possible remaining time before the obligated party of the secured exposure is scheduled to fulfill its obligation on the reference exposure. If a contract has embedded options that may reduce its term, the proposal would require the banking organization to adjust the residual maturity of the contract. If a call is at the discretion of the protection provider, the residual maturity of the contract would be at the first call date. If the call is at the discretion of the banking organization, but the terms of the arrangement at origination of the contract contain a positive incentive for the banking organization to cancel the contract before contractual maturity, the remaining time to the first call date would be the residual maturity of the contract.

may be withdrawn. If an obligor may withdraw a deposit at any time, including where an obligor may be subject to a notice period or an early withdrawal fee or penalty, the residual maturity would be zero, notwithstanding any stated maturity date of the deposit instrument.

Under the proposal, a banking organization would be required to apply the same adjustment to reduce the fair value of the financial collateral or the effective notional amount of the prepaid credit protection arrangement as currently applies to eligible credit derivatives and eligible guarantees under the substitution approach:

$$Pm = E \times [(t-0.25)/(T-0.25)]$$

Where:

- Pm = fair value of the financial collateral or effective notional amount of the eligible prepaid credit protection arrangement, adjusted for maturity mismatch;
- E = fair value of the financial collateral or effective notional amount of the eligible prepaid credit protection arrangement;
- t = the lesser of T or the residual maturity of the credit risk mitigant, expressed in years; and
- T = the lesser of five or the residual maturity of the secured exposure or reference exposure, as applicable, expressed in years.

Similarly, the proposal would eliminate the current capital rule's requirement that financial collateral be denominated in the same currency as the secured exposure for a banking organization to use the simple approach. The proposal would permit banking organizations to recognize the credit risk mitigation benefits of financial collateral and eligible prepaid credit protection arrangements when denominated in a different currency than the currency of the secured exposure, after adjusting the fair value or the effective notional amount, as applicable, to

reflect any currency mismatch. Under the proposal, a banking organization would use the following formula to adjust the fair value of the financial collateral or the effective notional amount of the eligible prepaid credit protection arrangement:

$$P_c = P_r \times (1 - H_{FX})$$

Where:

- P_c = fair value of the financial collateral or effective notional amount of the eligible prepaid credit protection arrangement, adjusted for currency mismatch (and maturity mismatch, if applicable).
- P_r = fair value of the financial collateral or effective notional amount of the eligible prepaid credit protection arrangement (adjusted for maturity mismatch, if applicable).
- H_{FX} = haircut appropriate for the currency mismatch between the financial collateral and the secured exposure or the eligible prepaid credit protection arrangement and the reference exposure.

Consistent with substitution approach for guarantees and credit derivatives in the current capital rule, the proposal would require banking organizations to use a standard supervisory haircut of 8 percent for H_{FX} (based on a ten business-day holding period and daily marking-to-market and remargining). If a banking organization revalues the financial collateral or eligible prepaid credit protection arrangement less frequently than once every 10 business days, the proposal would require the banking organization to scale up the haircut using the following square root of time formula:

$$H_{FX} = 8\% \times \sqrt{\frac{T_M}{10}}$$

Where:

- T_M = the greater of 10 or the number of business days between revaluations.

Question 61: The agencies seek comment on the effectiveness of the credit risk mitigation of collateral and eligible prepaid credit protection arrangement when there is a maturity mismatch between the credit risk mitigant and the hedged reference portfolio, for example, longer-dated assets that are protected by a shorter-dated prepaid credit protection arrangement. The agencies seek comment on whether the banking organization has effectively mitigated credit risk if the losses on the assets are estimated to occur after the expiration of the prepaid credit protection arrangement. Does the proposed maturity mismatch adjustment sufficiently capitalize for the residual risks of hedging longer-dated assets with shorter-term prepaid credit protection arrangement? Please provide supporting data and analysis.

B. Securitization framework

The securitization framework is designed to produce capital requirements for exposures that involve tranching of the credit risk of one or more underlying financial exposures.[164] The risk and complexity posed by securitizations differ relative to direct exposures to the underlying financial exposures because the credit risk of those exposures is divided into different levels of risk using a wide range of structural mechanisms.[165] The performance of a securitization

[164] To segment the credit risk of the underlying financial exposures ("reference portfolio"), securitization exposures divide the reference portfolio into different slices (known as "tranches") such that any cash flows or losses are allocated to the various tranches based on a predetermined order of priority. This payment structure is sometimes referred to as the cash flow waterfall (or simply the "waterfall") and dictates the manner in which interest or principal payments from the reference portfolio must be allocated, creating different risk-return profiles for each tranche.

[165] For example, assume a banking organization extends a loan to a bankruptcy remote special purpose entity which holds financial exposures (including equity securities) and the fair value of the underlying financial assets exceeds that of the loan. Under this transaction, the underlying financial exposures are pledged as collateral to the lender. As the excess collateral would initially absorb any losses arising from non-payment on the loan (after which the banking organization would be exposed to any subsequent losses), the loan would generally be viewed as tranched and could qualify as a securitization exposure under the proposal, if the transaction satisfies all of the other

exposure depends not only on the structure of the securitization, but also on the performance of the underlying exposures[166] and certain parties to the securitization structure, including the asset servicer and any liquidity facility provider. Such structural features and the involvement of these parties makes securitization exposures susceptible to additional risks as compared to direct exposures to the underlying financial exposures.

The proposed securitization framework would incorporate the securitization framework in the current standardized approach with the following modifications: (1) a revised definition of and additional operational requirements for synthetic securitizations; (2) a modified treatment for resecuritizations that meet the operational requirements; (3) a modified definition of an eligible clean-up call; (4) a new securitization standardized approach (SEC-SA), as a replacement to the standardized supervisory formula approach (SSFA), which includes, relative to the SSFA, modified definitions of attachment point and detachment point, a modified definition of the W parameter, modifications to the definition of K_G, a lower risk-weight floor for securitization exposures that are not resecuritization exposures, and a higher risk-weight floor for resecuritization exposures; (5) a revised treatment for purchased and sold nth-to-default credit derivatives that would prohibit banking organizations from recognizing any risk-mitigating benefit for such exposures; (6) a revised treatment for certain derivative contracts that are not credit derivatives and a new treatment for derivative contracts that do not provide credit

applicable requirements. Consistent with the current capital rule, to the extent the fair value of the collateral declines such that it no longer exceeds the outstanding principal balance of the banking organization's exposure to the borrower, the transaction would no longer involve tranching of credit or equity risk – and thus would not qualify as a securitization exposure under the proposal. Rather, the banking organization would be required to calculate risk-based capital requirements for the exposure using the general credit risk framework as described in section IV.A. of this **SUPPLEMENTARY INFORMATION**.

[166] Consistent with the current capital rule, the proposal would define equity exposure to include exposures to equity instruments that do not have mandatory contractual payments, among other requirements. Accordingly, under the proposal, the performance of underlying equity exposures would refer to both changes in the fair value of the equity exposures and whether the issuer(s) of the equity exposures is subject to a bankruptcy or insolvency proceeding.

enhancement; (7) new provisions to expand the scope of securitization exposures for which a banking organization may apply the overlapping exposure treatment; (8) a new treatment and eligibility criteria for certain senior securitization exposures (the "look-through approach"); (9) a modification to the treatment for credit-enhancing interest only strips; and (10) a new framework for non-performing loan securitizations. The proposal would also introduce certain minor technical edits to the definitions of traditional securitization and synthetic securitization to clarify the existing scope of exposures subject to the securitization framework under the current capital rule.

1. Definitions

The proposal would generally retain the existing definitions of traditional securitization and synthetic securitization under the current capital rule, except for (1) revising the definition of synthetic securitization to include prepaid credit protection arrangements, and (2) introducing technical modifications to the definitions of traditional securitization and synthetic securitization that are intended to clarify the existing scope of exposures subject to the securitization framework under the current capital rule.

a. Synthetic securitization

As discussed in section IV.A.5. of this **SUPPLEMENTARY INFORMATION**, the proposal would permit banking organizations to recognize risk mitigating benefits of eligible prepaid credit protection arrangements. Consistent with these provisions, the proposal would revise the definitional and operational criteria for synthetic securitizations to include prepaid credit protection arrangements as structures that can qualify as synthetic securitizations and to include eligible prepaid credit protection arrangements as an eligible credit risk mitigant within the securitization framework. Under the proposal, a transaction would meet the definitional and

operational criteria of synthetic securitization if all or a portion of the credit risk of one or more underlying exposures is transferred to one or more third parties through prepaid credit protection arrangements, and the transaction satisfies all other requirements of the securitization framework under the proposal.

b. Technical modifications

The proposal would modify paragraph (3) within the definitions of traditional securitization and synthetic securitization to clarify that the performance of the securitization exposure is expected to depend solely upon the performance of the underlying exposures, aside from the performance of common supporting transaction participants such as servicers and trustees. For example, a transaction would not satisfy this criterion if there is an expectation that any sources outside of the underlying exposures would fund the interest or principal payments due on the securitization exposures.

Consistent with the current capital rule, the proposed modification would continue to permit certain transactions where a party provides a specified amount of credit protection to qualify as a securitization exposure. As an example, consider a multi-seller ABCP conduit that funds itself entirely with a single class of commercial paper and purchases assets such as wholesale loan exposures from multiple sellers. As is typical in such multi-seller ABCP conduits, each seller provides first-loss protection by over-collateralizing its loans sold to the conduit. To ensure a high credit rating on the commercial paper issued by the ABCP conduit, a banking organization sponsor may provide either a pool-specific liquidity facility or a program-wide credit enhancement such as a guarantee on a portion of the losses not protected by the seller over-collateralization. Consistent with the current capital rule, under the proposal, commercial paper issued by the ABCP conduit with a pool-specific liquidity facility generally would be a

securitization exposure because the pool-specific liquidity facility represents a tranche of the credit risk of the underlying exposures (that is the repayment of the liquidity facility depends upon the underlying exposures) and losses are allocated through subordination. Conversely, if the sponsor provides a program-wide credit enhancement that covers all credit losses across multiple asset pools without reference to asset-level performance (not just those above the seller-provided credit enhancement) or seller-specific subordination, the commercial paper generally would not be a securitization exposure, as the commercial paper holders are primarily exposed to the default risk of the sponsor instead of the underlying exposures and the commercial paper does not represent a tranched risk position. The proposed modification is intended to clarify that a securitization exposure to such program-wide guarantees, including guarantees provided by an operating company to a special purpose entity it establishes, generally would not satisfy the definition of traditional or synthetic securitization.

Additionally, the proposal would modify paragraph (1) of the definition of traditional securitization to clarify that a transaction transferring equity risk could be subject to the securitization framework if all of the other definitional criteria are satisfied. The securitization framework generally applies to exposures to companies with material liabilities that are not operating companies,[167] and whose underlying exposures are primarily financial exposures (including when all or substantially all of the underlying assets are equity exposures). For exposures to companies with material liabilities that are not operating companies and whose underlying exposures are all or substantially all financial exposures, the risk-based capital treatment under the current capital rule reflects how the risk of exposures to such entities depends primarily on the degree of leverage employed by the company. Accordingly, the current

[167] *See* 78 FR 62018, 62112 (Oct. 11, 2013).

capital rule generally requires banking organizations to apply the securitization framework to determine the risk-weighted asset amount for exposures to non-operating companies with material liabilities, unless the primary Federal supervisor determines that the exposure is not a traditional securitization based on the transaction's leverage, risk profile or economic substance. The proposal would modify paragraph (1) of definition of traditional securitization to clarify that this treatment would also apply to exposures to such companies with material liabilities, where all or a portion of the credit or equity risk of one or more underlying exposures is transferred to one or more third parties (other than through the use of credit derivatives or guarantees or prepaid credit protection arrangements).[168] As a result, the proposed definition of traditional securitization would continue to include exposures to companies with material liabilities that are not operating companies, where all or substantially all of the underlying assets are financial exposures, and whose funding structure results in the risk associated with the underlying exposures being separated into at least two tranches with different levels of seniority.

Question 62: What additional clarifications, if any, should the agencies consider for the proposed modification to paragraph (3) of the definition of traditional and synthetic securitization and why?

Question 63: What additional clarifications, if any, should the agencies consider for the proposed modification to paragraph (1) of the definition of traditional securitization and why? What would be the advantages and disadvantages of making similar changes to paragraph (1) of the definition of synthetic securitization?

[168] Consistent with the current capital rule, under the proposal, a banking organization would use the equity framework to calculate risk-based capital requirements for equity exposures to companies where all or substantially all of the underlying assets are financial assets and that have no material liabilities. *See* definition of investment fund in § __.2 of the current capital rule and the treatment of equity exposures to investment funds in § __.142 of the proposed rule.

Question 64: The agencies seek comment on the appropriateness of requiring covered banking organizations to use the general risk-weight framework for certain overcollateralized exposures if the fair value of underlying equity exposures declines such that there is no longer overcollateralization? What would be the advantages and disadvantages of requiring covered banking organizations to use the general risk-weight framework (rather than the securitization framework) to determine the applicable risk weight for securitization exposures where the underlying exposures are primarily equity exposures and the fair value of the underlying equity exposures has significantly declined? What criteria should the agencies consider to capture only those securitization exposures for which such an approach would more appropriately capture the risk and why?

2. Operational requirements

The proposed operational requirements would be consistent with the operational requirements in the standardized approach of the current capital rule, with five exceptions as described below and directly above in section IV.A.1.a. of this **SUPPLEMENTARY INFORMATION**. In addition, for resecuritization exposures that meet the operational requirements, the proposal would eliminate the option for banking organizations to treat the exposures as if they had not been securitized.[169]

a. Early amortization provisions

Early amortization provisions cause investors in securitization exposures to be repaid before the original stated maturity when certain conditions are triggered. For example, many

[169] In the case of non-performing loan securitizations, as described in section IV.B.5.g. of this **SUPPLEMENTARY INFORMATION**, the proposal would allow a banking organization that meets the operational requirements to choose to hold risk-based capital against the transferred exposures as if they had not been securitized and deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the transaction.

securitizations of revolving credit facilities, most commonly credit-card receivable securitizations, contain provisions that require the securitization to be wound down and investors repaid on an accelerated basis if excess spread falls below a certain threshold. This decrease in excess spread would typically be caused by credit deterioration in the underlying exposures. Such provisions can expose the originating banking organization to increased credit and liquidity risk and potentially increased capital requirements after the early amortization is triggered as the banking organization could be obligated to fund the borrowers' future draws on the revolving lines of credit.[170] In such an instance, the originating banking organization may have to either find a new funding source, whether internal or external, to cover the new draws or reduce the borrowers' credit line availability.

The proposal would expand the applicability of the operational requirements regarding early amortization provisions to synthetic securitizations, similar to their application to traditional securitizations under the standardized approach of the current capital rule. The current capital rule defines an early amortization provision as a provision in the documentation governing a securitization that, when triggered, causes investors in the securitization exposures to be repaid before the original stated maturity of the securitization exposures, with certain exceptions.[171] Under the proposal, if a synthetic securitization includes an early amortization provision and references one or more underlying exposures in which the borrower is permitted to

[170] Under the capital rule, an originating banking organization, with respect to a securitization, means a banking organization that: (1) directly or indirectly originated or securitized the underlying exposures included in the securitization; or (2) serves as an ABCP program sponsor to the securitization. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

[171] Under the capital rule, the exceptions to the definition of early amortization provision are a provision that: (1) is triggered solely by events not directly related to the performance of the underlying exposures or the originating banking organization (such as material changes in tax laws or regulations); or (2) leaves investors fully exposed to future draws by borrowers on the underlying exposures even after the provision is triggered. *See* definition of early amortization provision in §__.2 of the capital rule. 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

vary the drawn amount within an agreed limit under a line of credit, the banking organization would be required to hold risk-based capital against the underlying exposures as if they had not been synthetically securitized. Aligning this treatment for both traditional and synthetic securitizations would provide greater consistency within the securitization framework and reduce the likelihood that a banking organization would provide implicit support for synthetic securitization exposures.

Question 65: What, if any, additional exceptions to the early amortization provision definition should the agencies consider and why, provided such exceptions would not incentivize a banking organization to provide implicit support to a securitization exposure? In particular, is the current rule's exception where early amortization "is triggered solely by events not directly related to the performance of the underlying exposures or the originating institution (such as material changes in tax laws or regulations)" sufficiently clear? What types of early termination events should qualify as events not directly related to either the performance of the underlying exposures or the originating banking organization? Should events not directly related to the performance of the underlying exposures or the originating banking organization include customary provisions designed to protect against non-performance of various contractual obligations by one of the parties facilitating the securitization (including the originating banking organization, if it has such a transaction facilitating role, for example by acting as a servicer)? Commenters are also asked to describe under what circumstances could a provision in a revolving loan securitization that, when triggered, causes investors in the securitization exposures to be repaid before the original stated maturity of the securitization exposures, leaves investors "fully exposed to future draws by borrowers on the underlying exposures even after the provision is triggered", or otherwise should be deemed not to be an early amortization

provision. What are the advantages and disadvantages of "fully exposed" encompassing only cash-funded exposures versus also including exposures in the form of contractual commitments to provide funding?

b. Synthetic excess spread

The proposal would prohibit an originating banking organization from recognizing the risk-mitigating benefits of a synthetic securitization that includes synthetic excess spread. Synthetic excess spread would be defined as any contractual provision in a synthetic securitization that is designed to absorb losses prior to any of the tranches of the securitization structure. Synthetic excess spread is a form of credit enhancement provided by the originating banking organization to the investors in the synthetic securitization; therefore, the originating banking organization should maintain capital against the credit exposure represented by the synthetic excess spread. However, a risk-based capital requirement for synthetic excess spread may not be determinable with sufficient precision to promote comparability across banking organizations because the amount of synthetic excess spread made available to investors in the synthetic securitization would depend upon the maturity of the underlying exposures, which itself depends on whether any of the underlying exposures have defaulted or prepaid. In particular, the total amount of synthetic excess spread made available at inception to investors over the life of the transaction may not be known *ex ante,* as the outstanding balance of the securitization in future years is unknown. Therefore, if a synthetic securitization structure includes synthetic excess spread, the proposal would require the banking organization to maintain capital against all the underlying exposures as if they had not been synthetically securitized.

Question 66: What clarifications or modifications should the agencies consider for the above proposed definition of synthetic excess spread and why?

Question 67: What are the advantages and disadvantages of the proposed treatment of synthetic securitizations with synthetic excess spread? If the agencies were to permit originating banking organizations to recognize the credit risk-mitigation benefits of securitizations with synthetic excess spread, how should the exposure amount of the synthetic excess spread be calculated, and what would be the appropriate capital requirement for synthetic excess spread?

c. Minimum payment threshold

Under the proposal, the operational requirements for synthetic securitizations would include a new requirement that any applicable minimum payment threshold for the credit risk mitigant be consistent with standard market practice.[172] A contractual minimum payment threshold refers to the delinquency condition that must exist before a credit event is deemed to have occurred under the terms of the credit protection. The proposed minimum payment threshold criterion is intended to prohibit an originating banking organization from recognizing any risk mitigating benefit for a synthetic securitization whose minimum payment threshold is so large that it allows for material losses to occur without triggering the credit protection acquired by the protection purchaser, as such provisions would interfere with an effective transfer of credit risk.

Question 68: What are the benefits and drawbacks of the proposed minimum payment threshold criterion? What, if any, additional criteria or clarifications should the agencies consider and why?

[172] For example, for derivative contracts written under ISDA Master Agreement documentation, standard market practice for contractual minimum payment thresholds would generally be $1 million (or the equivalent in other currencies), such as established in ISDA Credit Derivatives Definitions. *See* ISDA Credit Derivatives Definitions Section 4.5 "Failure to Pay" and Section 4.9(d) "Payment Requirement."

d. Resecuritization exposures

For a resecuritization exposure arising from a traditional securitization, if the operational requirements have been met, an originating banking organization would be required to exclude the transferred exposures from the calculation of its risk-weighted assets and maintain risk-based capital against any credit risk it retains in connection with the resecuritization. Unlike in the case of a securitization exposure that is not a resecuritization exposure, the proposal would not provide the option for a banking organization to elect to treat a resecuritization exposure as if the underlying exposures had not been re-securitized. While a securitization of non-securitized assets can be used to diversify or transfer credit risk of those exposures, a resecuritization might not offer similar risk reduction or diversification benefits, particularly if the underlying exposures reflect similar high-risk tranches of other securitizations. Therefore, these resecuritization exposures warrant a higher regulatory capital requirement than that applicable to the underlying exposures.

Similarly, for a resecuritization that is a synthetic securitization, if the operational requirements have been met, an originating banking organization would be required to recognize for risk-based capital purposes the use of a credit risk mitigant to hedge the underlying exposures and must hold capital against any credit risk of the resecuritization exposures it retains in connection with the synthetic securitization. These proposed operational requirements for resecuritization exposures are consistent with the Basel standards.

e. Clean-up Calls

The proposal would use the definition of a clean-up call in the current capital rule without change. The capital rule defines a clean-up call as a contractual provision that permits an originating banking organization or servicer to call securitization exposures before their stated

maturity date or call date. For an originating banking organization to exclude the underlying exposures from its risk-based capital calculation, any clean-up call associated with a securitization must be an eligible clean-up call.

The proposal would expand the definition of an eligible clean-up call. Under the current capital rule, an eligible clean-up call is defined as a clean-up call that is exercisable solely at the discretion of the originator or servicer, is not structured to avoid allocating losses to securitization exposures held by investors or otherwise structured to provide credit enhancement to the securitization, and is only exercisable when 10 percent or less of the principal amount of the initial pool of underlying or reference exposures is outstanding. The proposal would expand the definition of an eligible clean-up call to also include clean-up calls exercisable when certain regulatory and tax events occur, in addition to the existing criteria under the current capital rule. Specifically, the modification would permit the exercise of a clean-up call upon the occurrence of (1) a regulatory event that significantly changes the risk-weighted asset amount for the securitization exposure under applicable risk-weighted asset standards of the agencies, or (2) a tax event that significantly changes the tax treatment of the securitization exposure under applicable tax laws. The events must represent final actions, such as a final rule adopted by the agencies or taxing authority, or a law enacted by Congress. Proposed rules or legislative bills would not satisfy this requirement.

Question 69: What, if any, other modifications should the agencies consider for the definition of an eligible clean-up call and why?

3. Exposure amount of a securitization exposure

The proposal would maintain the exposure calculation methodology in the current capital rule for both on-balance-sheet and off-balance-sheet securitization exposures. The exposure

amount for an on-balance-sheet securitization exposure that is not a repo-style transaction, an eligible margin loan, or a derivative contract (other than a credit derivative) would equal the carrying value of the exposure. For off-balance- sheet securitization exposures that are not a repo-style transaction, eligible margin loan, or derivative contract (other than a credit derivative), the exposure amount would equal the notional amount of the exposure.[173] For a securitization exposure that is a repo-style transaction, eligible margin loan, or derivative contract (other than a credit derivative), the exposure amount would be calculated based on the proposed counterparty credit risk framework, described in section IV.A.4. of this **SUPPLEMENTARY INFORMATION**.

Question 70: What, if any, clarifications should the agencies consider regarding the determination of the exposure amount for securitization exposures where one or more of the underlying exposures are off-balance sheet exposures (such as unfunded commitments)? Specifically, what are the advantages and disadvantages of a modification that would clarify that banking organizations could apply the same credit conversion factors described in section IV.A.1.b. of this ***SUPPLEMENTARY INFORMATION*** *when calculating the components of the SEC-SA (K_G, W parameter, attachment point A and detachment point D) for a securitization exposure where one or more of the underlying exposures are off-balance sheet exposures? What would be the effect of such a clarification on the volatility of the capital requirements?*

4. Securitization standardized approach (SEC-SA)

[173] The proposal would generally maintain the current capital rule's treatment for off-balance sheet securitization exposures to ABCP programs, with certain exceptions. The proposal would not include the specific treatments provided for such exposures in __.42(c)(3)(ii)-(iii) and __.44 in the current capital rule. The other elements of the proposed securitization framework (for example, the look through approach for senior securitization exposures) are intended to better reflect the risk of such exposures.

Under the proposal, a banking organization would determine the capital requirements for most securitization exposures under the SEC-SA, which is generally consistent with the Basel standards. The SEC-SA would be substantively similar to the SSFA in the current capital rule except for certain changes as discussed below. Under the SEC-SA, a banking organization would determine the risk weight for a securitization exposure based on the risk weight of the underlying exposures that are adjusted to reflect (1) delinquencies in such exposures, (2) the securitization exposure's subordination level in the allocation of losses, and (3) the heightened correlation and additional risks inherent in securitizations relative to direct exposures to the underlying financial exposures.

To calculate the risk weight for a securitization exposure using the SEC-SA, a banking organization would be required to have accurate information on the parameters used in the SEC-SA calculation. If the banking organization cannot, or chooses not to, apply the SEC-SA, the banking organization would be required to apply a 1,250 percent risk weight to the securitization exposure. For synthetic securitizations, the proposal would permit banking organizations to choose not to recognize the credit risk mitigant and hold risk-based capital against the underlying exposures as if they had not been synthetically securitized.

Under the proposed SEC-SA, the risk weight assigned to a securitization exposure, or portion of a securitization exposure, would be determined according to the formula under §__.133(a) of the proposed rule, expressed as:

$$RW_{SEC-SA}$$

$$= \begin{cases} max(RW_{FLOOR}, 1{,}250\% \cdot K_{SEC-SA}), & K_A \leq A \\ max\left(RW_{FLOOR}, \left(\frac{K_A - A}{D - A}\right) \cdot 1{,}250\% + \left(\frac{D - K_A}{D - A}\right) \cdot 1{,}250\% \cdot K_{SEC-SA}\right), & A < K_A < D \\ 1{,}250\%, & D \leq K_A \end{cases}$$

Where:

- RW_{FLOOR} is equal to 100 percent for resecuritization exposures and 15 percent for all other securitization exposures.
- K_A represents the delinquency-adjusted, weighted-average capital requirement of the underlying exposures, as described in section IV.B.4.c. of this **SUPPLEMENTARY INFORMATION**.
- *A* represents the attachment point of the securitization exposure, as described in section IV.B.4.a. of this **SUPPLEMENTARY INFORMATION**.
- *D* represents the detachment point of the securitization exposure, as described in section IV.B.4.a. of this **SUPPLEMENTARY INFORMATION**.
- $K_{SEC-SA} = \frac{e^{a \cdot u} - e^{a \cdot l}}{a \cdot (u - l)}$
- $a = -\frac{1}{p \cdot K_A}$, where p equals 1.5 for a resecuritization exposure and 0.5 for all other securitization exposures.
- $u = D - K_A$
- $l = max(A - K_A, 0)$
- e equals the base of the natural logarithm.

a. Definition of attachment point and detachment point

Under the current capital rule, the attachment point (parameter A) of a securitization exposure equals the ratio of (1) the current dollar amount of underlying exposures that are subordinated to the exposure of the banking organization to (2) the current dollar amount of underlying exposures. Any reserve account funded by the accumulated cash flows from the underlying exposures that is subordinated to the banking organization's securitization exposure may be included in the calculation of parameter A to the extent that cash is present in the

account. The current capital rule generally requires a banking organization to recognize cash or securities that are included in a reserve account in the calculation of parameter A.[174]

The proposal would generally retain the existing definitions of attachment point and detachment point under the current capital rule, with one modification. Specifically, the proposal would not allow a banking organization to include interest rate derivative contracts and exchange rate derivative contracts, or the cash collateral accounts related to these instruments, in the calculation of parameters A and D. The agencies are proposing this treatment because assets held in a funded reserve account, whether cash or securities, can provide credit enhancement to a securitization exposure, whereas interest rate and foreign exchange derivatives (and any cash collateral held against these derivatives) do not.[175]

b. Definition of W parameter

Under the current capital rule, parameter W, which is expressed as a decimal value between zero and one, reflects the proportion of underlying exposures that are not performing or are delinquent, according to criteria outlined in the rule.[176] The proposal would retain the current capital rule's definition of parameter W, with two modifications. Specifically, the proposal would revise the definition of parameter W to (1) exclude any exposure that is directly and

[174] Consistent with the current capital rule, the proposal would require banking organizations to treat any assets that are included in a reserve account as underlying exposures of the securitization exposure, which must be reflected in parameters A and D as well as K_G and the W parameter.

[175] For example, assume a securitization has assets denominated in U.S. dollars and liabilities denominated in euros, and that the securitization executes a USD-EUR foreign exchange swap with a banking organization. The transaction would serve to hedge the foreign exchange risk of the securitization's assets and liabilities, but would not provide credit enhancement to any of the tranches of the securitization.

[176] Consistent with the current capital rule, the proposal would define equity exposure to include exposures to equity instruments that do not have mandatory contractual payments, among other requirements. Accordingly, under the proposal, for purposes of determining the W parameter for a securitization exposure, a banking organization would not treat an underlying equity exposure as being past due or in default on payments, but could treat an underlying equity exposure as subject to a bankruptcy or insolvency proceeding if the issuer of the equity exposure were subject to such a proceeding. *See* definition of equity exposure in §__.2 of the capital rule. 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

unconditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency from the calculation of W, up to the amount of the guarantee; and (2) clarify that for resecuritization exposures, any underlying exposure that is a securitization exposure would only be included in the denominator of the ratio and would be excluded from the numerator of the ratio.

Under the proposal, a banking organization would exclude from the calculation of parameter W any exposure that is directly and unconditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency, up to the amount of the guarantee. By allowing banking organizations to reflect the risk mitigation effects of the U.S. government's guarantee, the proposed modification is intended to more appropriately align the capital requirement with the risk of such securitization exposures. For example, when a banking organization invests in a securitization exposure where all of the underlying exposures are unconditionally guaranteed by the U.S. government, the banking organization may set parameter W equal to zero.

For resecuritization exposures, parameter W would be the ratio of the sum of the current dollar amount of any underlying exposures of the resecuritization that meet any of the criteria in paragraphs __.133(b)(1)(i) through (vi) of the proposal that are not securitization exposures to the current dollar amount of all underlying exposures. Underlying securitization exposures do not need to be included in the numerator of parameter W because the risk weight of the underlying securitization exposure as calculated by the SEC-SA would already reflect the impact of any delinquent or otherwise nonperforming loans within the underlying securitization exposure. For example, if a resecuritization with a notional amount of $10 million includes underlying securitization exposures with a notional amount of $5 million and underlying non-

securitization exposures with a notional amount of $5 million, and if $500,000 of the non-securitization exposures are delinquent, the numerator for the W parameter would be $500,000 while the denominator for the W parameter would be $10 million. This reflects the fact that the risk associated with securitization exposures generally arises from the underlying assets failing to perform as expected, resulting in investors receiving less cashflow than expected from the securitization exposure, rather than from securitization exposure itself failing to make payments due to investors.

Question 71: The agencies seek comment on the appropriateness of requiring banking organizations to only include equity exposures when the issuer is subject to a bankruptcy or insolvency proceeding in the W parameter calculation. What, if any, alternative approaches (such as requiring banking organizations to include equity exposures when the issuer has an obligation to the banking organization that is 90-days or more past due) should the agencies consider that would more appropriately capture the proportion of underlying exposures that are not performing or are delinquent and why? What, if any, operational concerns could such alternatives pose?

c. *Delinquency-adjusted (K_A) and non-adjusted (K_G) weighted-average capital requirement of the underlying exposures*

Under the proposal, K_A would reflect the delinquency-adjusted, weighted-average capital requirement of the underlying exposures and would be a function of K_G and parameter W. Under this approach, in order to calculate parameter W, and thus K_A, the banking organization must know the delinquency status of all underlying exposures in the securitization. K_G would equal the weighted average total capital requirement of the underlying exposures (with the unpaid principal used as the weight for each exposure), calculated using the proposed risk weights in the

expanded risk-based approach, as described in section IV.A.2. of this **SUPPLEMENTARY INFORMATION**.

The proposal would retain the current capital rule's definition of K_G, with two modifications. First, for interest rate derivative contracts and exchange rate derivative contracts, the proposal would require banking organizations to include in the numerator of K_G (and exclude from the denominator of K_G) the product of (1) the positive current exposure, (2) the risk weight of the counterparty, and (3) by 0.08, consistent with the Basel standards. This accounts for the issue where, if amounts related to interest rate and exchange rate derivative contracts were included in both the numerator and denominator of K_G, these contracts could reduce the capital requirement of securitization exposures even though interest rate and exchange rate derivative contracts do not provide any credit enhancement to a securitization.

Second, the proposal would clarify the existing requirement that banking organizations must determine the risk weight applicable to an underlying equity exposure under the simple risk-weight approach, as described in section IV.C.2. of this **SUPPLEMENTARY INFORMATION**, based on the characteristics of the underlying equity exposure. Consistent with the treatment under the current capital rule, banking organizations would not be able to consider the underlying equity exposures as a non-significant equity exposure that receive a 100 percent risk weight when determining K_G. Unlike equity exposures to investment funds (as defined), traditional securitizations can include transactions with companies that have material liabilities and structures that allocate losses based on a predetermined order of priority (rather than on a pro-rata basis). Accordingly, unlike the look-through approaches applicable to underlying equity securities held by investment funds, the proposal would clarify that banking organizations may not calculate risk-based capital requirements for securitization exposures with

underlying equity exposures as though the underlying equity exposures were on the banking organization's balance sheet. This clarification to the current capital rule promotes the risk sensitivity of the securitization framework by requiring banking organizations to reflect a risk weight based on the underlying exposure's risk characteristics and appropriately differentiates between the risk-based capital treatment applicable to investment funds and to securitization exposures.

Question 72: Recognizing that banking organizations may not always know the delinquency status of each underlying exposure, what would be the benefits and drawbacks of allowing a banking organization to use the SEC-SA if the banking organization knows the delinquency status for most, but not all, of the underlying exposures? For example, if the banking organization knew the delinquency status of 95 percent of the exposures, what would be the benefits and drawbacks of allowing the banking organization to (1) split the underlying exposures into two subpools, (2) calculate a weighted average of the K_A of the subpool comprising the underlying exposures for which the delinquency status is known, (3) assign a value of 1 for K_A of the other subpool comprising exposures for which the delinquency status is unknown, and (4) assign a K_A for the entire pool equal to the weighted average of the K_A for each subpool? What other approaches, if any, should the agencies consider and why?

Question 73: The agencies seek comment on the appropriateness of requiring banking organizations to reflect underlying past due exposures in both the K_G and the W parameter components when calculating K_A. To what extent could including past due exposures in both components result in overly punitive capital requirements for such exposures under SEC-SA? What, if any, alternatives (such as not applying the heightened 150 risk weight for past due

exposures for purposes of calculating K_G) should the agencies consider and why? Commenters are encouraged to provide specific examples, including calculations and supporting data.

d. Supervisory risk-weight floors

Consistent with the SSFA in the current capital rule, the SEC-SA would require banking organizations to apply a risk-weight floor to all securitization exposures. The proposed risk-weight floor is intended to ensure that banking organizations maintain a minimum level of capital to account for risks that may not otherwise be captured by SEC-SA, such as modeling risks and correlation. The proposal would apply a risk-weight floor of 15 percent for securitization exposures that are not resecuritization exposures. The 15 percent risk-weight floor is most relevant for more senior securitization exposures. While junior tranches can absorb a significant amount of credit or equity risk, senior tranches are still exposed to some amount of credit or equity risk on the underlying exposures. Therefore, a minimum capital requirement continues to be appropriate for all securitization exposures.

For resecuritization exposures, the proposed SEC-SA approach would require banking organizations to apply a risk-weight floor of 100 percent. The proposed 100 percent supervisory risk-weight floor for resecuritization exposures is intended to capture the greater complexity of such exposures and heightened correlation risks inherent in the underlying securitization exposures.[177]

[177] In a typical securitization exposure that is not a resecuritization, each underlying exposure is subject to idiosyncratic default risks (for example, the employment status of each obligor) which may exhibit lower relative default correlation. In a resecuritization exposure, the underlying exposures, which are typically tranches of securitizations, usually have credit enhancement from more junior tranches that protects against many idiosyncratic risks. Systematic risks are more likely to generate defaults in the underlying exposures of resecuritizations than idiosyncratic risks, but systematic risks are also much more likely to be correlated due to their system-wide nature; therefore, resecuritizations can be expected to have higher default correlations than other types of securitizations.

Question 74: The agencies seek comment on the proposed 100 percent risk-weight floor for resecuritization exposures. What modifications, if any, should the agencies consider to the 100 percent risk-weight floor for resecuritization exposures and why? For example, what would be the pros and cons of excluding certain types of resecuritization exposures—such as resecuritizations of servicer cash advance receivables—from the 100 percent risk-weight floor and why? Commenters are encouraged to provide data (such as loss history) to support their recommendations.

5. *Exceptions to the SEC-SA risk-based capital treatment for securitization exposures*

Securitization exposures sometimes contain features that, if not accounted for, could produce inconsistent outcomes under the SEC-SA, or in some cases make the calculation of the risk weight inoperable. Therefore, the proposal would include additional approaches for certain types of securitization exposures to more appropriately align the capital requirement with the risk of such securitization exposures.

a. *Purchased credit derivatives*

As discussed previously in section IV.B.1.b. of this **SUPPLEMENTARY INFORMATION**, the proposal would modify paragraph (1) of the definition of traditional securitization to clarify that the securitization framework generally applies to exposures to companies with material liabilities that are not operating companies, and whose underlying exposures are primarily financial exposures. To further clarify the scope of exposures subject to the securitization framework under the current capital rule, the proposal would also remove the definition of securitization special purpose entity (SPE).

Under the current capital rule, if a banking organization purchases a credit derivative (other than an nth-to-default credit derivative) that is recognized as a credit risk mitigant (including via recognized collateral) under the securitization framework, the banking organization is not required to compute a separate counterparty credit risk capital requirement. For purchased credit derivatives that a banking organization cannot or chooses not to recognize as a credit risk mitigant under the securitization framework, the current capital rule requires the banking organization to calculate an exposure amount using SA-CCR and to determine the applicable risk weight based on whether or not the counterparty is a securitization SPE.[178] Specifically, if the counterparty is a securitization SPE, the banking organization must determine the risk weight based on the securitization framework; if the counterparty is not a securitization SPE, the banking organization must apply the risk weight applicable to the counterparty under the general credit risk framework.

Consistent with the proposed technical modification to the definition of traditional securitization,[179] the proposal would (1) remove the definition of securitization SPE, and (2) clarify that the risk weight applicable to purchased credit derivatives that a banking organization cannot or chooses not to recognize as a credit risk mitigant would be based on whether the

[178] Securitization SPE under §__. 2 of the current capital rule means a corporation, trust, or other entity organized for the specific purpose of holding underlying exposures of a securitization, the activities of which are limited to those appropriate to accomplish this purpose, and the structure of which is intended to isolate the underlying exposures held by the entity from the credit risk of the seller of the underlying exposures to the entity. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

[179] The proposal would retain the existing definition of securitization exposure under the current capital rule. Under §__. 2 of the current capital rule, securitization exposure means (1) an on-balance sheet or off-balance sheet credit exposure (including credit-enhancing representations and warranties) that arises from a traditional securitization or synthetic securitization (including a resecuritization), or (2) an exposure that directly or indirectly references a securitization exposure described in paragraph (1) of this definition. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

counterparty is a securitization (that is, a non-operating company that holds the underlying exposures of a securitization transaction).

b. Nth-to-default credit derivatives

Nth-to-default credit derivatives provide credit protection on a group of reference exposures only after a specific number (n) of the reference exposures default.[180] As nth-to-default credit derivatives tranche the credit risk of the reference exposures based on the order in which defaults occur within the group of reference exposures, such credit derivatives would generally qualify as securitization exposures under the proposal, consistent with the current capital rule. Under the current capital rule, banking organizations that have purchased credit protection in the form of an nth-to-default credit derivative may recognize the risk-mitigating benefit of that derivative under the credit risk mitigation framework applicable to securitization exposures if certain conditions are met. If a banking organization sells protection in the form of an nth-to-default credit derivative, the current capital rule requires the banking organization to calculate risk-weighted assets as the product of (1) the exposure amount produced by SA-CCR, and (2) either the risk weight produced by the SSFA or a 1,250 percent risk weight.

Nth-to-default credit derivatives provide protection only for a limited number of default event(s) and, therefore, do not provide continuous or comprehensive coverage of credit risk for the entire basket of reference exposures. Furthermore, the current capital treatment of nth-to-default credit derivatives may not appropriately capture the default correlation among the reference exposures. For example, assume a banking organization with exposure to five corporate entities purchases an nth-to-default credit derivative that pays out upon the default of

[180] Consistent with the current capital rule, the proposal would define an nth-to-default credit derivative as a credit derivative the provides credit protection only for the nth-defaulting reference exposure in a group of reference exposures. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

the second of the five corporate entities. In such a case, the banking organization would remain exposed to any losses incurred upon the first corporate entity default, as well as losses from any defaults beyond the second corporate entity default, if applicable. Conversely, a banking organization that sells an nth-to-default credit derivative that provides protection against the default of the second corporate entity could incur losses exceeding the premiums collected from the protection purchaser if the defaults of the underlying corporates are highly correlated. Furthermore, the risk weight produced by the SEC-SA may not appropriately capture the risk of sold nth-to-default credit derivatives, which are priced based on the expected default correlation among the reference exposures.[181]

Accordingly, consistent with the Basel standards, while nth-to-default credit derivatives would continue to be securitization exposures, the proposal would not permit banking organizations to recognize any risk-mitigating benefit for nth-to-default credit derivatives for which the banking organization is the protection purchaser under the proposed securitization framework. Rather, the proposal would require banking organizations to calculate risk-weighted assets for counterparty credit risk using the exposure amount produced by SA-CCR, as described in section IV.A.4.b. of this **SUPPLEMENTARY INFORMATION** and the risk weight applicable to the protection provider under the general credit risk framework.

Similarly, consistent with the Basel standards, while nth-to-default credit derivatives in which the banking organization is the seller of protection would continue to be securitization exposures, the proposal would prohibit the banking organization from using the SEC-SA to

[181] As a standardized approach, the SEC-SA calculation does not explicitly capture default correlation among the underlying exposures (such as the possibility that multiple underlying exposures will default simultaneously or that the default of one underlying exposure may affect the likelihood of another underlying exposure defaulting). Instead, default correlation effects are implicitly incorporated through the supervisory parameter (p) in the SEC-SA calculation, which serves as a proxy for the concentration and correlation of the underlying exposures.

determine the applicable risk weight. Rather, the proposal would generally require banking organizations to calculate the risk-weighted asset amount by multiplying the notional amount of the protection provided by the nth-to-default credit derivative by the sum of the risk weights applicable to each of the underlying reference exposures, up to a maximum of 1,250 percent. In aggregating the risk weights for second- or-later-to-default credit derivatives, the proposal would permit banking organizations to exclude the (n-1) assets with the lowest risk weights from the calculation.[182] This approach would require a banking organization to maintain capital based on the risk characteristics of all the underlying reference exposures in the basket on which it is providing protection, while recognizing that the banking organization is not required to make a payment unless "n" names in the basket default.

c. Derivative contracts that do not provide credit enhancements

The proposal would revise the risk weight for securitization exposures that are derivative contracts (other than protection provided by a banking organization in the form of a credit derivative) that have a first priority claim on the cash flows from the underlying exposures, notwithstanding amounts due under interest rate or currency derivative contracts, fees, or other similar payments. The current capital rule permits banking organizations to assign a risk-weighted asset amount for such securitization exposures equal to the exposure amount calculated under SA-CCR (corresponding to a 100 percent risk weight). The proposal would eliminate this option. Instead, a banking organization would determine the risk-weighted asset amount by

[182] For example, assume a banking organization sells a first-to-default credit derivative that provides protection on three underlying corporate entities, two of which would be subject to a 65 percent risk weight and one to a 100 percent risk weight under the proposal. The proposal would require the banking organization to multiply the sum of the three risk-weights (230 percent) by the notional amount of protection provided by the first-to-default credit derivative. If the banking organization sold a second-to-default credit derivative that provided protection on the same three corporate entities, the proposal would require the banking organization to multiply the sum of the two highest applicable risk-weights (165 percent) by the notional amount of protection provided by the second-to-default credit derivative.

multiplying (1) the exposure amount produced by the counterparty credit risk framework, as described in section IV.A.4. of this **SUPPLEMENTARY INFORMATION**, and (2) either the risk weight applicable to the exposure under the securitization framework or a 1,250 percent risk weight. The proposed treatment would be more risk sensitive and more accurately reflect the risks of such exposures than a flat 100 percent risk weight.

Additionally, the proposal would provide a new treatment for certain interest rate or foreign exchange derivative contracts that qualify as securitization exposures. Some securitizations either make payments to investors in a different currency from the underlying exposures or make fixed payments to investors when the cash flows received on the underlying exposures are linked to a floating interest rate. To neutralize these foreign exchange or interest rate risks, a securitization may enter into a derivative contract that mirrors the currency or interest rate mismatch between the exposures and the tranches. Cash flows required to be paid to the derivative counterparty tend to have a claim senior to the investors in the cash flow waterfall, and therefore tend not to provide credit enhancement.

The proposal would require a banking organization that acts as a counterparty to these types of interest rate and foreign exchange derivatives to set the risk weight on such derivatives equal to the risk weight calculated under the SEC-SA for a securitization exposure that is pari passu to the derivative contract or, if such an exposure does not exist, the risk weight of the next subordinated tranche of the securitization exposure. A banking organization may otherwise not be able to calculate a risk weight for these derivative contracts using the SEC-SA because the attachment and detachment points under the proposed formula could equal one another, rendering the formula inoperable. The proposed treatment, consistent with the Basel standards, is intended to appropriately reflect how the credit risk associated with these derivative contracts

would be commensurate with or less than the credit risk associated with a pari passu tranche or the next subordinated tranche of a securitization exposure.

Question 75: The current capital rule provides banking organizations the option to assign a 100 percent risk weight to securitization exposures that are derivative contracts (other than protection provided by a banking organization in the form of a credit derivative) that have a first priority claim on the cash flows from the underlying exposures (notwithstanding amounts due under interest rate or currency derivative contracts, fees, or other similar payments). The agencies seek comment on the advantages and disadvantages of retaining this option. What, if any, operational burden would banking organizations face if this option were retained or eliminated? What, if any, clarifications should the agencies consider regarding the determination of the attachment point and detachment point for such securitization exposures, and why?

d. Overlapping exposures

To enhance the risk sensitivity of the securitization framework, the proposal would introduce new provisions to address instances where one of the banking organization's securitization exposures would preclude the banking organization from incurring losses under all circumstances on one or more separate securitization exposures also held by the banking organization (overlapping exposures). The standardized approach of the current capital rule includes provisions to limit the double counting of risks in situations involving overlapping securitization exposures. If a banking organization has multiple securitization exposures that provide duplicative coverage to the underlying exposures of a securitization (such as when a banking organization provides a program-wide credit enhancement and multiple pool-specific liquidity facilities to an ABCP program), the banking organization is not required to hold

duplicative risk-based capital against the overlapping position. Instead, the banking organization may apply to the overlapping position the applicable risk-based capital treatment under the securitization framework that results in the highest risk-based capital requirement.

Consistent with the Basel standards, the proposal would expand the treatment of overlapping exposures to allow banking organizations to also apply this treatment (1) where one or more of the overlapping securitization exposures would be subject to the expanded risk-based approach and other(s) to the proposed market risk framework, and (2) to securitization exposures that partially overlap for purposes of the expanded risk-based approach.

First, to the extent that one or more of the such securitization exposures would be subject to the expanded risk-based approach and others to the revised market risk framework, the proposal would allow banking organizations to reflect only the greater of the risk-based capital requirement produced by the expanded risk-based approach or the market risk capital framework, provided the banking organization is able to calculate and compare the capital requirements for the relevant exposures.

Second, if a banking organization has two or more securitization exposures that partially overlap, the proposal would permit the banking organization to treat the exposures as overlapping exposures, provided the banking organization can demonstrate that one of its securitization exposures can fully absorb losses arising from its other securitization exposures. For example, if a banking organization provides a program-wide credit enhancement to an ABCP conduit that covers only the portion of the losses above the seller-provided protection[183] and the banking organization also holds commercial paper issued by the ABCP conduit, the banking

[183] For example, typically in the case of multi-seller ABCP conduits, each seller provides first-loss protection by over-collateralizing the conduit to which it sells loans.

organization would be permitted to reflect the risk-weighted asset amount only for the program-wide credit enhancement, provided the banking organization demonstrates, for purposes of calculating risk-based capital requirements, that the program-wide credit enhancement would require the banking organization to fully absorb any losses arising from the ABCP conduit. As the risk-based capital requirement for the program-wide credit enhancement would be treated as covering any losses on the commercial paper, the proposal would not require the banking organization to also maintain additional risk-based capital against the securitization exposure(s) arising from the commercial paper.

In this regard, the proposal aims to increase risk-sensitivity by allowing banking organizations to appropriately reflect the risk of such overlapping exposures within the calculation of risk-weighted assets while also providing sufficient flexibility if doing so would impose significant burden.[184]

Question 76: What challenges, if any, would the option to recognize an overlap between market risk covered and noncovered positions introduce? To what degree do banking organizations anticipate recognizing overlaps between market risk covered and noncovered positions?

e. Look-through approach for senior securitization exposures

Consistent with the Basel standards, the proposal would introduce a provision that would allow a banking organization to assign to a senior securitization exposure that is not a resecuritization exposure a risk weight equal to the weighted average risk weight of the underlying exposures, provided that the banking organization has knowledge of the composition

[184] For example, the proposed market risk capital framework would require banking organizations to calculate risk-based capital requirements at the trading desk level. Thus, the cost associated with requiring banking organizations to calculate market risk capital requirements for an individual securitization exposure may outweigh any improvement in risk sensitivity associated with the proposed treatment for overlapping exposures described above.

of all of the underlying exposures (also referred to as the "look-through approach"). For purposes of calculating the weighted-average risk weight, the proposal would require a banking organization to use (1) the unpaid principal amount of underlying exposures as the weight for each exposure, and (2) determine the risk weight applicable to an underlying equity exposure based on the characteristics of the underlying equity exposure.[185]

The proposal would define a senior securitization exposure as an exposure that has a first priority claim on the cash flows from the underlying exposures. When determining whether a securitization exposure has a first priority claim on the cash flows from the underlying exposures, a banking organization would not be required to consider amounts due under interest rate derivative contracts, currency derivative contracts, and servicer cash advance facility contracts,[186] or any fees and other similar payments to be made by the securitization to other parties. Both the most senior commercial paper issued by an ABCP program and a liquidity facility that supports the ABCP program may be senior securitization exposures if the liquidity facility provider's right to reimbursement of the drawn amounts is senior to all claims on the cash flows from the underlying exposures, except amounts due under interest rate derivative contracts, currency derivative contracts, and servicer cash advance facility contracts, fees due, and other similar payments. Accordingly, under the proposed look-through approach, if a senior securitization exposure's underlying exposures consists solely of past due loans with a weighted-

[185] As discussed in section IV.B.4.c. of this **SUPPLEMENTARY INFORMATION**, the non-significant equity exposure treatment does not apply to equity securities underlying a securitization.

[186] Consistent with the current capital rule, the proposal would define a servicer cash advance facility as a facility under which the servicer of the underlying exposures of a securitization may advance cash to ensure an uninterrupted flow of payments to investors in the securitization, including advances made to cover foreclosure costs or other expenses to facilitate the timely collection of the underlying exposures. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

average risk weight of 150 percent, the risk weight for the senior securitization exposure would be no more than 150 percent.

Consistent with the proposed 15 percent floor under the SEC-SA, the proposal would require banking organizations to floor the total risk-based capital requirement under the look-through approach at 15 percent. The proposed 15 percent floor is intended to appropriately reflect the minimum amount of risk-based capital that a banking organization should maintain for senior securitization exposures given that the process of securitization can introduce risks that are not present in directly holding the underlying exposures. For example, the transformation of risk profiles through the securitization process and the introduction of payment waterfalls, among other structural features, can add complexity to modeling and correlation assumptions.

Question 77: What are the advantages and disadvantages of the proposed 15 percent risk weight floor in the look-through approach and why?

f. Credit-enhancing interest only strips

The proposal would require a banking organization to deduct from common equity tier 1 capital any portion of a credit-enhancing interest-only strip[187] that does not constitute an after-tax-gain-on sale, regardless of whether the securitization exposure meets the proposed operational requirements. The proposed treatment for credit-enhancing interest-only strips would be different than under standardized approach in the current capital rule, which requires a risk weight of 1,250 percent for these items. The proposal would require banking organizations to deduct credit-enhancing interest-only strips from common equity tier 1 capital because

[187] Consistent with the current capital rule, the proposal would define a credit-enhancing interest-only strip as an on-balance sheet asset that, in form or in substance (1) represents a contractual right to receive some or all of the interest and no more than a minimal amount of principal due on the underlying exposures of a securitization; and (2) exposes the holder of the CEIO to credit risk directly or indirectly associated with the underlying exposures that exceeds a pro rata share of the holder's claim on the underlying exposures, whether through subordination provisions or other credit-enhancement techniques. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

valuations of credit-enhancing interest-only strips can include a high degree of subjectivity and, just like assets subject to deduction under the current capital rule such as goodwill and other intangible assets, banking organizations may not be able to fully realize value from credit-enhancing interest-only strips based on their balance sheet carrying amounts. While a deduction is generally equivalent to a 1,250 percent risk weight when the banking organization maintains an 8 percent risk-based capital ratio, given the various capital ratios, buffers, and add-ons applicable to banking organizations subject to the proposed expanded risk-based approach, applying a deduction provides a more consistent treatment across capital ratios and greater consistency with the Basel standards.

g. Non-performing loan securitizations

The proposal would define a non-performing loan securitization as a traditional securitization, that is not a resecuritization, where parameter W for the underlying exposures is greater than or equal to 90 percent at the origination cut-off date[188] and at any subsequent date on which exposures are added to or removed from the pool of underlying exposures due to replenishment or restructuring. A securitization exposure that meets the definition of a resecuritization exposure would be excluded from the definition of a non-performing loan securitization.

In a typical non-performing loan securitization, the originating banking organization sells non-performing loans to a securitization at a significant discount to the outstanding loan balances, reflecting the nonperforming nature of the underlying exposures. This nonrefundable purchase price discount functions as a form of credit enhancement to investors. Unlike

[188] Cut-off date is the date on which the composition of the underlying exposures collateralizing a securitization transaction is established. This means that all exposures to be included in a securitization must already be in existence and meet the non-performing loan criteria as of that date.

securitizations of performing loans, which principally depend on the cash flows of the underlying loans, the performance of non-performing loan securitizations depends in part on the performance of workouts on defaulted loans and on the liquidation of underlying collateral for those loans which are unable to be cured, both which are uncertain and could be volatile.

Consistent with the Basel standards, the proposal would introduce a specific capital treatment for non-performing loan securitization exposures. A banking organization would assign a risk weight of 100 percent to a non-performing loan securitization exposure if the following conditions are satisfied: (1) the transaction structure meets the definition of a traditional securitization; (2) the securitization contains a credit enhancement in the form of a nonrefundable purchase price discount greater than or equal to 50 percent of the outstanding balance of the underlying exposures at inception of the transaction; and (3) the banking organization's securitization exposure is a senior securitization exposure, as described in section IV.B.5.e. of this **SUPPLEMENTARY INFORMATION**.[189] Applying the SEC-SA to senior securitizations of non-performing loans that meet these criteria would result in capital requirements that do not appropriately reflect the nonrefundable purchase price discount associated with these transactions. The SEC-SA is calibrated on the assumption that the underlying exposures at origination of the securitization are generally performing and is therefore inappropriate for senior exposures to securitizations of non-performing loans that meet these criteria.

If the non-performing loan securitization exposure is not a senior securitization exposure or the nonrefundable purchase price discount is less than 50 percent, the banking organization

[189] If the banking organization is an originating banking organization with respect to the non-performing loan securitization, the banking organization may maintain risk-based capital against the transferred exposures as if they had not been securitized and must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the transaction and any portion of a CEIO strip that does not constitute an after-tax gain-on-sale.

would be required to apply the SEC-SA to determine the applicable risk weight (including by reflecting all delinquent exposures in the calculation of parameter W), subject to a risk weight floor of 100 percent. Compared to other securitizations, the higher supervisory risk-weight floor of 100 percent for non-performing loan securitization exposures reflects the greater dependence of non-performing loan securitizations on the servicer's ability to generate recovery cashflows through loan workouts, borrower renegotiations, or enforcement against collateral. If the securitization exposure does not meet the requirements for use of the SEC-SA, the proposal would require the banking organization to assign a risk weight of 1,250 to the securitization exposure.

Question 78: The agencies seek comment on the proposed 100 percent risk-weight floor for non-performing loan securitization exposures. What modifications, if any, should the agencies consider to the 100 percent risk-weight floor for non-performing loan securitization exposures and why? Commenters are encouraged to provide data (such as loss history) to support their recommendations.

i. *Attachment and detachment points for NPL securitizations subject to the SEC-SA*

Under the proposal, the nonrefundable purchase price discount would equal the difference between the outstanding principal balance of the underlying exposures at the time of sale and the price at which these exposures are sold by the securitization originator[190] on a final basis, without recourse, to a company the activities of which are limited to those appropriate for the specific purpose of holding the underlying exposures of a securitization. The purchase price discount would be considered non-refundable when neither the securitization originator nor the

[190] While originator typically refers to the party originating the underlying loans, in the non-performing loan context it refers to the party arranging the non-performing loan securitization (that is, the securitizer).

original lender are reimbursed with respect to that difference. For any given tranche of the securitization, a banking organization may take into account only the initial sale from the securitization originator in the determination of the non-refundable purchase price discount. In cases where the securitization originator underwrites tranches of a non-performing loan securitization for subsequent sale, an investing banking organization may include in the calculation of the nonrefundable purchase price discount the difference between the outstanding principal balance of the underlying exposures at time of sale and the price at which the securitization originator subsequently sells all of the underwritten tranches to unrelated third parties.

Because the calculation of both parameters A and D depend on the current dollar amount of the underlying exposures, any nonrefundable purchase price discount associated with a securitization would be included in both the numerator and denominator of parameters A and D. For example, assume an originating banking organization sells on a final basis, without recourse, a pool of mortgage loans with an outstanding principal balance of $100 million to a securitization at a price of $60 million. The nonrefundable purchase price discount would be the difference between the outstanding principal balances of the underlying mortgages at the time of sale to the securitization and the price at which the originating banking organization sold these mortgages to the securitization company (that is, $40 million). Assume that the securitization company issues $60 million in securitization tranches of which the originating banking organization purchases the senior $50 million tranche and an investing banking organization purchases the $10 million subordinate tranche. Parameter A for the investing banking organization's exposure would equal 40 percent (that is, the ratio of $40 million to $100 million). In this case, the purchase price discount functions as the effective first-loss position in the

securitization structure. Likewise, the originating banking organization would treat both the nonrefundable purchase price discount and the investing banking organization's tranche as subordinate and would set parameter A at 50 percent.

If, in the example above, after selling the $100 million pool of mortgage loans to a securitization company at a price of $60 million, the originating banking organization underwrites both the senior tranche and the subordinate tranche and later sells both tranches to third parties at a 20 percent discount (that is, the $10 million subordinated tranche is sold for a price of $8 million and the $50 million senior tranche is sold for a price of $40 million), the proposal would allow the investing banking organizations to assign an attachment point that reflects the extent to which losses have effectively been absorbed by the non-refundable purchase price discount, as measured by the difference between the outstanding principal amount of the underlying exposures ($100 million) and the aggregate price at which the originating bank subsequently sells those securitization tranches to unrelated third parties ($48 million). The originating banking organization as underwriter absorbs the additional 20 percent price discount at the sale of the tranches.[191] Thus, the investing banking organization that purchases the $8 million subordinate tranche would be permitted to assign an attachment point of 52 percent and a detachment point of 60 percent to its securitization exposure; the investing banking organization that purchases the $40 million senior tranche would be permitted to assign an attachment point of 60 percent and a detachment point of 100 percent to its securitization exposure.

6. Credit risk mitigation for securitization exposures

[191] Under the proposal, a purchase price discount would only qualify as a non-refundable purchase price discount if neither the securitization originator nor the original lender receive reimbursement of the discount. If, in the above example, the securitization company repays the originating banking organization, acting in its role as underwriter, for the purchase price discount from the sale of the tranches to third-party investors, the purchase price discount would not qualify as a non-refundable purchase price discount and the investing banking organizations would not be permitted to recognize such a discount in the calculation of parameters A and D.

The proposal would incorporate the credit risk mitigation framework for securitization exposures in the current standardized approach, with one exception.[192] A banking organization that purchases or sells tranched credit protection, whether hedged or unhedged, referencing part of a senior tranche would not be allowed to treat the lower-priority portion that the credit protection does not reference as a senior securitization exposure. For example, if a banking organization holds a securitization exposure with an attachment point of 20 percent and a detachment point of 100 percent and the banking organization purchases an eligible guarantee with an attachment point of 50 percent and a detachment point of 100 percent, the banking organization's residual exposure, which attaches at 20 percent and detaches at 50 percent, would be considered a non-senior securitization exposure, and the banking organization would not be permitted to apply the look-through approach to this exposure. A banking organization that purchases a mezzanine tranche that attaches at 20 percent and detaches at 50 percent has a similar economic exposure to a banking organization that purchases a senior tranche that attaches at 20 percent and detaches at 100 percent and then purchases credit protection that attaches at 50 percent and detaches at 100 percent. Because the former transaction would not be considered a senior securitization exposure eligible for the look-through approach, the latter transaction likewise should not be eligible for the look-through approach. Alternatively, the banking organization may choose not to recognize the tranched credit protection. In this case, the

[192] As discussed in section IV.A.4. of this **SUPPLEMENTARY INFORMATION**, the proposal would increase consistency and comparability of capital requirements by reducing the use of bank models. Therefore, the proposal does not include the model-based approaches currently contained in the credit risk mitigation framework under the advanced approaches (such as allowing banking organizations to use their own internal estimates for calculating haircuts under the collateral haircut approach and allowing the use of the internal models methodology or simple value at risk methodology for measuring counterparty credit risk). Instead, consistent with the standardized approach in the current capital rule, the proposed credit risk mitigation framework for securitization exposures would permit the recognition of a credit risk mitigant only to the extent consistent with the requirements of § __.120 or 121, as applicable, as well as the requirements of the proposed securitization framework.

proposal would allow the banking organization to treat the securitization exposure (which attaches at 20 percent and detaches at 100 percent) as a senior securitization exposure.

C. Equity exposures

Equity exposures present a greater risk of loss relative to credit exposures, as equity exposures represent an ownership interest in the issuer of an equity instrument and is a residual claim on the assets and income of the issuer. An equity exposure entitles a banking organization to no more than the pro-rata residual value of a company after all other creditors are repaid.[193] As a result, consistent with the current capital rule, the proposal would generally assign higher risk weights to equity exposures than exposures subject to the proposed credit risk framework.

Under the proposal, for banking organizations subject to the market risk framework, material publicly traded equity exposures would generally be subject to the proposed market risk framework[194] described in section V.A. of this **SUPPLEMENTARY INFORMATION**, unless restrictions exist on the tradability of such exposures. Similarly, equity exposures to investment funds would be subject to the proposed market risk framework when the following conditions are met: (1) the banking organization has access to the investment fund's prospectus, partnership agreement, or similar contract that defines the fund's permissible investments and investment limits, and (2) the banking organization is either able to calculate a market risk capital requirement for its proportional ownership share of each exposure held by the investment fund, or obtain daily price quotes. For banking organizations with significant trading activity, the proposed equity framework would therefore primarily cover illiquid or infrequently traded equity

[193] For example, exposures that could be characterized as an equity exposure under the current capital rule and under the proposal include a short position in an equity security or an equity total return swap. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC) for the definition of equity exposure.

[194] *See* §__.202 for the proposed definition of market risk covered position.

exposures. For banking organizations without significant trading activity, the proposed equity framework would be used to calculate risk-weighted assets for all equity exposures.

The proposed framework would largely maintain the current standardized approach equity framework. The proposal would make one targeted modification to align the treatment of commitments within the expanded risk-based approach. Specifically, the proposal would simplify the current rule's conversion factors for conditional commitments to acquire an equity exposure.

1. Adjusted carrying value

The proposal would retain the risk-weighted asset amount calculation under the current capital rule.[195] In addition, the proposal would maintain the current capital rule's methods for calculating the adjusted carrying value for equity exposures, with one exception. Consistent with the update to credit conversion factors described in section IV.A.3.b. of this **SUPPLEMENTARY INFORMATION**, the proposal would simplify the treatment of conditional commitments to acquire an equity exposure by removing the differentiation of conversion factors by maturity. The proposal would require a banking organization to multiply the effective notional principal amount of a conditional commitment by a 40 percent conversion factor to calculate its adjusted carrying value. This change is consistent with the Basel standards, promoting international alignment, and removes incentives for firms to structure commitments based on maturity date to avoid the higher 50 percent conversion factor under the current rule in favor of the lower 20 percent conversion factor.

[195] *See* 78 FR 62124.

Under the proposal, the adjusted carrying value of an equity exposure, including equity exposures to investment funds, would be based on the type of exposure, as described in Table 1 below.

Table 1: Adjusted Carrying Value for Equity Exposures

Equity exposure type	Adjusted carrying value
On-balance sheet component of an equity exposure	The carrying value of the exposure.
Unconditional commitment to acquire an equity exposure	The effective notional principal amount[196] of the exposure multiplied by a 100 percent conversion factor.
Conditional commitment to acquire an equity exposure	The effective notional principal amount of the exposure multiplied by a 40 percent conversion factor.
Off-balance sheet component of an equity exposure that is not an equity commitment[197]	The effective notional principal amount of the exposure, the size of which is equivalent to a hypothetical on-balance sheet position in the underlying equity instrument that would evidence the same change in fair value (measured in dollars) for a given small change in the price of the underlying equity instrument, minus the adjusted carrying value of the on-balance sheet component of the exposure.

[196] Consistent with the current capital rule, the proposal includes the concept of the effective notional principal amount of the off-balance sheet portion of an equity exposure to provide a uniform method for banking organizations to measure the on-balance sheet equivalent of an off-balance sheet exposure. For example, if the value of a derivative contract referencing the common stock of company X changes the same amount as the value of 150 shares of common stock of company X, for a small change (for example, 1.0 percent) in the value of the common stock of company X, the effective notional principal amount of the derivative contract is the current value of 150 shares of common stock of company X, regardless of the number of shares the derivative contract references. The adjusted carrying value of the off-balance sheet component of this derivative is the current value of 150 shares of common stock of company X minus the adjusted carrying value of any on-balance sheet amount associated with the derivative.

[197] Consistent with the current capital rule, the proposal would allow a banking organization to choose not to hold risk-based capital against the counterparty credit risk of equity derivative contracts, as long as it does so for all such contracts. Where the equity derivative contracts are subject to a qualified master netting agreement, the proposal would require the banking organization to either include all or exclude all of the contracts from any measure used to determine counterparty credit risk exposure. *See* §__.114(d) of the proposal.

2. Simple risk-weight approach (SRWA)

Under the proposal, the risk-weighted asset amount for an equity exposure, except for equity exposures to investment funds, would be the product of the adjusted carrying value of the equity exposure multiplied by the lowest applicable risk weight, as described in Table 2 below. The proposed simple risk-weight approach maintains the same risk weights applicable to equity exposures under the current capital rule.

Table 2: Risk Weights Applicable to Equity Exposures under the Simple Risk-Weight Approach (SRWA)

Risk Weight	Equity Exposure
0%	An equity exposure to a sovereign, specified supranational entity,[198] a multilateral development bank, and any other entity whose credit exposures receive a zero percent risk weight under §__. 111 of the proposal.
20%	An equity exposure to a Public Sector Entity, Federal Home Loan Bank, or the Federal Agricultural Mortgage Corporation.
100%	An equity exposure that qualifies as a community development investment under section 24 (Eleventh) of the National Bank Act.
	Non-significant equity exposures.[199]
	The effective portion of a hedge pair.
250%	Significant investments in the capital of unconsolidated financial institutions in the form of common stock that are not deducted from capital pursuant to §__.22(d)(2)(i)(B) under the proposal.

[198] Under the proposal, specified supranational entities would include the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, and the European Financial Stability Facility. Consistent with the current capital rule, equity exposures to such entities would continue to be subject to a zero percent risk weight for the purposes of the simple risk weight approach.

[199] *See* 78 FR 62124 (Oct. 11, 2013).

300%	A publicly traded equity exposure.[200]
400%	An equity exposure that is not publicly traded.
600%	An equity exposure to an investment firm that: • Would meet the definition of a traditional securitization were it not for the application of paragraph (8) of that definition; and • Has greater than immaterial leverage.

a. Alternative approach

The proposal would maintain the current capital rule's treatment of non-significant equity exposures. Non-significant equity exposures means equity exposures to the extent that the aggregate adjusted carrying value of the banking organization's equity exposure does not exceed 10 percent of the banking organization's total capital.[201] Non-significant equity exposures receive a 100 percent risk weight under the current capital rule.

To increase the risk sensitivity of the proposed equity framework, the agencies considered the following alternative approach: (1) remove the 100 percent risk weight for non-significant equity exposures, (2) introduce a 100 percent risk weight for certain tax equity financing transactions and equity exposures to Small Business Investment Companies,[202] (3) lower the risk weight for publicly traded equity exposures from 300 percent to 250 percent,[203] and (4) increase the risk weight applicable to equity exposures to investment firms with greater than immaterial leverage and that would meet the definition of a traditional securitization were it not for the

[200] The proposal would rely on the existing definition of publicly traded under the current capital rule. *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

[201] *See* _.141(b)

[202] Under the current capital rule, when determining which equity exposures are "non-significant" and thus eligible for a 100 percent risk weight, a banking organization first must include equity exposures to an unconsolidated small business investment company or held through a consolidated small business investment company described in section 302 of the Small Business Investment Act of 1958 (15 U.S.C. 682).

[203] The 250 percent risk weight for publicly traded equities would be consistent with the Basel standards.

application of paragraph (8) of that definition from 600 percent to 1,250 percent. Outside of those changes under consideration, the agencies would retain the current capital rule's risk weights for equity exposures, the hedge pair treatment, and look-through approaches for equity investment in funds. This alternative approach would increase risk sensitivity by requiring banking organizations to apply a risk weight based on the characteristics of each equity exposure, rather than only for those in excess of 10 percent of the banking organization's total capital. Conversely, the agencies recognize that implementing this alternative approach would increase the operational burden associated with the proposal as banking organizations have developed internal reporting systems and processes to apply the current capital rule's 100 percent risk weight for non-significant equity exposures.

Given that the proposed equity framework captures a more limited set of exposures compared to the current rule,[204] the agencies determined that the cost associated with replacing the current treatment for non-significant equity exposures may be higher than the improvement in risk sensitivity associated with the alternative approach described above. As such, to balance risk sensitivity with burden, the proposed simple risk weight approach retains the current capital rule's treatment for non-significant equity exposures.

Question 79: What are the advantages and disadvantages of the proposed 40 percent conversion factor for calculating the adjusted carrying value of conditional equity commitments? How appropriate is this proposed conversion factor for capturing the risk that such commitments will become on-balance sheet equity exposures? What alternative approaches or conversion

[204] A significant portion of publicly traded equity exposures and equity investment in funds exposures will be considered market risk covered positions. *See* §__.202 for the proposed definition of market risk covered position.

factor values might better reflect the risk profile of conditional equity commitments, and what would be the potential costs and benefits of such alternatives?

Question 80: What are the advantages and disadvantages of using a treatment for conditional commitments which differentiates conversion factors based on maturity, and would apply a 20 percent credit conversion factor to those commitments with an original maturity of one year or less, and a 50 percent conversion factor to those with an original maturity of more than one year?

Question 81: The agencies request comment on the proposed 100 percent risk weight for non-significant equity exposures. What are the advantages or disadvantages of replacing the proposed treatment of equity exposures with the alternative approach described above? What other alternatives should the agencies consider, and what would be the advantages and disadvantages of such alternatives?

Question 82: For what, if any, types of exposures would a 100 percent risk weight and classification as non-significant equity exposure be inappropriate and why? What specific characteristics of these exposures would warrant a different risk weight treatment?

Question 83: Certain equity exposures, such as certain tax equity financing transactions, may have a different risk profile than general equity exposures. What types of equity exposures have risk profiles that differ materially from general equity exposures? What risk weights would be appropriate for such exposures, and what are the benefits and costs of applying different risk weight treatments? Please provide relevant data to support your views, including historical loss data and information on risk characteristics of these exposures.

D. Operational risk

The proposal would include an operational risk capital requirement. Operational risk is defined in the current capital rule as the risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events.[205] It includes a wide range of risks, such as fraud, system failures, business disruptions, damage to physical assets, cyberattacks, and litigation. Operational risk is present across banking products, activities, processes, and systems and has resulted in substantial financial losses for large banking organizations in the United States.[206]

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[205] *See* 12 CFR 3.101 (OCC); 217.101 (Board); 12 CFR 324.101 (FDIC). Under the proposal, the definition of operational risk would include legal risk, but exclude strategic risk.

[206] There are several examples of large banking organizations experiencing severe operational losses. Multiple banking organizations have suffered substantial losses due to rogue trading. Large U.S. banking organizations have also experienced billions of dollars in operational losses from legal settlements relating to improper loan origination, securitization, and foreclosure practices associated with the 2007–09 global financial crisis. Some banking organizations have experienced substantial losses from legal settlements relating to the violation of sanctions put in place by the United States. Additionally, a large banking organization experienced substantial operational losses due to a fake-accounts scandal.

See, e.g., M. Jeremy, "Leeson pleads guilty to two charges in Barings collapse, and may cooperate," *The Wall Street Journal* (Dec. 1, 1995); and Nicola Clark and David Jolly, "French Bank Says Rogue Trader Lost $7 Billion," *The New York Times*, (Jan. 25, 2008).

See, e.g., U.S. Dep't of Justice, Press Release, Federal Government and State Attorneys General Reach $25 Billion Agreement with Five Largest Mortgage Servicers to Address Mortgage Loan Servicing and Foreclosure Abuses (Feb. 9, 2012), *https://www.justice.gov/opa/pr/federal-government-and-state-attorneys-general-reach-25-billion-agreement-five-largest*; U.S. Dep't of Justice, Press Release, Justice Department, Federal and State Partners Secure Record $13 Billion Global Settlement with JPMorgan for Misleading Investors About Securities Containing Toxic Mortgages (Nov. 9, 2013), *https://www.justice.gov/opa/pr/justice-department-federal-and-state-partners-secure-record-13-billion-global-settlement*; FHFA, Press Release, FHFA Announces $9.3 Billion Settlement With Bank of America Corporation (Mar. 26, 2014), *https://www.fhfa.gov/news/news-release/fhfa-announces-9.3-billion-settlement-with-bank-of-america-corporation*; U.S. Dep't of Justice, Press Release, Bank of America to Pay $16.65 Billion in Historic Justice Department Settlement for Financial Fraud Leading up to and During the Financial Crisis (Aug. 21, 2014), 21, 2014), *https://www.justice.gov/opa/pr/bank-america-pay-1665-billion-historic-justice-department-settlement-financial-fraud-leadinghttps://www.justice.gov/opa/pr/bank-america-pay-1665-billion-historic-justice-department-settlement-financial-fraud-leading*; U.S. Dept' of Justice, Press Release, Justice Department, Federal and State Partners Secure Record $7 Billion Global Settlement with Citigroup for Misleading Investors About Securities Containing Toxic Mortgages (July 14, 2014), *https://www.justice.gov/opa/pr/justice-department-federal-and-state-partners-secure-record-7-billion-global-settlementhttps://www.justice.gov/opa/pr/justice-department-federal-and-state-partners-secure-record-7-billion-global-settlement*; U.S. Dep't of Justice, Press Release, BNP Paribas Sentenced for Conspiring to Violate the International Emergency Economic Powers Act and the Trading with the Enemy Act (May 1, 2015), *https://www.justice.gov/opa/pr/bnp-paribas-sentenced-conspiring-violate-international-emergency-economic-powers-act-and*;U.S. Dep't of Justice, Press Release, Morgan Stanley Agrees to Pay $2.6 Billion Penalty in Connection with Its Sale of Residential Mortgage Backed Securities (Feb. 11, 2016), *https://www.justice.gov/opa/pr/morgan-stanley-agrees-pay-26-billion-penalty-connection-its-sale-residential-*

In total, Category I and II holding companies have experienced over $308 billion in operational losses between 2007Q1 and 2025Q2.[207] These totals include large operational losses from activities that typically do not result in substantial credit or market risk-weighted assets, such as certain fee-based activities, indicating that operational risk can represent the main source of risk for activities that have a limited balance sheet footprint.

In addition to their substantial stand-alone materiality, empirical academic research supports that operational losses tend to increase during economic downturns.[208] In some cases,

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mortgage-backed; U.S. Dep't of Justice, Press Release, Deutsche Bank Agrees to Pay $7.2 Billion for Misleading Investors in its Sale of Residential Mortgage-Backed Securities (Jan. 17, 2017), *https://www.justice.gov/opa/pr/deutsche-bank-agrees-pay-72-billion-misleading-investors-its-sale-residential-mortgage-backed*; U.S. Dep't of Justice, Press Release, Credit Suisse Agrees to Pay $5.28 Billion in Connection with its Sale of Residential Mortgage-Backed Securities (Jan. 18, 2017), *https://www.justice.gov/opa/pr/deutsche-bank-agrees-pay-72-billion-misleading-investors-its-sale-residential-mortgage-backed*; U.S. Dep't of Justice, Press Release, Credit Suisse Agrees to Pay $5.28 Billion in Connection with its Sale of Residential Mortgage-Backed Securities (Jan. 18, 2017), *https://www.justice.gov/opa/pr/credit-suisse-agrees-pay-528-billion-connection-its-sale-residential-mortgage-backed*; and U.S. Dep't of Treasury, Office of Foreign Assets Control, Press Release, Settlement Agreement between the U.S. Department of the Treasury's Office of Foreign Assets Control and JPMorgan Chase Bank, N.A. (JPMC), and Finding of Violation issued to JPMC (Oct. 5, 2018), *https://ofac.treasury.gov/recent-actions/20181005* (each describing a settlement between the U.S. government and large banking organizations involving substantial payments by banking organizations to resolve allegations of misconduct).

See, e.g., Jackie Wattles, Ben Geir, Matt Egan, and Danielle Wiener-Bronner, "Wells Fargo's 20-Month Nightmare," *CNN Money* (Apr. 24, 2018).

[207] The $308 billion figure was calculated by adding together all operational loss events that resulted in a net loss amount of $20,000 or more and were reported in the FR Y-14Q form.

[208] Using a summary measure for the macroeconomic environment, Abdymomunov et al. (2020) find that operational losses increase by 16.5 percent for a one standard deviation decrease in the macroeconomic measure. Similarly, Allen and Bali (2007) find that operational risk is cyclical and relates to measures of the macroeconomy and systemic risk. Chernobai et al. (2011) find that operational risk is higher for firms with higher credit risk. Hess (2011) finds that measures of operational risk for several business lines increased meaningfully after the 2007-09 financial crisis. Cope and Carrivick (2013) find that operational loss frequency and severity increased due to the 2007-09 financial crisis. And Aldosoro et al. (2023) find that operational losses peaked during the 2007-09 financial crisis and that operational losses increase after periods of accommodative monetary policy. Relatedly, Berger et al. (2022) find that operational losses increase the systemic risk posed by large U.S. banking organizations. *See* Abdymomunov, Azamat, Filippo Curti, and Atanas Mihov, "U.S Banking Sector Operational Losses and the Macroeconomic Environment," Journal of Money, Credit, and Banking, Vol. 52, No.1, pages 115-144 (2020); Allen, Linda, and Turan G. Bali, "Cyclicality in catastrophic and operational risk measurements," Journal of Banking & Finance 31, pages 1191-1235 (2007); Chernobai, Anna, Phillippe Jorion, and Fan Yu, "The Determinants of Operational Risk in U.S. Financial Institutions," Journal of Financial and Quantitative Analysis, Vol. 46, No. 6, pages 1683-1725 (2011); Hess, Christian, "The impact of the financial crisis on operational risk in the financial services industry: empirical evidence," The Journal of Operational Risk, Volume 6, Number 1, pages 23-35 (2011); Cope, Eric W., and Luke Carrivick, "Effects of the financial crisis on banking operational losses,"

operational losses only become apparent once a banking organization is otherwise under stress, with economic downturns and reductions in asset values exposing previous operational failures and fraud.[209] For example, the operational failures and fraud of a rogue trader within Barings Bank only became known after the fall in asset values within Asian financial markets following the 1995 Kobe earthquake. These operational losses ultimately resulted in the bank's failure.[210] Similarly, substantial operational losses followed from the Enron and Worldcom fraud scandals, which coincided with a stock market downturn in the early 2000s.[211] The fall in asset values during the 2007-09 financial crisis was a key factor in exposing Bernard Madoff's ponzi scheme and mortgage servicing abuses, which led to severe operational losses for certain large banking organizations.[212]

Journal of Operational Risk 8(3), pages 3-29 (2013); Aldosoro, Inaki, Leonardo Gambacorta, Paolo Giudici, and Thomas Leach, "Operational and Cyber Risks in the Financial Sector," International Journal of Central Banking Vol. 19, No. 5, pages 341-402 (2023); Berger, Allen N., Filippo Curti, Atanas Mihov, and John Sedunov, "Operational Risk is More Systemic than You Think: Evidence from U.S. Bank Holding Companies;" Journal of Banking and Finance 143, 106619 (2022).

[209] *See* Paul Povel, Rajdeep Singh, and Andrew Winton, "Booms, Busts, and Fraud" The Review of Financial Studies, 1219-1254 (2007); and Robert T. Stewart, "Bank fraud and the macroeconomy," Journal of Operational Risk 11(1), 71-82 (2016).

[210] The inclusion of operational risk in the Basel II standards was driven in part by Barings Bank's failure in 1995. Barings Bank, originally founded in 1762, collapsed after discovering that one of its Singapore branch traders lost $1.3 billion in unauthorized derivatives trades made through the bank's error accounts. One of the lessons from the failure of Barings Bank is that a bank's capital could be depleted through rogue traders and other operational events, not just through credit and market losses. *See* Michael S. Barr, Howell E. Jackson, Margaret E. Tahyar, *Financial Regulation: Law and Policy* (2021).

[211] On the operational losses caused by the Enron scandal, *see https://www.nytimes.com/2005/06/15/business/jp-morgan-chase-to-pay-enron-investors-22-billion.html*; *https://www.nytimes.com/2005/06/15/business/jp-morgan-chase-to-pay-enron-investors-22-billion.html*; *https://www.nytimes.com/2008/03/27/business/27enron.html*; *https://www.nytimes.com/2008/03/27/business/27enron.html*; and Vaugh K. Reynolds, "The Citigroup and J.P Morgan Chase Enron Settlements: The Impact on the Financial Industry" North Carolina Banking Institute - Financial Accounting and Derivatives (2004), *https://scholarship.law.unc.edu/cgi/viewcontent.cgi?article=1143&context=ncbi*.

On the operational losses caused by the WorldCom scandal, *see https://www.nytimes.com/2005/03/13/business/yourmoney/worldcom-teaches-a-pricey-lesson.html* and *https://www.wsj.com/articles/SB110985786525469459*.

[212] On the operational losses caused by the Bernard Madoff scandal, *see https://www.justice.gov/usao-sdny/pr/manhattan-us-attorney-and-fbi-assistant-director-charge-announce-filing-criminal*. On operational losses

For these reasons, the agencies are proposing to account for operational risk together with credit risk and market risk in the capital framework applicable to Category I and II banking organizations to help ensure their safety and soundness and bolster U.S. financial stability.

Under the current capital rule, Category I and II banking organizations are required to calculate risk-weighted assets for operational risk using the AMA,[213] which is based on a banking organization's internal models. The AMA results in significant challenges for banking organizations, market participants, and the supervisory process. AMA exposure estimates can present substantial uncertainty and volatility, introducing challenges to capital planning processes.[214] In addition, the AMA's reliance on internal models has resulted in a lack of transparency and comparability across banking organizations. As a result, supervisors and market participants experience challenges in evaluating the adequacy of operational risk capital across banking organizations. To address these concerns, the proposal would remove the AMA and introduce a standardized approach for operational risk that seeks to address the operational risks currently covered by the AMA.

Consistent with the Basel standards, risk-weighted assets for operational risk would be equal to 12.5 times the business indicator component.[215,216] The business indicator component

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resulting from mortgage servicing abuses, *see https://www.justice.gov/opa/pr/federal-government-and-state-attorneys-general-reach-25-billion-agreement-five-largest*.

[213] The agencies adopted the AMA for operational risk as part of the advanced approaches capital framework in 2007. *See* 72 FR 69288 (Dec. 7, 2007).

[214] *See, e.g.*, Cope, E., G. Mignola, G. Antonini, and R. Ugoccioni. 2009. Challenges and Pitfalls in Measuring Operational Risk from Loss Data. Journal of Operational Risk 4(4): 3–27; and Opdyke, J., and A. Cavallo. 2012. Estimating Operational Risk Capital: The Challenges of Truncation, the Hazards of Maximum Likelihood Estimation, and the Promise of Robust Statistics. Journal of Operational Risk 7(3): 3–90.

[215] 12.5 is the amount by which the measure of operational risk exposure needs to be multiplied so that the risk-weighted assets it generates are equivalent to an 8 percent total capital requirement.

[216] The proposal would not include the internal loss multiplier that was included under the agencies 2023 proposal, which is equivalent to setting the internal loss multiplier equal to one.

would provide a measure of the operational risk exposure of the banking organization and would be calculated based on its business indicator multiplied by scaling factors that increase with the business indicator. The business indicator would serve as a proxy for a banking organization's business volume and would be based on inputs compiled from a banking organization's financial statements.

Banking organizations with higher overall business volume are larger and more complex, which is likely to result in more operational risk exposure.[217] Higher business volumes present more opportunities for operational risk to manifest. In addition, the complexities associated with a higher business volume can give rise to gaps or other deficiencies in internal controls that result in operational losses. Therefore, the proposal would set a banking organization's operational risk capital requirement in line with its business volume.

Question 84: *The Basel standards includes an optional scalar called the internal loss multiplier, which is calculated based on a banking organization's historical internal operational losses. The internal loss multiplier would scale the business indicator component in the calculation of risk-weighted assets for operational risk. The internal loss multiplier is calculated as follows:*

*Internal loss multiplier = ln(exp(1) – 1 + (15 * average annual total net operational losses/business indicator component)$^{0.8}$)*

[217] Recent research connecting operational risk to higher business volume includes Frame, McLemore, and Mihov (2020), Haste Makes Waste: Banking Organization Growth and Operational Risk, Federal Reserve Bank of Dallas, *https://www.dallasfed.org/research/papers/2020/wp2023*; Curti, Frame, and Mihov (2019), Are the Largest Banking Organizations Operationally More Risky?, Journal of Money, Credit and Banking Vol. 54, Issue 5, 1223-1259, *https://doi.org/10.1111/jmcb.12933*; and Abdymomunov and Curti (2020), Quantifying and Stress Testing Operational Risk with Peer Banks' Data, Journal of Financial Services Research Vol. 57, 287-313, *https://link.springer.com/article/10.1007/s10693-019-00320-w*.

where ln is the natural logarithm and exp(1) is the Euler's number, which is approximately equal to 2.7183.

Should the agencies include the internal loss multiplier in the calculation of operational risk-weighted assets and, if so, why? If the internal loss multiplier is included in the calculation of the operational risk-weighted assets, should the "15" factor included in its calculation be adjusted to better reflect the operational risks of U.S. Category I and II banking organizations, within a range between 5 and 15? Please provide any analysis justifying a recommendation.

1. Business indicator

Under the proposal, the business indicator would be based on the sum of the following two components: an interest, lease, and dividend component and a noninterest component. Each component would serve as a measure of a broad category of activities in which banking organizations typically engage. Given that operational risk is inherent to banking products, activities, processes, and systems, these components aim to comprehensively capture a banking organization's financial activities and thus serve as a proxy for its business volume. The interest, lease, and dividend component aims to capture lending and investment activities through measures of interest income, interest expense, interest-earning assets, and dividends. The noninterest component aims to capture fee and commission-based activities, trading activity and other activities that are associated with a banking organization's assets and liabilities.

Under the proposal, all inputs to the business indicator would be based on three-year rolling averages. For example, a business indicator input reported at the end of the third calendar quarter of 2025 would be the average of the values for the fourth quarter of 2022 through the third quarter of 2023, the fourth quarter of 2023 through the third quarter of 2024, and the fourth quarter of 2024 through the third quarter of 2025. The one exception are interest-earning assets,

which would be calculated as the average of the quarter-end values of interest-earning assets for the previous 12 quarters.[218]

The use of three-year averages would capture a banking organization's activities over time and help reduce the impact of temporary fluctuations. Basing the business indicator on a shorter time period, such as a single year of data, would likely result in a more volatile capital requirement, which could challenge the incorporation of the operational risk capital requirement into capital planning processes and result in unduly low or high operational risk capital requirements given temporary changes in a banking organization's activities. Alternatively, basing the business indicator on too many years of data could reduce its responsiveness to changes in a banking organization's activities, which could in turn weaken the relationship between the capital requirements and the banking organization's risk profile. The use of three-year averages aims to balance the stability and responsiveness of the operational risk capital requirement.

As described below, the inputs used in each component of the business indicator would, in most cases, use information contained in line items from schedules RI and RC of the Call Report and schedules HI and HC of the FR Y-9C report, as applicable. The agencies are planning to separately propose modifications to the FFIEC 101 report so that all inputs to the business indicator would be publicly reported as separate inputs to the applicable calculations.

The inputs to each component of the business indicator would not overlap. Income and expenses would not be counted in more than one component of the business indicator, consistent

[218] Unlike the other inputs used to calculate the business indicator, interest-earning assets are balance-sheet items, rather than income statement items, and thus their use in the business indicator does not represent a flow over a one-year period, but rather a point-in-time value. The use of average interest-earning assets for the previous 12 quarters instead of, for example, the average interest-earning assets for the ending quarter of the last three years aims to increase the robustness of the average used in the calculation.

with instructions to the regulatory reports and the principles of accounting. The inputs used to calculate the business indicator would include data for entities that have been acquired by, or merged with, the banking organization over the period prior to the acquisition or merger that is relevant to the calculation of the business indicator.

a. The interest, lease, and dividend component

Under the proposal, the interest, lease, and dividend component would account for activities that produce interest, lease, and dividend income and would be calculated as follows:

$$\textit{Interest, lease, and dividend component} = \min\left(\textit{Avg}_{3y}\left(\text{Abs}(\textit{total interest income} - \textit{total interest expense})\right), 0.0225 * \textit{Avg}_{3y}(\textit{interest-earning assets})\right) + \textit{Avg}_{3y}\textit{ (dividend income)}$$

where *Avg3y* refers to the three-year average of the quantity in parentheses; *Abs* refers to the absolute value of the quantity in parentheses; *total interest income* would mean interest income from all financial assets and other interest income;[219] *total interest expense* would mean interest expenses related to all financial liabilities and other interest expenses;[220] *interest-earning assets* would mean the sum of all gross outstanding loans and leases, securities that pay interest, interest-bearing balances, Federal funds sold, and securities purchased under agreements to

[219] Total interest income would correspond to total interest income in the FR Y-9C (holding companies) and Call Report, excluding dividend income as defined in the proposal.

[220] Total interest expense would correspond to total interest expense in the FR Y-9C (holding companies) and Call Report.

resell;[221] and *dividend income* would mean all dividends received on securities not consolidated in the banking organization's financial statements.[222]

The interest, lease, and dividend component would capture a banking organization's interest income and expenses from financial assets and liabilities, as well as dividend income from investments in stocks and mutual funds.

The interest income and expense portion of the interest, lease, and dividend component would be calculated as the absolute value of the difference between total interest income and total interest expense (which constitutes net interest income) and be subject to a ceiling equal to 2.25 percent of the banking organization's interest-earning assets. Net interest income is a useful indicator of a banking organization's operational risk because a higher volume of business is associated with higher operational risk. Given that operational risk is unlikely to increase proportionally to increases in net interest margin, the net interest income input would be capped at 2.25 percent of interest-earning assets, consistent with the Basel standards.

The proposal would add dividend income to the net interest income input to capture investment activities that produce dividends instead of interest income (for example, investment in equities and mutual funds).

Question 85: The proposal would include interest income and expenses in the interest component and noninterest income and certain noninterest expenses in the noninterest component. Income and expenses relating to operating leases are typically characterized as

[221] Interest-earning assets would equal the sum of interest-bearing balances in U.S. offices, interest-bearing balances in foreign offices, Edge and agreement subsidiaries, and IBFs, Federal funds sold in domestic offices, securities purchased under agreements to resell, loans and leases held for sale, loans and leases held for investment, total held-to-maturity securities at amortized cost (only including securities that pay interest), total available-for-sale securities at fair value (only including securities that pay interest), and total trading assets (only including trading assets that pay interest) in the FR Y-9C (holding companies) and Call Report.

[222] Dividend income is currently included in total interest income in the FR Y-9C (holding companies) and Call Report.

noninterest income and noninterest expenses, respectively, in regulatory reports. However, income and certain expenses relating to operating leases are included in the interest component under the Basel standards. What would be the advantages and disadvantages of including (1) income from operating leases and (2) depreciation and impairments relating to operating leased assets in the interest component rather than the noninterest component?

b. The noninterest component

Under the proposal, the noninterest component would account for fee and commission-based activities, trading activity, and other activities that are associated with a banking organization's assets and liabilities and would be calculated as follows:

Noninterest component = Avg_{3y}(Abs(total noninterest income + realized gains (losses) on held-to-maturity securities + realized gains (losses) on available-for-sale debt securities – noninterest expense for BI – 0.7(total noninterest income from investment management, investment services, and non-lending treasury services – noninterest expense for BI from investment management, investment services, and non-lending treasury services)) + total operational losses)*

where Avg_{3y} refers to the three-year average of the quantity in parentheses; *Abs* refers to the absolute value of the quantity in parentheses; *total noninterest income, realized gains (losses) on held-to-maturity securities,* and *realized gains (losses) on available-for-sale debt securities* are as reported in the consolidated financial statements of the banking organization;[223] *noninterest expense for BI* means expense reported as other noninterest expense, excluding expenses that

[223] The *total noninterest income, realized gains (losses) on held-to-maturity securities,* and *realized gains (losses) on available-for-sale debt securities* to be used in the calculation of the noninterest component align with the corresponding values in the banking organization's Call Report or FR Y-9C report. Ahead of the implementation of any final rule, the agencies plan to issue an update to the FFIEC 101 report, which would include reporting instructions for all items relevant to the calculation of risk-weighted assets for operational risk.

relate to non-financial services received by the banking organization and total operational losses;[224] *investment management* means activities related to asset management, wealth management and private banking, including the professional management of mutual funds and institutional accounts, and professional portfolio management and advisory services for individuals; *investment services* means activities related to asset servicing (which include custody, fund services, securities lending, liquidity services, collateral management, and other asset servicing; as well as recording keeping services for 401K and employee benefit plans, but exclude funding or guarantee products offered to such clients), issuer services (which include corporate trust, shareowner services, depository receipts, and other issuer services), and other investment services (which include clearing and other investment services); *non-lending treasury services* means activities related to cash management, global payments, and deposit services (and excludes any lending or card activities); and *total operational losses* equals the sum of all operational losses within the relevant period.

The netting of income and expenses in the calculation of the noninterest component would provide two main benefits relative to how the Basel standards treats these sources of income in the calculation of the business indicator. First, this net treatment would be similar to the approach used for the interest, lease, and dividend component and, therefore, would improve the consistency of treatments between the two components. Second, the one-step netting of all noninterest income and expenses would help ensure that the operational risk requirements treat noninterest income and expenses consistently despite the range of acceptable accounting practices across banking organizations. For example, certain expenses are accounted for as

[224] Other noninterest expense is as reported in the consolidated financial statements of the banking organization.

"contra revenues" by some banking organizations, but not by others.[225] The proposed approach would avoid the variability in the calculation of risk-weighted assets for operational risk that could result from inconsistent accounting classification of more granular items.

The operational risk capital requirement is designed to reflect all operational risks to which a banking organization is exposed, regardless of the activity or legal entity in which this risk resides. The proposal would, therefore, include the income and expense of a banking organization's insurance activities within the business indicator calculation.

The agencies have received feedback from the public regarding the relative operational risk of certain activities. In particular, industry experts have argued that investment management (including asset management and wealth management), investment services (including custody), and treasury services pose low operational risk. In considering this feedback, the agencies reviewed the operational loss and income data currently reported by Category I and II bank holding companies in the FR Y-14Q. The aggregate ratio of operational losses to business line income for all Category I and II holding companies was calculated from 2009Q1 to 2025Q2.[226] This analysis shows that the aggregate ratio of historical operational losses to income for investment management activities, investment services, and treasury services is approximately 32 percent of the same ratio for the Category I and II holding companies as a whole.

Aggregate operational losses and income: investment management, investment services, and treasury services vs. all business lines

	Operational losses ($ billion)	Income ($ billion)	Ratio of operational losses to income

[225] Contra revenues are reductions to a revenue account in an accounting statement (typically, most expenses are included in accounting statements through expense accounts).

[226] Operational loss data was obtained from FR Y-14Q Schedule E. Income data was obtained from FR Y-14Q Schedule G. Only observations for which both the operational losses and the necessary income elements were reported are included in this analysis.

Investment management, investment services, and treasury services	15.5	1,981	0.78%
All business lines	144.6	5,937	2.44%

Notes:
Aggregates reflect data from 2009Q1 to 2025Q2 for Category I and II holding companies.
Operational losses for "all business lines" reflect all operational losses reported in Schedule E of the FR Y-14Q form that are assigned to a business line (that is, not included under the "corporate level" business line).
Operational losses from investment management, investment services, and treasury services include all operational losses classified as from BL5 "Payment and Settlement," BL6 "Agency Services," BL7 "Asset Management," BL8 "Retail Brokerage," or BL32 "Private Banking" in Schedule E of the FR Y-14Q form.
Income from all business lines reflects income reported in item 27 "Total Revenues" in Schedule G of the FR Y-14Q form minus the income reported in items 9 and 22 "Insurance Services," 10 and 23 "Retirement / Corporate Benefits Products," 11 and 24 "Corporate / Other," and 12 and 25 "Optional Immaterial Business Segments" of the same form.
Income for investment management, investment services, and treasury services reflects income reported in items 6 and 19 "Investment Management," 7 and 20 "Investment Services," and 8 and 21 "Treasury Services" in Schedule G of the FR Y-14Q form.
Only observations for which both the operational losses and the necessary income elements were reported are included in this analysis.
Only operational loss events that resulted in a net loss amount of $20,000 or more over the period from 2009Q1 to 2025Q2 and were reported in the FR Y-14Q form are included.

Considering the findings of this analysis, the proposal would reduce by 70 percent the noninterest income and expenses from investment management, investment services, and non-lending treasury services used in the calculation of the noninterest income component and, thereby, reflect the lower operational risk that these activities have presented historically.[227]

There are substantial practical difficulties in designing and implementing scalars to differentiate the contribution of business lines to the operational risk capital requirement. The existing segmentation of business lines for purposes of reporting operational losses, income, and expenses does not align in all cases. Also, banking organizations' practices around classification

[227] The definition of treasury services currently employed in the FR Y-14 includes certain lending activities such as trade finance and corporate and commercial credit cards. To ensure that lending activities are treated consistently by the operational risk framework, the proposal would not include lending activities within treasury services in the scope of activities whose contribution to the noninterest component would be reduced by 70 percent.

of operational losses and income vary, and there may be meaningful variability across banking organizations with respect to the ratio of operational losses to income at the business line level. In addition, introducing differentiated scalars across multiple business lines could introduce inconsistency across banking organizations, as the business line classification of income or expense would have risk-based capital consequences. Addressing such potential inconsistency would necessitate significant supervisory review of business line income and expense classification, which would result in additional compliance costs for banking organizations. Further, differentiation of operational risk requirements across business lines would introduce additional inconsistencies relative to the Basel standards. Given these considerations, the proposal would only differentiate the contribution of investment management, investment services, and non-lending treasury services activities to the noninterest component.

The proposal would reflect operational losses within the business indicator. Empirical research suggests observed operational losses are a meaningful indicator of a banking organization's operational risk exposure.[228] Including expenses related to operational loss events in the business indicator is therefore consistent with the operational risk requirement's objective of supporting a banking organization's resilience to operational risk. Specifically, the proposal would add *total operational losses* within the noninterest component. This approach is consistent with how operational losses contribute positively to *other operating expense* under the Basel standards and, therefore, would contribute positively to the business indicator under the Basel standards when *other operating expense* is higher than *other operating income*.[229]

[228] *See* Filippo Curti and Marco Migueis, "The Information Value of Past Losses in Operational Risk," Journal of Operational Risk Volume 18, Number 2, 1-36 (2023), *https://doi.org/10.21314/JOP.2022.033*.

[229] Subtracting operational losses from the noninterest component (and thereby the business indicator) – as would occur if operational losses were retained within *noninterest expense for BI* – would not be appropriate because operational losses would generally be reducing risk-weighted assets for operational risk.

The proposed noninterest component, including the downscaling of income net of expenses from investment management, investment services, and non-lending treasury services activities, would improve the consistency of requirements across Category I and II banking organizations and better reflect the operational risk of their activities.

Question 86: What are the advantages and disadvantages of the proposed design of the noninterest component, including any impact on specific business models? Which alternatives, if any, should the agencies consider and why? Please provide supporting data with your response.

Question 87: What are the advantages and disadvantages of the proposed downscaling of the income and expense from investment management, investment services, and non-lending treasury services activities? What are the advantages and disadvantages of the proposed calibration approach? Should the agencies consider differentiated scalars (both increasing and decreasing requirements) across multiple business lines and why? What alternatives, if any, should the agencies consider and why? Please include data to support your views.

c. Exclusions from the business indicator

Consistent with the Basel standards, the business indicator under the proposal would reflect the volume of financial activities of a banking organization; therefore, the business indicator would exclude expenses that do not relate to financial services received by the banking organization. Excluded expenses would include staff expenses, expenses to outsource non-financial services (such as logistical, human resources, and information technology), administrative expenses (such as utilities, telecommunications, travel, office supplies, and postage), expenses relating to premises and fixed assets, and depreciation of tangible and intangible assets.

Also consistent with the Basel standards, the proposal would exclude loss provisions and reversal of provisions (except for those related to operational loss events) or changes in goodwill from the business indicator, as these items reflect accounting adjustments rather than financial transactions. In addition, the business indicator would be neutral relative to applicable income taxes by excluding them from the expense considered.

With prior supervisory approval, the proposal would allow banking organizations to exclude activities that they have ceased to conduct, whether directly or indirectly, from the calculation of the business indicator, provided that the banking organization demonstrates that such activities do not carry legacy legal exposure. Supervisory approval would not be granted when, for example, legacy business activities are subject to potential or pending legal or regulatory enforcement action. The supervisory approval requirement would help ensure that a banking organization's operational risk capital requirement aligns with its existing operational risk exposure.

Question 88: Under what circumstances, if any, would it be appropriate for the business indicator to also exclude income relating to non-financial activities provided by a banking organization, such as an exclusion for income relating to non-financial activities provided to foreign affiliates or parents (recharge income)? What are the advantages and disadvantages of such exclusion, and what distinguishes such potentially excluded income from other income relating to non-financial activities? Please provide any data that would be useful to consider on this issue, including data that would allow the agencies to estimate the impact of such exclusion.

2. Business indicator component

Under the proposal, the business indicator component would rise with the size of the business indicator, but at three different rates. It would increase by 12 percent for each unit of

business indicator up to $1 billion, by 15 percent for each unit above $1 billion and up to $30 billion, and by 18 percent for each unit above $30 billion. As described in section II.E., these thresholds would be indexed to inflation over time. Table 3 below presents the formulas that can be used to calculate the business indicator component given a banking organization's business indicator.

Table 3 – Business Indicator Component by Business Indicator Range

Business indicator range	Business indicator component[230]
$0 to $1 billion	0.12 * Business Indicator (BI)
$1 billion to $30 billion	$120 million + 0.15 * (BI - $1 billion)
> $30 billion	$4.47 billion + 0.18 * (BI - $30 billion)

The proposed higher rate of increase of the business indicator component as a banking organization's business indicator rises above $1 billion and $30 billion reflects operational risk generally increasing more than proportionally with a banking organization's overall business volume, in part due to the increased complexity of large banking organizations. This approach is supported by analysis undertaken by the Basel Committee.[231] Similarly, academic studies have found that larger U.S. bank holding companies have higher operational losses per dollar of total assets.[232]

3. Alternative simple approaches

[230] $120 million is equal to 0.12 * $1 billion. $4.47 billion is equal to 0.12 * $1 billion + 0.15 * ($30 billion - $1 billion).

[231] *See* Basel Committee (2014), "Operational risk – Revisions to the simpler approaches," *https://www.bis.org/publ/bcbs291.htm* and Basel Committee (2016), "Standardized Measurement Approach for operational risk," *https://www.bis.org/bcbs/publ/d355.htm*.

[232] *See* Curti, Mih, and Mihov (2022), "Are the Largest Banking Organizations Operationally More Risky?, Journal of Money, Credit and Banking," DOI: 10.111/jmcb.12933; and Frame, McLemore, and Mihov (2020), "Haste Makes Waste: Banking Organization Growth and Operational Risk," Federal Reserve Bank of Dallas, *https://www.dallasfed.org/research/papers/2020/wp2023*.

In developing the proposal, the agencies considered alternative approaches to the proposed framework for determining a banking organization's operational risk capital requirement. These alternatives would rely on simpler measures of size and complexity that may provide an appropriate proxy for operational risk exposure. Specifically, the agencies considered an income-based approach and an asset-based approach as alternatives. Each of these approaches could provide a simple alternative for determining operational risk capital, which could easily be measured from existing regulatory reporting.

Under an income-based approach, size and complexity – and associated operational risk exposure – could be measured using a broad measure of income, such as gross income, similar to the Basel Committee's basic indicator approach.[233] Under the Basel Committee's basic indicator approach, risk-weighted assets for operational risk equal 15 percent of average annual gross income, defined as net interest income plus net noninterest income, over the previous three years where annual gross income is positive, multiplied by 12.5. Notably, the definition of gross income under the basic indicator approach excludes certain income statement items.[234]

In an income-based alternative closest to the Basel Committee's basic indicator approach, the agencies would define gross income in a given year as net-interest income plus noninterest income minus noninterest expense, where noninterest expense excludes salaries and employee benefits, expenses of premises and fixed assets, goodwill impairment losses, and amortization

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[233] *See* Basel Committee on Banking Supervision (2006): "International Convergence of Capital Measurement and Capital Standards," https://www.bis.org/publ/bcbs128.htm. Upon the adoption of the new approach for calculating operational risk capital to the Basel standards, the basic indicator approach is no longer part of the Basel framework.

The agencies have previously considered simple options for operational risk, including the basic indicator approach. *See* 73 FR 43982, *https://www.govinfo.gov/content/pkg/FR-2008-07-29/pdf/E8-16262.pdf.*

[234] The basic indicator approach specifies that gross income should (1) be gross of any provisions (for example, for unpaid interest), (2) be gross of operating expenses, including fees paid to outsourcing service providers, (3) exclude realized gains or losses from the sale of securities in the banking book such as from securities classified as "held to maturity" and "available for sale," and (4) exclude extraordinary or irregular items as well as income derived from insurance.

expense and impairment losses for other intangible assets. Like in the Basel Committee's basic indicator approach, the calculation of risk-weighted assets for operational risk under this approach would equal the product of the gross income scalar and average annual gross income over the previous three years where annual gross income is positive, multiplied by 12.5.

To appropriately calibrate an operational risk capital requirement based on gross income, the agencies considered two alternatives. In the first alternative, the scalar determining the capital requirement would be calibrated to result in a similar amount of aggregate required capital as under the proposed standardized approach for operational risk. Analysis by the agencies suggests that a scalar between 15 and 20 percent would be necessary to achieve the target calibration.[235] As a second alternative, the gross income scalar could be set to cover the operational risk exposure of Category I and II banking organizations demonstrated by their historical operational losses.

The agencies also considered potential modifications to gross income. For example, gross income could be defined solely as net-interest income plus net-noninterest income, with no exclusions for noninterest expenses. Based on agency analysis of FR Y-9C data between 2022Q3 to 2025Q2, such an approach would require a gross-income scalar between 35 and 45 percent to result in a similar amount of aggregate required capital as under the proposed standardized approach for operational risk.

Separately, both gross income definitions discussed above could be modified to add operational losses (similar to the methodology within the noninterest component under the proposal's operational risk standardized approach). Such a modification would ensure that

[235] Based on data from form FR Y-9C, Schedule HI, between 2022Q3 to 2025Q2. Net-interest income would correspond to line 3 from Schedule HI, noninterest income to line 5.m, and noninterest expense excluding salaries and employee benefits, expenses of premises and fixed assets, goodwill impairment losses, and amortization expense and impairment losses for other intangible assets to line 7.d.

operational losses are positively reflected in operational risk capital requirements and could incentivize better operational risk management. Under such a modification, operational losses would be excluded from noninterest expense.

The agencies also considered an alternative that would use an institution's balance sheet, rather than income, for calculating the operational risk capital requirement. Such an approach could use total consolidated assets as an alternative, simple measure of size and complexity and, therefore, as a proxy for operational risk exposure. Asset size is a common proxy for size and complexity in the agencies' regulatory framework.

In an asset-based approach, a scalar would be applied to total assets to determine the operational risk capital requirement. To result in a similar aggregate amount of required capital as under the proposed standardized approach for operational risk, analysis by the agencies suggests that a scalar between 0.4 percent and 0.5 percent would be appropriate. Similar to the income-based approach, the scalar in an asset-based approach could be calibrated to cover the operational risk exposure of Category I and II banking organizations demonstrated by their historical operational losses.

An approach based on total assets could be modified to capture off-balance sheet activities, which may improve how the requirement captures operational risk exposure at the cost of some additional complexity.[236]

Relative to an approach based on income, an approach based on the balance sheet of a banking organization may not appropriately capture the operational risks associated with

[236] The current capital rule applies certain adjustments to capture off-balance sheet activities. For example, the standardized approach for credit risk utilizes credit conversion factors to incorporate off-balance sheet activities into risk-weighted assets. Similarly, the supplementary leverage ratio incorporates off-balance sheet activities into the calculation of total leverage exposure.

activities with small footprint in terms of on-balance sheet assets and few quantifiable off-balance sheet exposures.

Using gross income or total assets instead of the business indicator to set the operational risk capital requirement would result in a simpler method for calculating the operational risk requirement than the proposal. However, such approaches may be less risk sensitive than the proposed requirement based on the business indicator. Also, use of the business indicator as a proxy for operational risk exposure provides for greater alignment with the Basel standard than these alternatives, consistent with a broader objective of the proposal. Still, the agencies welcome comments on all aspects of these potential alternatives and on alternative calibrations.

Question 89: The agencies invite comments on the use of a simple approach for determining a banking organization's operational risk capital requirement. Are there any aspects associated with using a simple approach that should be considered? What are the advantages and disadvantages of a simple approach relative to the proposed standardized approach for operational risk? Which aspects of the proposed standardized approach for operational risk would provide for greater risk sensitivity relative to the simple approaches discussed above? To what extent should risk sensitivity be an objective for the operational risk capital requirement, and how should that be weighed against complexity?

Question 90: The agencies invite comments on an approach based on gross income for determining a banking organization's operational risk capital requirement. What are the advantages and disadvantages of such an approach? What are the advantages and disadvantages of excluding salaries and employee benefits, expenses of premises and fixed assets, goodwill impairment losses, and amortization expense and impairment losses for other intangible assets from the definition of gross income? What are the advantages and

disadvantages of adding operational losses to gross income in the calculation of the operational risk capital requirement? Provide any analysis supporting your recommendation.

Question 91: The agencies invite comments on an asset-based approach for determining a banking organization's operational risk capital requirement. What are the advantages and disadvantages of such an approach? What are the advantages and disadvantages of including off-balance sheet exposures on the size proxy used in such an approach? How should off-balance sheet exposures be measured under such an alternative? Provide any analysis supporting your recommendation.

Question 92: The agencies invite comments on how to calibrate an income-based or an assets-based approach, if such an approach were to be adopted. What are the advantages and disadvantages of using projected requirements under the proposed standardized approach as the basis for calibration?

For calibration of an income-based approach: (1) In a gross income variant where salaries and employee benefits, expenses of premises and fixed assets, goodwill impairment losses, and amortization expense and impairment losses for other intangible assets are excluded from the calculation, would a scalar between 15 percent and 20 percent be appropriate and why?(2) In a gross income variant where gross income does not have the exclusions under (1), would a scalar between 35 and percent and 45 be appropriate and why?

For the calibration of an asset-based approach would a scalar between 0.4 percent and 0.5 percent be appropriate and why?

What are the advantages and disadvantages of calibrating the operational risk capital requirement such that it would capture operational risk exposure as demonstrated by banking organizations' historical operational losses? If the agencies were to follow such a calibration

approach, which methodology should be used to estimate operational risk exposure and why? Provide any analysis supporting your recommendations.

4. Operational risk management

The agencies consider effective operational risk management to be critical to ensuring the financial and operational resilience of banking organizations, particularly for large banking organizations.[237] Thus, consistent with the current advanced approaches qualification requirements applicable to Category I and II banking organizations, the proposal would require that banking organizations subject to the expanded risk-based approach have an operational risk management function that is independent of business line management. This independent operational risk management function would design, implement, and oversee the comprehensiveness and accuracy of operational loss event data and its collection processes and oversee other aspects of the banking organization's operational risk management. In addition, banking organizations subject to the expanded risk-based approach would be required to report operational loss events and other relevant operational risk information to business unit management, senior management, and the board of directors (or a designated committee of the board). Lastly, the proposal would require banking organizations subject to the expanded risk-based approach to have operational loss event data collection processes that meet certain requirements.

V. Calculation of risk-weighted assets under the market risk framework

A. Market risk

1. Background

[237] The interagency paper titled "Sound Practices to Strengthen Operational Resilience" (Nov. 2, 2020) notes that operational resilience "is the outcome of effective operational risk management combined with sufficient financial and operational resources to prepare, adapt, withstand, and recover from disruptions."

a. Description of market risk

Market risk for a banking organization results from exposure to price movements caused by changes in market conditions, market events, and issuer events that affect asset prices. Losses resulting from market risk can affect a banking organization's capital strength, liquidity, and profitability. To help ensure that a banking organization maintains a sufficient amount of capital to withstand adverse market risks and consistent with amendments to the Basel Capital Accord, the agencies adopted risk-based capital standards for market risk in 1996 (1996 rule).[238] Although adoption of the 1996 rule was a constructive step in capturing market risk for risk-based capital standards, the 1996 rule did not sufficiently capture the risks associated with financial instruments that became prevalent in the years following its adoption. This became evident during the 2007–2009 financial crisis, when the 1996 rule did not fully capture banking organizations' increased exposures to traded credit and other structured products, such as collateralized debt obligations (CDO), credit default swaps (CDS), mortgage-related securitizations, and exposures to other less liquid products.

In August 2012, the agencies issued a final rule that modified the capital rule to address these deficiencies.[239] Specifically, the rule added a stressed value-at-risk (VaR) measure, a capital requirement for default and migration risk (the incremental risk capital requirement), a comprehensive risk measurement for correlation trading portfolios, a modified definition of covered position, a definition of trading position, an expanded set of requirements for internal models to reflect advances in risk management, and revised requirements for regulatory

[238] Risk-Based Capital Standards: Market Risk, 61 FR 47358 (Sept. 6, 1996). The agencies' market risk capital rules were located at 12 CFR part 3, appendix B (OCC), 12 CFR part 208, appendix E and 12 CFR part 225, appendix E (Board), and 12 CFR part 325, appendix C (FDIC).

[239] Risk-Based Capital Guidelines: Market Risk, 77 FR 53059 (Aug. 30, 2012).

backtesting. These changes enhanced the calibration of market risk capital requirements by incorporating stressed conditions into VaR and increasing the comprehensiveness and quality of the standards for internal models used to calculate market risk capital requirements.[240]

While these updates to the rule addressed certain pressing deficiencies in the calculation of market risk capital requirements, a number of structural shortcomings that came to light during the crisis remained unaddressed (such as an inability of a VaR metric to adequately capture tail risks beyond the VaR confidence level). To address these shortcomings, the Basel Committee established minimum capital requirements for market risk.[241] To increase risk sensitivity, transparency, and consistency of the market risk capital requirements, the proposal would replace the existing market risk capital framework within the capital rule with a new framework that is based on the revised framework of the Basel Committee (Basel standards).

b. Overview of the Proposal

The proposal would improve the risk sensitivity and calibration of market risk capital requirements relative to the current capital rule. The proposal would introduce a simple, transparent, and risk-sensitive standardized methodology for calculating risk-weighted assets for market risk (standardized measure for market risk) and a new models-based methodology (models-based measure for market risk) to replace the market risk capital framework in the

[240] The rule was subsequently modified in 2013 with changes that included moving the market risk requirements from the agencies' respective appendices to subpart F of the capital rule; making savings associations and covered savings and loan holding companies with material exposure to market risk subject to the market risk rule, 78 FR 62018 (Oct. 11, 2013); addressing changes to the country risk classifications, clarifying the treatment of certain traded securitization positions; revising the definition of covered position, and clarifying the timing of the market risk disclosure requirements, 78 FR 76521 (Dec. 18, 2013).

[241] The Basel Committee has published three consultative documents on the review and to address the structural shortcomings identified. "Fundamental review of the trading book," May 2012, www.bis.org/publ/bcbs219.pdf; "Fundamental review of the trading book: A revised market risk framework," October 2013, www.bis.org/publ/bcbs265.pdf; and, "Fundamental review of the trading book: Outstanding issues," December 2014, www.bis.org/bcbs/publ/d305.pdf. The Basel Committee published a new, more robust framework, which established minimum capital requirements for market risk, "Minimum capital requirements for market risk," January 2016, www.bis.org/bcbs/publ/d352.pdf.

current capital rule. The proposed standardized and models-based measures would improve the risk-sensitivity of market risk capital requirements by replacing the VaR-based measure of market risk with an expected shortfall-based measure that better accounts for extreme losses.[242] In addition, the proposal would replace the fixed ten-business-day liquidity horizon in the current capital rule with liquidity horizons that vary based on the underlying risk factors to appropriately capture the market risk of less liquid positions.[243]

The standardized measure for market risk would be the default methodology for calculating market risk capital requirements for all banking organizations subject to market risk capital requirements. A banking organization would be required to obtain prior approval from its primary Federal supervisor to use the models-based measure for market risk to determine its market risk capital requirements.[244]

In contrast to the current framework which, subject to approval by the primary Federal supervisor, allows the use of internal models at the level of the consolidated banking organization, the proposal would provide for enhanced risk sensitivity by introducing the concept of a trading desk and restricting application of the proposed models-based approach to the trading desk level. Under the proposal, a banking organization would be required to conduct and successfully pass two quantitative tests (a backtesting requirement[245] and a profit and loss

[242] The proposal would define expected shortfall as a measure of the average of all potential losses exceeding the VaR at a given confidence level and over a specified horizon. The risk weights within the standardized measure were calibrated based on the expected shortfall-based measure in the models-based measure for market risk.

[243] The proposal would define liquidity horizon as the time required to exit or hedge a market risk covered position without materially affecting market prices in stressed market conditions.

[244] A banking organization that has regulatory approval to use internal models to measure market risk under the current rule would be required to obtain new approval to use the models-based measure for market risk under the proposed framework.

[245] The proposed desk-level backtesting requirements are intended to measure the accuracy and conservatism of the forecasting assumptions and valuation methods used in the desk's internal models.

attribution (PLA) requirement[246]) at the trading desk level in order to use the models-based approach. The trading desk-level approach is intended to limit use of the models-based approach to only those trading desks that can appropriately capture the risk of market risk covered positions in banking organizations' internal models. The agencies recognize the potential difficulties that a banking organization could experience when performing the proposed desk-level PLA test. To improve the ability of banking organizations to use more risk-sensitive modeled approaches, where appropriate, the proposal would provide a three-year transition period during which there would be no automatic consequences based on PLA test results. This extended transition period for implementation of the PLA test would allow banking organizations to gain experience with the test, provide time to improve their systems and processes, and address any potential gaps in data and model performance. The delayed transition would also provide the agencies an additional opportunity to monitor the effectiveness of the PLA test metric and thresholds.

The proposal would also revise the criteria for determining whether a banking organization is subject to the market risk capital requirements to (1) reflect the inflation since 1996 and growth in the capital markets as well as to reflect CPI-W going forward; (2) provide a more reliable and stable measure of banking organizations' trading activity by introducing a four-quarter average requirement, and (3) incorporate measures of risk identified as part of the agencies' 2019 regulatory tailoring rule.[247] In general, the revised criteria would take into

[246] The proposed desk-level PLA testing requirements are intended to measure the accuracy of the potential future profits or losses estimated by the valuation models used for internal risk management purposes relative to those produced by the financial reporting models. For purposes of this **SUPPLEMENTARY INFORMATION**, the term "financial reporting model" refers to the valuation methods used to report actual profits and losses for financial reporting purposes.

[247] *See* 84 FR 59230, 59249 (Nov. 1, 2019).

account the prudential benefits of the proposed market risk capital requirements and the potential costs, including compliance costs.

In addition, the proposal would help promote consistency and comparability in market risk capital requirements across banking organizations by strengthening the criteria for identifying positions subject to the proposed market risk capital requirement and by proposing a risk-based capital treatment of transfers of risk between a trading desk and another unit within the same banking organization (internal risk transfers). The proposal would also improve the transparency of market risk capital requirements through enhanced disclosures.

2. Scope and application of the proposed rule

a. Scope of the proposed rule

Under the current capital rule, any banking organization with aggregate trading assets and trading liabilities that, as of the most recent calendar quarter, equal $1 billion or more, or 10 percent or more of the banking organization's total consolidated assets, is required to calculate market risk capital requirements.

The proposal would revise the criteria for determining whether a banking organization is subject to market risk capital requirements. Under the proposal, a Category I or Category II depository institution holding company would be subject to market risk capital requirements. In addition, a banking organization with average aggregate trading assets and trading liabilities, excluding customer and proprietary broker-dealer reserve bank accounts,[248] over the previous four calendar quarters equal to $5 billion or more or equal to 10 percent or more of total

[248] The proposal would define customer and proprietary broker-dealer reserve bank accounts as segregated accounts established by a subsidiary of a banking organization that fulfill the requirements of 17 CFR 240.15c3-3 (SEC Rule 15c3-3) or 17 CFR 1.20 (CFTC Regulation 1.20).

consolidated assets at quarter end as reported on the most recent quarterly regulatory report would be subject to market risk capital requirements.[249]

The proposed scope is designed to apply market risk capital requirements to the largest and most complex banking organizations. As the agencies noted in the preamble to the final tailoring rule, due to their operational scale or global presence, banking organizations subject to Category I or II capital standards pose heightened risks to U.S. financial stability which necessitate more stringent capital requirements.[250] Further, because such banking organizations are generally the most internationally active and interconnected banking organizations, the proposed scope of the market risk capital requirements (which are based largely on the international framework adopted by the Basel Committee), should help promote competitive equity among U.S. banking organizations and their foreign peers and competitors, and reduce opportunities for regulatory arbitrage across jurisdictions.

In addition to applying market risk capital requirements to the largest banking organizations, the proposed rule would retain and increase the trading activity threshold from $1 billion to $5 billion to reflect inflation since 1996 and growth in the capital markets. The agencies are also proposing to index the $5 billion trading activity threshold based on the CPI-W going forward. Additionally, a banking organization whose trading assets and trading liabilities are equal to 10 percent or more of its total assets would continue to be subject to market risk capital requirements under the proposal. This means that any subsidiary depository institution of a Category I and II depository institution holding company or any banking organization that is not a Category I or II banking organization would be subject to market risk capital requirements

[249] *See* section II.E. of this **SUPPLEMENTARY INFORMATION** for a more detailed discussion on indexing nominal thresholds in the proposal going forward to reflect CPI-W.

[250] *See* 84 FR 59230, 59249 (Nov. 1, 2019).

if it has trading activity that exceeds either of these quantitative thresholds. The proposed trading activity dollar threshold would be measured using the average aggregate trading assets and trading liabilities of a banking organization, calculated in accordance with the instructions to the FR Y-9C or Call Report, as applicable, over the prior four consecutive quarters, rather than using only the single most recent quarter.[251] This approach would provide a more reliable and stable measure of the banking organization's trading activities than the current capital rule's quarter-end measure.[252] Furthermore, for purposes of determining applicability of market risk capital requirements, a banking organization would exclude from its calculation of aggregate trading assets and trading liabilities securities related to certain segregated accounts established by a subsidiary of a banking organization pursuant to SEC Rule 15c3-3 and CFTC Regulation 1.20 (customer and proprietary broker-dealer reserve bank accounts). To protect customers against losses arising from a broker-dealer's use of customer assets and cash, the SEC's and CFTC's requirements for customer and proprietary broker-dealer reserve bank accounts limit the ability of a banking organization to benefit or suffer loss from short-term price movements on the assets held in such accounts. When such accounts constitute the vast majority of a banking organization's trading activities, the prudential benefit of requiring the banking organization to measure risk-weighted assets for market risk would be limited. The proposal would only allow a banking organization to exclude these amounts from proposed trading activity thresholds for the

[251] For purposes of the proposed scoping criteria, aggregate average trading assets and trading liabilities would mean the sum of the amount of trading assets and the amount of trading liabilities as reported by the banking organization on the Consolidated Financial Statements for Holding Companies (sum of line items 5 and 15 on schedule HC of the Y-9C) or on the Consolidated Reports of Condition and Income (i.e., the sum of line items 5 and 15 on schedule RC of the FFIEC 031, the FFIEC 041, or the FFIEC 051), as applicable.

[252] If the banking organization has not reported trading assets and trading liabilities for each of the preceding four calendar quarters, the threshold would be based on the average amount of trading assets and trading liabilities over the quarters that the banking organization has reported, unless the primary Federal supervisor notifies the banking organization in writing to use an alternative method.

purpose of determining whether the banking organization is subject to market risk capital requirements. If a banking organization exceeds either of the proposed trading threshold criteria after excluding such accounts, the proposal would require the banking organization to include such accounts when calculating its market risk capital requirements.

b. Application of proposed rule

The proposal would require a banking organization to comply with the market risk capital requirements (as well as the related reporting and public disclosure requirements) beginning the quarter after the banking organization meets any of the proposed scoping criteria. To avoid volatility in requirements, a banking organization that is not a Category I or II depository institution holding company would remain subject to market risk capital requirements unless and until its trading activity falls below the threshold criteria for each of the prior four consecutive quarters.

Implementing the proposed market risk capital requirements would require significant operational preparation. Therefore, the agencies expect that a banking organization would monitor its aggregate trading assets and trading liabilities on an ongoing basis and work with its primary Federal supervisor as it approaches any of the proposed scoping criteria to prepare for compliance.

While the proposed threshold criteria for application of market risk capital requirements would help reasonably identify a banking organization with significant levels of trading activity given the current risk profile of the banking organization, there may be unique instances where a banking organization either should or should not be required to reflect market risk in its risk-based capital requirements. To continue to allow the agencies to address such instances on a case-by-case basis, the proposal would retain, without modification, the authority under the

market risk framework of the current capital rule for the primary Federal supervisor to either: (1) require a banking organization that does not meet the proposed criteria to calculate a market risk capital requirement, or (2) exclude a banking organization that meets the proposed criteria from such calculation, as appropriate.

Question 93: The agencies seek comment on the appropriateness of the proposed scope of application thresholds. Given the compliance costs associated with the proposal, what, if any, alternative thresholds should the agencies consider and why?

Question 94: What are the advantages or disadvantages of using a four-quarter rolling average for the $5 billion aggregate trading assets and trading liabilities scope of application threshold? What different methodologies and time periods should the agencies consider for purposes of this threshold?

3. Measure for market risk

Under the current capital rule, a banking organization subject to market risk capital requirements must use one or more internal models to calculate market risk capital requirements for its covered positions.[253] A banking organization's market risk-weighted assets equal the sum of the VaR-based capital requirement, the stressed VaR-based capital requirement, specific risk add-ons, the incremental risk capital requirement, the comprehensive risk capital requirement, and the capital requirement for de minimis exposures, plus any additional capital requirement established by the primary Federal supervisor, multiplied by 12.5. The primary Federal supervisor may require the banking organization to maintain an overall amount of capital that differs from the amount otherwise required under the rule, if the supervisor determines that the

[253] Notably, for securitization positions subject to the market risk capital framework, the current capital rule provides a standardized measurement method for capturing specific risks and a models-based measure for capturing general risks for purposes of calculating market risk-weighted assets.

banking organization's market risk-based capital requirements under the rule are not commensurate with the risk of the banking organization's covered positions, a specific covered position, or portfolios of such positions, as applicable.

The proposal would introduce a standardized methodology for calculating market risk capital requirements (standardized measure for market risk) and a new models-based methodology (models-based measure for market risk) to replace the market risk capital framework of the current capital rule. A banking organization with no model-eligible trading desks would calculate market risk capital requirements under the standardized measure for market risk. Alternatively, with prior approval from its primary Federal supervisor, a banking organization that has one or more model-eligible trading desks would be required to calculate market risk capital requirements under the models-based measure for market risk.[254]

If a trading desk does not receive approval to use the models-based non-default capital requirement or fails to meet the operational requirements of the models-based non-default capital requirement on an on-going basis, the desk would be required to use the standardized non-default capital requirement to calculate its market risk capital requirements. The agencies view the proposed standardized non-default capital requirement as sufficiently risk sensitive to serve as a credible alternative to the models-based non-default capital requirement given the conservative calibration of the risk weights and correlations applied to market risk covered positions under the standardized non-default capital requirement. Additionally, by relying in part on inputs a banking organization uses for its own internal risk management or financial reporting purposes, the proposed standardized non-default capital requirement would help ensure market risk capital

[254] The proposal would require a banking organization to calculate the standardized measure for market risk on a weekly basis and the models-based measure for market risk, if applicable, on a daily basis.

requirements appropriately capture a banking organization's actual market risk exposure in a manner that minimizes compliance burden and enhances risk-capture. Furthermore, the proposed standardized measure for market risk would promote comparability in market risk capital requirements across banking organizations subject to the proposal.

The proposed models-based measure for market risk would provide important improvements to the risk sensitivity and calibration of risk-weighted assets for market risk. In addition to replacing the VaR-based measure with an expected shortfall measure to capture tail risk better, the models-based measure for market risk would replace the fixed ten business-day liquidity horizon in the market risk capital framework of the current capital rule with liquidity horizons that vary based on the underlying risk factors in order to adequately capture the market risk of less liquid positions. The proposal also would limit the regulatory capital benefit of hedging and portfolio diversification across different asset classes, which may dissipate in stress periods.

At a high level, both the proposed standardized measure and the models-based measure for market risk would consist of a non-default capital requirement specific to each measure; a default risk capital requirement, which would be the same under both the standardized and models-based measures for market risk; a fallback capital requirement; and a capital add-on for re-designations. Each measure would include any additional capital requirement established by the primary Federal supervisor. Figure 1 illustrates the components of the standardized measure for market risk and Figure 2 illustrates the components of the models-based measure for market risk. Each of the components is described below in this section.

Figure 1

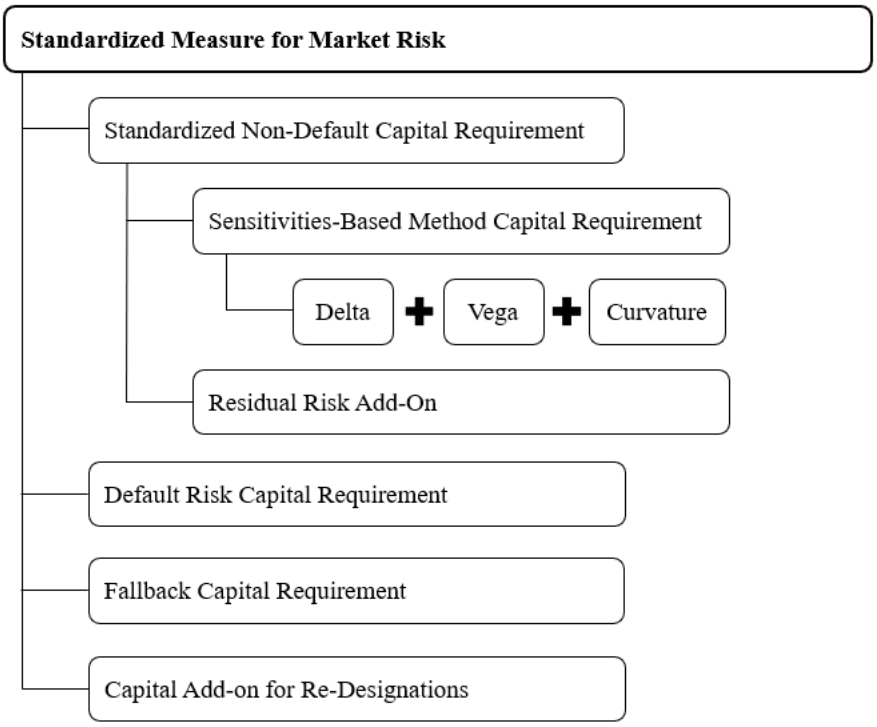
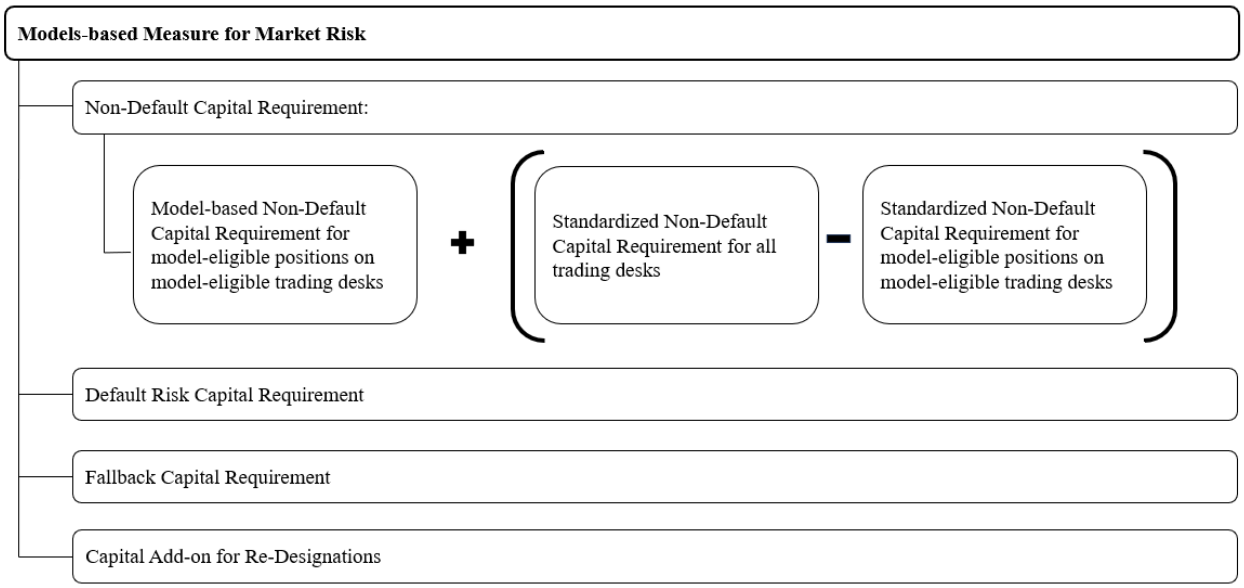


Figure 2



a. Standardized non-default capital requirement

Under the proposal, the standardized non-default capital requirement would consist of two components: a sensitivities-based method capital requirement and a residual risk add-on, each further described in section V.A.7. of this **SUPPLEMENTARY INFORMATION**. The sensitivities-based capital requirement captures non-default market risk based on the estimated losses produced by risk factor sensitivities[255] under regulatorily determined stressed conditions.[256] The residual risk add-on serves to produce a simple, conservative capital requirement for any other known risks that are not already captured by the sensitivities-based method capital requirement or the default risk capital requirement, including gap risk, correlation risk, and behavioral risks, such as prepayments.

b. Non-default capital requirement under the models-based measure

Under the proposal, a banking organization that has received prior supervisory approval to use the models-based measure for market risk could have some trading desks that are eligible for the models-based non-default capital requirement (model-eligible trading desks) and others that are not (model-ineligible trading desks).[257] The proposal would limit use of the models-

[255] A risk factor sensitivity is the change in value of an instrument given a small movement in a risk factor that affects the instrument's value.

[256] Under the proposal, the market risk capital requirement for the sensitivities-based method would equal the sum of the capital requirements for a given risk factor for delta (a measure of impact on a market risk covered position's value from small changes in underlying risk factors), vega (a measure of the impact on a market risk covered position's value from small changes in volatility) and curvature (a measure of the additional change in the positions' value not captured by delta arising from changes in the value of an option or an embedded option). As discussed further in section V.A.6.d.i. of this SUPPLEMENTARY INFORMATION, model-eligible trading desk would be allowed to hold insignificant amounts of model-ineligible positions such as securitization positions, correlation trading positions, or certain equity positions in investment funds. The proposal would require a banking organization to calculate the non-default capital requirement for model-ineligible positions using the standardized non-default capital requirement.

[257] As discussed further in section V.A.6.d.i. of this **SUPPLEMENTARY INFORMATION**, model-eligible trading desk would be allowed to hold insignificant amounts of model-ineligible positions such as securitization positions, correlation trading positions, or certain equity positions in investment funds. The proposal would require a banking organization to calculate the non-default capital requirement for model-ineligible positions using the standardized non-default capital requirement.

based non-default capital requirement to those trading desks that can appropriately capture the risks of market risk covered positions in internal models and that satisfy the model eligibility criteria and processes (for example, desk-level backtesting) introduced under the proposal, as described in section V.A.6.d. of this **SUPPLEMENTARY INFORMATION**. Specifically, if the primary Federal supervisor were to approve a banking organization to calculate market risk capital requirements for one or more model-eligible trading desks under the models-based non-default capital requirement, the banking organization would be required to calculate the entity-wide market risk capital requirement under the models-based measure for market risk, which would incorporate the capital requirements for model-eligible and model-ineligible positions, according to the following formula, as provided under §__.204(c) of the proposed rule:

$$\begin{aligned} &Models\text{-}based\ measure\ for\ market\ risk \\ &\quad = NDCR + DRC + fallback\ capital\ requirement \\ &\quad + capital\ add\text{-}on\ for\ redesignations \end{aligned}$$

Consistent with the standardized non-default capital requirement as discussed above, the non-default capital requirement under the models-based measure (*NDCR*) is intended to capture potential losses arising from changes in risk factors under severe stress conditions. More specifically, the proposal would set the non-default capital requirement under the models-based measure equal to the sum of (1) the models-based non-default capital requirement for model-eligible positions ($IMA_{G,A}$) and (2) the difference between the standardized non-default capital requirement for all trading desks ($SA_{all\ desks}$) and the standardized non-default capital requirement for model-eligible positions ($SA_{G,A}$).

$$NDCR = IMA_{G,A} + \left(SA_{all\ desks} - SA_{G,A}\right)$$

The agencies recognize that simply adding the standardized non-default capital requirements for model-ineligible positions and the models-based non-default capital requirements for model-eligible positions ($IMA_{G,A}$) together would disregard potential diversification effects between these two types of market risk covered positions. In order to appropriately reflect the marginal contribution of model-ineligible positions subject to the standardized non-default capital requirement, the proposal would require a banking organization to calculate the standardized non-default capital requirement for all market risk covered positions on all trading desks ($SA_{all\ desks}$) and subtract the amount required under the standardized non-default capital requirement for model-eligible positions ($SA_{G,A}$). To appropriately capture implied diversification benefits between model-eligible and model-ineligible positions across trading desks, the proposal would require a banking organization to calculate the non-default capital requirement as the sum of the models-based non-default capital requirement for model-eligible positions ($IMA_{G,A}$) and the adjusted standardized non-default capital requirement for model ineligible positions $\left(SA_{all\ desks} - SA_{G,A}\right)$.

In some circumstances, non-default capital requirement for model-eligible positions ($IMA_{G,A}$) may exceed the standardized non-default capital requirement for model-eligible positions ($SA_{G,A}$). In such cases, the non-default capital requirement under the models-based measure ($NDCR$) would exceed the standardized non-default capital requirement for all market risk covered positions on all trading desks ($SA_{all\ desks}$). While there can be merit in requiring a banking organization to reflect higher capital requirements produced by the models-based non-default capital requirement for model-eligible positions, there could be instances when the higher capital requirements are not commensurate with the risk profile of the banking organization's market risk covered positions. To address such situations, the proposal would allow a banking

organization, with prior approval from the primary Federal supervisor, to cap the amount of capital required under the non-default capital requirement of the models-based measure (*NDCR*) at the standardized non-default capital requirement for all trading desks ($SA_{all\ desks}$). To receive approval to cap the non-default capital requirement under the models-based measure, a banking organization would be required to demonstrate to the primary Federal supervisor that the aggregate market risk capital requirement with the cap would be adequate with respect to the risk profile of the banking organization's market risk covered positions and consistent with safety and soundness.[258]

Question 95: The agencies seek comment on the recognition of diversification benefits between model-eligible and model-ineligible positions across trading desks. What are the advantages and disadvantages of requiring a banking organization to calculate the models-based non-default capital requirement as the sum of the models-based non-default capital requirement for model-eligible positions ($IMA_{G,A}$) and the adjusted standardized non-default capital requirement for model ineligible positions ($SA_{all\ desks} - SA_{G,A}$), and why? If the agencies were to consider not recognizing any diversification benefits between model-eligible and model-ineligible positions across trading desks, should the agencies consider adopting the following formula:

$$\begin{aligned} &Models\ Based\ Non-Default\ Capital\ Requirement \\ &\quad = min\left(\left(IMA_{G,A} + PLA\ add\text{-}on + SA_U\right), SA_{all\ desks}\right) \\ &\quad + max\left(\left(IMA_{G,A} - SA_{G,A}\right), 0\right) \end{aligned}$$

[258] For example, periods of sudden and extreme market volatility (such as the COVID pandemic) may significantly increase the number of aggregate trading portfolio backtesting exceptions, which can result in models-based non-default capital requirement being unduly conservative relative to the market risk to which the banking organization is exposed.

Where, SA_U would be the standardized approach capital requirement for market risk covered positions for model-ineligible trading desks.

What are the advantages and disadvantages of calculating the models-based non-default capital requirement as the sum of the models-based non-default capital requirement for model-eligible trading desks and the standardized non-default capital requirement for model-ineligible trading desks, capped at the capital requirement for all trading desks under the standardized non-default capital requirement, plus the difference between the models-based non-default capital requirement for model-eligible desks and the standardized non-default capital requirement for model-eligible desks? If the agencies were to consider this alternative, what adjustments should be made? Why? Please include any supporting empirical data, including during periods of market stress, and rationale that would be helpful for evaluating this alternative.

Question 96: The agencies seek comment on allowing a banking organization to cap the non-default risk capital requirement under the models-based measure at the amount required by the standardized non-default capital requirement for all trading desks upon approval by the primary Federal supervisor. What are the advantages and disadvantages of the proposed cap, and why? If the agencies were to consider allowing the cap to be in effect in all circumstances, without prior approval, what are the advantages and disadvantages of the proposed supervisory approval requirement, and why? Commenters are encouraged to provide supporting rationale and data.

Question 97: In order to provide appropriate incentives for banking organizations to use internal models, what, if any, alternatives to capping the amount of capital required under the non-default risk capital requirement within the models-based measure at the amount required by the standardized non-default capital requirement for all trading desks should the agencies consider, and why?

c. Default risk capital requirement

The default risk capital requirement, further described in section V.A.9. of this **SUPPLEMENTARY INFORMATION**, would capture losses on credit and equity positions in the event of issuer default for purposes of both the standardized measure for market risk and the models-based measure for market risk. To recognize offsetting of long and short positions across model-eligible and model-ineligible positions, the models-based measure for market risk would require banking organizations to perform a single calculation of the default risk capital requirement that includes all market risk covered positions.

d. Fallback capital requirement

The agencies recognize that a banking organization may not be able to calculate market risk capital requirements for one or more of its market risk covered positions under the standardized non-default capital requirement, the models-based non-default capital requirement, or the default risk capital requirement. For example, a banking organization may not be able to calculate some risk factor sensitivities or components for one or more market risk covered positions due to an operational issue or a calculation failure. Such issues could arise when a new market product is introduced and the banking organization has not had sufficient time to develop models and analytics to produce the required sensitivities or the new data feeds for the proposed market risk capital calculations. In such cases, the proposal would require a banking organization to apply the fallback capital requirement to the affected market risk covered positions, as further described below.

For purposes of calculating the standardized measure for market risk, the proposal would require a banking organization to apply the fallback capital requirement to each of the affected

positions and exclude such positions from the standardized non-default capital requirement and the default risk capital requirement.[259]

For purposes of calculating the models-based measure for market risk, the proposal would require the banking organization to apply the fallback capital requirement to each market risk covered position for which it is not able to apply the models-based non-default capital requirement, the standardized non-default capital requirement, or the default risk capital requirement, as applicable, and exclude such positions from the respective components of models-based measure for market risk.

The fallback capital requirement would equal the sum of the absolute value of the fair value of each position subject to the fallback capital requirement, unless the banking organization receives prior approval from its primary Federal supervisor to use an alternative method to quantify the market risk capital requirement for such positions. The fallback capital requirement would only apply in instances where a banking organization is not able to capture all relevant risks of market risk covered positions under the standardized non-default capital requirement, the models-based non-default capital requirement, or the default risk capital requirement. As such, the agencies consider that applying a separate capital treatment for such positions is appropriate to ensure that they are conservatively incorporated into the market risk capital requirement. The agencies also recognize that using the fair value for derivatives can materially underestimate the exposure to the derivative positions given the fair market value of any given derivatives can change daily, often with a magnitude much greater than their current fair value. Therefore, for derivative positions that represent more than de-minimis exposure, the

[259] The respective components of the standardized non-default capital requirement are the sensitivities-based method capital requirement and the residual risk add-on.

banking organizations should notify their primary Federal supervisor. In such cases, the banking organization can propose an alternative methodology (subject to approval from the primary Federal supervisor) or the primary Federal supervisor can mandate a methodology for the banking organization to adopt for the fallback capital requirement.

Question 98: The fair value for derivative positions may materially underestimate the exposure because the fair value of derivatives is generally lower than the derivatives' potential exposure (for example, fair value of a derivative swap contract is generally zero at origination). What are the advantages and disadvantages of using the absolute fair value of the derivative positions for the calculation of the fallback capital requirement? What could be alternative methodologies for the fallback capital requirements for derivative positions? What, if any, alternative techniques would more appropriately measure the market risk associated with market risk covered positions for which the standardized non-default capital requirement cannot be applied?

Question 99: What are the advantages and disadvantages of asking a banking organization to notify its primary Federal supervisor if the banking organization has derivative positions that represent more than de-minimis exposure and it plans to use an alternative methodology to calculate the fallback capital requirement, and why? What are the advantages and disadvantages of requiring a banking organization to notify its primary Federal supervisor, and why?

e. Capital add-on for re-designations

The proposal would require a banking organization to have clearly defined policies and procedures for identifying positions that are market risk covered positions and those that are not,

as well as for determining whether, after such initial designation, a position needs to be re-designated as being a market risk covered position or not.

A position's effect on risk-weighted assets can vary based on whether it is a market risk covered position. Therefore, to offset any potential capital benefit that otherwise might be received from re-designating a position, the proposal would introduce the capital add-on requirement to compensate for any re-designation. The capital add-on requirement for re-designations would apply in cases where a banking organization re-classifies an instrument after initial designation as being subject either to the market risk capital requirements or to the capital requirements under the standardized approach or the expanded risk-based approach, respectively. With prior notification to the primary Federal supervisor, the proposal would not require a banking organization to apply the capital add-on for re-designations arising from circumstances that are outside of the banking organization's control (for example, changes in accounting standards or in the characteristics of the instrument itself, such as an equity being listed or de-listed). The agencies expect re-designations to be extremely rare, and recognize that re-designations could occur, for example, due to the termination of a business activity applicable to the instrument. Given the very limited circumstances under which re-designations would occur, any re-designation would be irrevocable, unless the banking organization receives prior approval from its primary Federal supervisor.

To calculate the capital add-on for a re-designation, a banking organization would be required to calculate its total capital requirements for the re-designated positions separately under the standardized approach or the expanded risk-based approach, as applicable, and under market risk capital framework before and immediately after the re-designation of a position. If the total capital requirement is lower as a result of the re-designation, then the difference between the two

would be the capital add-on for the re-designation to avoid any resultant reduction in market risk capital requirements.

The proposal would require a banking organization to calculate the capital add-on requirement at the time of the re-designation. The capital add-on requirement would decline proportionate to the balance sheet value relative to the time of the re-designation. This could occur when an instrument matures, pays down, amortizes, or expires, or the banking organization sells or exits (in whole or in parts) the position.

Question 100: What, if any, operational challenges could the proposed capital add-on calculation pose? What, if any, changes should the agencies consider making to the proposed exceptions to the capital add-on, such as to address additional circumstances in which the capital add-ons for re-designations should not apply, and why? For example, what would be advantages and disadvantages of exempting transactions in high quality liquid assets (HQLA) between a business unit of a banking organization that engages in asset-liability management and internal trading desk from the re-designation framework, and why?

Question 101: The agencies seek comment on whether the re-designation framework should include a grace period (for example, 10 business days) that would allow a banking organization to identify and correct any errors during the initial re-designation process. What are the advantages and disadvantages of the grace period and why?

f. Additional capital requirement and other provisions

As part of the proposal's reservation of authority provisions, the primary Federal supervisor may require a banking organization to maintain an overall amount of capital that differs from the amount otherwise required under the proposal, if the primary Federal supervisor

determines that the banking organization's market risk capital requirements under the proposal are not commensurate with the risk of the banking organization's market risk covered positions, a specific market risk covered position, or categories of positions, as applicable.

The primary Federal supervisor also would have the authority to require a banking organization to calculate capital requirements for specific positions or categories of positions under either the standardized approach or the expanded risk-based approach instead of under the market risk capital framework, or under the market risk capital framework instead of under the standardized approach or the expanded risk-based approach, as applicable, to more appropriately reflect the risks of the positions. Alternatively, under the proposal, the primary Federal supervisor may require a banking organization to apply a capital add-on for re-designations of specific positions or portfolios. These proposed provisions would help the primary Federal supervisor ensure that a banking organization's risk-based capital requirements appropriately reflect the risks of such positions.

Additionally, for a banking organization that uses the models-based measure for market risk, the agencies would reserve the authority to require such a banking organization to modify its observation period or methodology (including the stress period) used to measure market risk, when calculating the expected shortfall measure or stressed expected shortfall. In this way, the proposal would help the primary Federal supervisor ensure that a banking organization's internal models remain sufficiently robust to capture risks in a dynamic market environment and appropriately reflect the risks of such positions. Furthermore, the primary Federal supervisor could require a banking organization that has one or more model-eligible trading desks to calculate the standardized non-default risk capital requirement for each model-eligible trading desk as if that trading desk were a standalone regulatory portfolio. This situation could arise

when, for example, a banking organization is unable to empirically justify the correlation of a trading desk's losses with other model-eligible trading desks.

4. Market risk covered position

Market risk capital requirements under the current capital rule apply to a banking organization's covered positions, which are defined to include, subject to certain restrictions: (i) any trading asset or trading liability as reported on a banking organization's regulatory reports that is a trading position[260] or that hedges another covered position and is free of any restrictive covenants on its tradability or for which the material risk elements may be hedged by the banking organization in a two-way market, and (ii) any foreign exchange[261] or commodity position regardless of whether such position is a trading asset or trading liability. The definition of a covered position also explicitly excludes certain positions. Thus, the definition is structured into three broad categories, each subject to certain conditions: trading assets or liabilities that are covered positions, positions that are covered positions regardless of whether they are trading assets or trading liabilities, and exclusions.

The proposal would retain the structure and major elements of the existing definition of covered position (re-designated as "market risk covered position") with several modifications. These modifications aim to better align the definition of market risk covered position with those

[260] The current capital rule defines a trading position as one that is held by a banking organization for the purpose of short-term resale or with the intent of benefiting from actual or expected short-term price movements or to lock-in arbitrage profits.

[261] With prior approval from its primary Federal supervisor, the proposal would allow a banking organization to exclude from its market risk covered positions any structural position in a foreign currency, which is defined as a position that is not a trading position and that is (i) a subordinated debt, equity or minority interest in a consolidated subsidiary that is denominated in a foreign currency; (ii) capital assigned to foreign branches that is denominated in a foreign currency; (iii) a position related to an unconsolidated subsidiary or another item that is denominated in a foreign currency and that is deducted from the banking organization's tier 1 or tier 2 capital, or (iv) a position designed to hedge a banking organization's capital ratios or earnings against the effect of adverse exchange rate movements on (i), (ii), or (iii).

positions the agencies consider should be subject to the market risk capital requirements, as well as to reflect other proposed changes to the framework (for example, to incorporate the proposed treatment of internal risk transfers). The proposed revisions would capture positions that have exposures to market risk and also help promote consistency and comparability in the risk-based capital treatment of positions across banking organizations.

a. Trading assets and trading liabilities that would be market risk covered positions under the proposal

The proposed definition of market risk covered position would explicitly include any trading asset or trading liability that is held for the purpose of regular dealing or making a market in securities or other instruments.[262] In general, such positions are held to facilitate sales to customers or otherwise to support the banking organization's trading activities, for example by hedging its trading positions, and, therefore, expose a banking organization to market risk.

b. Positions that would be market risk covered positions under the proposal regardless of whether they are trading assets or trading liabilities

The proposal would include as market risk covered positions certain positions or hedges of such positions regardless of whether the position is a trading asset or trading liability.[263] Consistent with the current capital rule, such positions would continue to include foreign exchange and commodity positions with certain exclusions. In particular, the proposal would

[262] Consistent with the current capital rule, the proposal also would require such a position to be free of any restrictive covenants on its tradability or for the banking organization to be able to hedge the material risk elements of such a position in a two-way market.

[263] A position that hedges a trading position would be required to be within the scope of the banking organization's hedging strategy as described in §__.203(a)(2) of the proposed rule. Extending market risk covered positions to also include such hedges is intended to encourage sound risk management by allowing a banking organization to capture both the underlying market risk covered position and any associated hedge(s) when calculating its market risk capital requirements. Consistent with current practice, the agencies would review a banking organization's hedging strategies to ensure the appropriate designation of positions subject to market risk capital requirements.

continue to allow a banking organization to exclude structural positions in a foreign currency from market risk covered positions with prior approval from its primary Federal supervisor. To incentivize prudent hedging and sound risk management, the proposal would also exclude foreign exchange and commodity positions that are CVA hedges from the definition of market risk covered position.[264]

The proposal would also expand the types of positions that would be market risk covered positions, even if not categorized as trading assets or trading liabilities, to include the following, each discussed further below: (i) certain equity positions in an investment fund;[265] (ii) net short risk positions; (iii) certain publicly traded equity positions;[266] (iv) certain embedded derivatives on instruments issued by the banking organization that relate to credit or equity risk and that the banking organization bifurcates for accounting purposes or elects the fair value option for purposes of financial reporting;[267] (v) certain positions associated with internal risk transfer

[264] The proposal would define CVA hedge as a transaction that a banking organization enters into with a third party or an internal trading desk and manages for the purpose of mitigating CVA risk. Thus, the proposal would exclude from market risk capital requirements any CVA hedge – regardless of whether or not a banking organization is subject to CVA risk capital requirements.

[265] Equity positions in investment funds arising from bank-owned life insurance, corporate owned-life insurance owned by an affiliate, or that the banking organization has acquired for the purpose of providing such fund with sufficient initial equity to permit the fund to attract unaffiliated investors and held for less than five years ("seed capital investments") and any hedges of such positions that qualify for effective hedge pair treatment under §__.52(c) of the current rule or §__.141(c) of the proposal would not be included in the scope of market risk covered position.

[266] Equity positions arising from deferred compensation plans and hedges of such positions that qualify for effective hedge pair treatment under §__.52(c) of the current rule or §__.141(c) of the proposal would not be included in the scope of market risk covered position.

[267] With prior approval from its primary Federal supervisor, the proposal would allow a banking organization to include in the scope of market risk covered positions an entire instrument with an embedded derivative issued by the banking organization and that relates to credit or equity risk and for which the banking organization elects the fair value option for purposes of financial reporting.

under the proposal;[268] and (vi) certain instruments resulting from securities underwriting commitments.

First, the proposal would include as a market risk covered position an equity position in an investment fund for which the banking organization has access to the fund's prospectus, partnership agreement, or similar contract that defines the fund's permissible investments and investment limits, and which meets one of two conditions. Specifically, the banking organization would either need to (i) be able to use the look-through approach to calculate a market risk capital requirement for its proportional ownership share of each exposure held by the investment fund, or (ii) obtain daily price quotes for the investment fund.

The current covered position definition relies in part on the legal form of the investment fund by referencing the Investment Company Act of 1940[269] to determine whether an equity position in such a fund is a covered position. In contrast, the proposed criteria would capture equity positions for which there is sufficient transparency for the positions to be reliably valued on a daily basis. This valuation could come either from an observable market price for the equity position in the investment fund itself or from the banking organization's ability to identify the underlying positions held by the investment fund.

Second, the proposal would introduce a new term, net short risk positions, to describe credit and equity exposures that are outright short positions or over-hedges of credit and equity exposures that are not market risk covered positions. As the hedged exposures from which such positions originate are not traded, net short risk positions would not meet the definition of trading

[268] *See* section V.A.5. of this **SUPPLEMENTARY INFORMATION** for further detail on eligible internal risk transfer positions.

[269] 15 U.S.C. 80a-1 et seq.

position even though they expose the banking organization to market risk.[270] The agencies propose to include any net short risk position of at least $20 million, adjusted to reflect CPI-W, in market risk covered positions in order to help ensure that such exposures are appropriately reflected in banking organizations' risk-based capital requirements.[271]

For example, assume a banking organization purchases an eligible credit derivative (for example, a credit default swap) to mitigate the credit risk arising from a loan that is not a market risk covered position and the notional amount of protection provided by the credit default swap exceeds the loan exposure amount. The banking organization is exposed to additional market risk on the exposure arising from the difference between the amount of protection purchased and the amount of protected exposure because the value of the protection would fall if the credit spread of the credit default swap narrows. Neither the standardized approach nor the expanded risk-based approach would require the banking organization to reflect this risk in risk-weighted assets. To capture the market risk arising from net short risk positions, the proposal would require the banking organization to treat such positions that meet or exceed the proposed dollar threshold described above as market risk covered positions.

To calculate the exposure amount of a net short risk position, the proposal would require a banking organization to compare the notional amounts of its long and short credit positions and the adjusted notional amounts of its long and short equity positions that are not market risk covered positions.[272] For purposes of this calculation, the notional amounts would include the

[270] The proposal would retain, without modification, the existing definition of trading position in the market risk capital framework of the current capital rule. *See* 12 CFR 3.202 (OCC); 12 CFR 217.202 (Board); 12 CFR 324.202 (FDIC).

[271] As discussed in section II.E. of this **SUPPLEMENTARY INFORMATION**, the proposal would index the $20 million threshold for net short risk positions going forward on an annual basis to reflect CPI-W.

[272] For equity derivatives, the adjusted notional amount would be the product of the current price of one unit of the stock (for example, a share of equity) and the number of units referenced by the trade.

total funded and unfunded commitments for loans that are not market risk covered positions. Additionally, as a banking organization may hedge exposures at either the single-name level or the portfolio level, the proposal would require a banking organization to identify separately net short risk positions for single-name exposures and for index hedges. For single-name exposures, a banking organization would need to evaluate its long and short equity and credit exposures for all positions referencing a single name or obligor to determine if it has a net short risk position. For index hedges, a banking organization would need to evaluate its long and short equity and credit exposures for all positions that are not market risk covered positions in the hedged portfolio (aggregating across all relevant individual exposures) to determine if it has a net short risk position for any hedged portfolio.

Exposures arising from net short risk positions are a potential area where a banking organization may maintain insufficient capital relative to the market risk. The agencies nonetheless recognize that requiring a banking organization to capture every net short exposure that may arise, regardless of size or duration, when calculating its market risk capital requirements could be burdensome. Accordingly, the proposed $20 million threshold is intended to help ensure that individual net short risk exposures that could materially impact the risk-based capital requirements of a banking organization would be appropriately reflected in the proposed market risk capital requirements. Additionally, the proposed $20 million threshold is intended to strike a balance between over-hedging concerns and aligning incentives for banking organizations to prudently hedge and manage risk while capturing positions for which a market risk capital requirement would be appropriate. For example, if a loan amortizes more quickly than expected, due to a borrower making additional payments to pay down principal, the amount of notional protection would only constitute a net short risk position if it exceeds the amount of

the total committed loan balance by $20 million or more. The operational burden of requiring a banking organization to capture temporary or small differences due to accelerated amortization within its market risk capital requirements could inhibit the banking organization from engaging in prudential hedging and sound risk management. The proposal would require a banking organization to calculate net short risk positions on a spot, quarter-end basis, consistent with regulatory reporting, in order to reduce the operational burden of identifying such positions subject to the proposed market risk capital requirements.[273]

Third, the proposal generally would include as market risk covered positions all publicly traded equity positions[274] regardless of whether they are trading assets or trading liabilities, provided that there are no restrictions on the tradability of such positions.

Fourth, a banking organization may issue hybrid instruments that contain an embedded derivative related to credit or equity risk and a host contract, and bifurcate the derivative and the host contract for accounting purposes under GAAP or elect the fair value option for such an embedded derivative for purposes of financial reporting.[275] Under such circumstances, the proposal would include the embedded derivative in the definition of market risk covered position

[273] For net short-risk positions, banking organizations may use their spot, quarter-end calculations for the purposes of their weekly calculations of the standardized measure for market risk or daily calculations of the models-based measure for market risk.

[274] The proposal would not change the current capital rule's definition of publicly traded as traded on: (1) any exchange registered with the SEC as a national securities exchange under section 6 of the Securities Exchange Act of 1934 (15 U.S.C. 78f); or (2) any non-U.S.-based securities exchange that is registered with, or approved by, a national securities regulatory authority and that provides a liquid, two-way market for the instrument in question. Consistent with the current capital rule, the proposal would define a two-way market as a market where there are independent bona fide offers to buy and sell so that a price reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined within one day and settled at that price within a relatively short time frame conforming to trade custom.

[275] This would apply to hybrid contracts containing an embedded derivative that must be separated from the host contract and accounted for as a derivative instrument under ASC Topic 815, Derivatives and Hedging (formerly FASB Statement No. 133 "Accounting for Derivative Instruments and Hedging Activities," as amended).

regardless of whether GAAP treats the derivative as a trading asset or a trading liability.[276] This approach would capture the market risk of embedded derivatives a banking organization faces when it issues such hybrid instruments while being sensitive to the operational challenges of requiring banking organizations to calculate the fair value of such derivatives on a daily basis, and also appropriately exclude conventional instruments with an embedded derivative for which the capital requirements under the standardized approach or the expanded risk-based approach, as applicable, would be appropriate.[277] If a banking organization elects to report the entire hybrid instrument at fair value under the fair value option for accounting purposes (rather than bifurcating the derivative and host contract), the proposal would allow the banking organization to treat the entire instrument (and any associated hedges) as a market risk covered position with prior approval from the primary Federal supervisor. The agencies recognize such hybrid instruments can also present market risk, which banking organizations may choose to hedge either at the level of the embedded derivative or the entire instrument. To encourage sound risk management without unduly increasing operational burden or decreasing the overall capital required under the market risk framework,[278] the proposal would allow banking organizations to

[276] For purposes of regulatory reporting, the instructions to the FR Y-9C and Call Report require a banking organization to classify as trading securities all debt securities that a banking organization has elected to report at fair value under a fair value option with changes in fair value reported in current earnings, regardless of whether such positions are held with trading intent. ASC 815-15-25-4 permits both issuers of and investors in hybrid financial instruments that would otherwise require bifurcation of an embedded derivative to elect at acquisition, issuance or a new basis event to carry such instrument at fair value with all changes in fair value reported in earnings.

[277] For example, a conventional mortgage loan contains an embedded prepayment or call option.

[278] For example, a banking organization can choose to hedge structured notes issued by a banking organization that are linked to credit or equity risk with trading instruments even if the banking organization does not view the structured note as a trading position.

treat the entire instrument (as well as any associated hedges) as a market risk covered position with prior approval from the primary Federal supervisor. [279]

Fifth, the proposed definition of market risk covered position would include certain transactions of internal risk transfers, as described in section V.A.5. of this **SUPPLEMENTARY INFORMATION**, based in certain cases on the eligibility of the internal risk transfers. The market risk covered position would explicitly include (1) the trading desk segment of an eligible internal risk transfer of credit risk, interest rate risk, or CVA risk;[280] and (2) certain external transactions[281] based on eligibility of the risk transfers, executed by a trading desk related to an internal risk transfer of credit or interest rate risk. This aspect of the proposal is intended to help promote consistency and comparability in the risk-based capital treatment of such positions across banking organizations and ensure the appropriate capitalization of such positions under the standardized approach, the expanded risk-based approach, or the market risk capital framework of the capital rule.

Sixth, the proposed definition of market risk covered position would include instruments resulting from securities underwriting commitments where the securities are expected to be purchased by the banking organization on the settlement date, except those that a banking organization expects to classify as held to maturity or available for sale upon purchase. In

[279] The agencies anticipate that such approval would be granted in limited circumstances such as where the instrument or associated hedges trade or may be hedged in liquid, two-way markets.

[280] Under the proposal, only banking organizations subject to CVA risk capital requirements would be required to treat the trading desk segment of an eligible internal risk transfer of CVA risk as a market risk covered position, as described in section V.B.2. of this **SUPPLEMENTARY INFORMATION**. The proposed definition of market risk covered position would not include the trading desk segment of an eligible internal risk transfer of CVA risk for banking organizations subject to the market risk framework but not CVA risk framework.

[281] An external transaction generally refers to a transaction between a banking organization and an unaffiliated third party (except that in the case of a banking organization that is a depository institution, a transaction with an affiliate that is not a direct or indirect subsidiary of the depository institution would also be an external transaction for purposes of the depository institution's stand-alone capital requirement).

general, such positions are held for sale or otherwise to support the banking organization's trading activities and, therefore, expose a banking organization to significant market risk. The agencies recognize that there may be circumstances under which the banking organization, as underwriter, might hold securities for investment purposes that it could not sell in the distribution. As such securities are not reflective of a banking organization's trading activity, the proposal would exclude instruments that a banking organization expects to purchase for held to maturity or available for sale purposes from the definition of market risk covered position.

c. Exclusions from the proposed definition of market risk covered position

The definition of a covered position in the current capital rule explicitly excludes certain positions.[282] These excluded instruments and positions generally reflect the fact that they are either deducted from regulatory capital, explicitly addressed under the standardized approach and advanced approaches of the current capital rule, have significant constraints in terms of a banking organization's ability to liquidate them readily and value them reliably on a daily basis, or are not held with trading intent.

Consistent with the current capital rule, the proposal would continue to exclude from the definition of market risk covered positions: (1) any intangible asset, including any servicing asset; (2) any hedge of a trading position that the banking organization's primary Federal supervisor determines to be outside the scope of the banking organization's trading and hedging strategy; (3) any instrument that, in form or substance, acts as a liquidity facility that provides support to asset-backed commercial paper; (4) any position a banking organization holds with the intent to securitize; and (5) any CVA hedge.[283] The proposed definition would also continue

[282] *See* 77 FR 53060, 53064-65 (Aug. 30, 2012) for a more detailed discussion on these exclusions under the market risk capital rule.

[283] *See* definition of "CVA hedge" and "market risk covered position" under §_.202 of the proposal rule.

to exclude from market risk covered positions any direct real estate holdings.[284] Consistent with past guidance from the agencies, indirect investments in real estate, such as through REITs or special purpose vehicles, would not be direct real estate holdings and could be market risk covered positions if they meet the proposed definition.[285]

The proposed definition would also exclude the following from the definition of market risk covered position: (1) any non-publicly traded equity positions, other than certain equity positions in investment funds, (2) any publicly traded equity position that has restrictions on tradability; (3) any publicly traded equity position that is a significant investment in the capital of an unconsolidated financial institution in the form of common stock not deducted from regulatory capital, as applicable, (4) any equity position in an investment fund that is not a trading asset or trading liability or that otherwise does not meet the requirements to be a market risk covered position,[286] and (5) equity positions that qualify as effective hedges pursuant to §__.52(c) of the current capital rule or §__.141(c) of the proposal.

[284] Direct real estate holdings include real estate for which the banking organization holds title, such as "other real estate owned" held from foreclosure activities, and bank premises used by the bank as part of its ongoing business activities.

[285] *See* 77 FR 53060, 53065 (August 30, 2012) for the agencies' interpretive guidance on the treatment of such indirect holdings under the market risk capital framework of the capital rule.

[286] For example, the proposal would exclude equity positions in investment funds arising from bank-owned life insurance and corporate owned-life insurance owned by an affiliate from the scope of market risk covered position. Such positions are held for the purpose of covering the cost of providing benefits to employees and retirement planning, and not with trading intent. Similarly, the proposal would exclude equity positions in investment funds arising from seed capital investments from the definition of market risk covered position. A banking organization typically invests a limited amount of its own capital as part of organizing the fund to produce investment performance as a record of the fund's investment strategy ("track record"). Only once a track record is established would the banking organization market the fund to investors with trading intent. As investors may demand a track record of at least five years before investing in the fund, the proposal would exclude equity positions in investment funds arising from seed capital investments, if the banking organization has held the fund for less than five years from the date on which the investment adviser or similar entity to the fund begins making initial investments pursuant to the written strategy of the fund upon its establishment. The exclusion is not intended to be used in situations where an investment manager provides additional capital to a fund after the fund has developed a track record. *See* (2)(x) and (2)(xiv) within the definition of market risk covered position under §__.202 of the proposal.

The proposed definition would add an exclusion for any derivative instrument or exposure to an investment fund that has material exposures to any of the preceding excluded instruments or positions discussed in this section. The proposal would also add an exclusion for instruments held for the purpose of hedging a particular risk of a position in any of the preceding excluded types of instruments discussed in this section.

Question 102: The agencies seek comment on the appropriateness of the proposed definition of market risk covered position. What, if any, practical challenges might the proposed definition pose for banking organizations, such as the ability to fair value daily any of the proposed instruments that would be captured by the definition?[287]

Question 103: The proposal would include as a market risk covered position an equity position in an investment fund that satisfies the conditions described in the definition of "market risk covered position" in §__.202. Consistent with the definition of "investment fund" under the current capital rule, to be an eligible market risk covered position, an equity position must be in a company (1) where all or substantially all of the assets of the company are financial assets, and (2) that has no material liabilities. The agencies seek comment on whether a more specific definition of eligible "investment fund" would be appropriate for market risk covered positions. For example, what other vehicles that do not meet the criteria of the "investment fund" definition but would be subject to market risk capital requirements, in a manner that such

[287] For banking organizations subject to market risk capital requirements under the capital rule, the Volcker Rule defines the scope of instruments subject to the proprietary trading prohibition (trading account) based on two prongs: market risk capital rule covered positions that are trading positions, and instruments purchased or sold in connection with the business of a dealer, swap dealer, or securities-based swap dealer that require it to be licensed or registered as such. The proposed revisions to the definition of covered positions (re-designated as "market risk covered position"), as described in section V.A.4. of this **SUPPLEMENTARY INFORMATION**, could alter the scope of financial instruments deemed to be in the trading account under the Volcker Rule, but only to the extent that a market risk covered position is also a trading position and the position is not otherwise excluded from the Volcker rule definition of trading account. *See* 12 CFR 44.3(b) (OCC); 12 CFR 248.3(b) (Board); 12 CFR 351.3(b) (FDIC).

positions would be most appropriately subject to market risk capital requirements, such as an investment fund with material liabilities? What are the advantages and disadvantages of subjecting such investment funds to market risk capital requirements, and why? Alternatively, what additional conditions or limitations should the agencies consider to place on investment funds eligible for being a market risk covered position, beyond those currently in the proposal?

Question 104: The agencies seek comment on the extent to which limiting the proposed definition of market risk covered position to include equity positions in investment funds only for which a banking organization has access to the fund's investments limits (as specified in the fund's prospectus, partnership agreement, or similar contract that define the fund's permissible investments) appropriately captures the types of positions that should be subject to regulatory capital requirements under the proposed market risk framework. What types of investment funds, if any, would a banking organization have the ability to value reliably on a daily basis that do not meet this condition? In addition, what are the advantages and disadvantages of excluding equity positions in investment funds arising from bank-owned life insurance or corporate-owned life insurance from the definition of market risk covered positions?

Question 105: For the purposes of determining whether certain positions are within the definition of market risk covered position, is the proposed definition of net short risk position appropriate, and why? What, if any, alternative measures should the agencies consider to identify net short risk positions and why would these be more appropriate?

Question 106: The agencies seek comment on whether the proposed $20 million threshold is an appropriate measure for identifying significant net short risk exposures that warrant capitalization under the market risk framework. What alternative thresholds or methods

should the agencies consider for identifying significant net short risk positions, and why would these alternatives be more appropriate than the proposed $20 million threshold?

Question 107: What, if any, challenges might banking organizations face in calculating the market risk capital requirement for net short risk positions? In particular, what, if any, alternatives to the total commitment for loans should the agencies consider using to calculate notional amount—for example, delta notional values rather than notional amount, present value, sensitivities—and why would any such alternatives be a better metric? Please provide specific details on the mechanics of and rationale for any suggested methodology. In addition, which, if any, of the items to be included in a banking organization's net short credit or equity risk position may present operational difficulties and what is the nature of such difficulties? How could such concerns be mitigated?

5. Internal risk transfers

A banking organization may choose to hedge the risks of certain positions[288] held by a banking unit or a CVA desk by having one of its trading desks obtain the hedge for a banking unit or a CVA desk exposure. The current capital rule does not address the transfers of risk from a banking unit or a CVA desk (or a functional equivalent thereof) to a trading desk within the same banking organization[289] (internal risk transfers), for example between a mortgage banking unit and a rates trading desk. Thus, market risk-weighted assets do not reflect the market risk of

[288] Such risks can include credit, interest rate, or CVA risk arising from exposures that are subject to risk-based requirements under the standardized approach, the expanded risk-based approach, or the market risk capital framework of the capital rule.

[289] For example, if the banking organization is a depository institution within a holding company structure, transactions conducted between the depository institution and an affiliated broker-dealer entity that is not a subsidiary of the depository institution would not qualify as transactions within the same banking organization for the depository institution. Such transactions would qualify as transactions within the same banking organization for the consolidated holding company.

such internal transactions and capture only the external portion of the hedge, potentially misrepresenting the risk position of the banking organization.

Accordingly, the proposal would define internal risk transfers and establish a set of requirements including documentation and other conditions for a banking organization to recognize certain types of internal risk transfers in risk-based capital requirements. The proposal would define internal risk transfers as transfers executed through internal derivatives trades of credit risk or interest rate risk arising from an exposure capitalized under the standardized approach of the capital rule or the proposed expanded risk-based approach to a trading desk, or a transfer of CVA risk arising from a CVA desk (or the functional equivalent if the banking organization does not have any CVA desks) to a trading desk.[290] The proposed definition of internal risk transfer would not include transfers of risk from a trading desk to a banking unit or between trading desks because such transactions present the types of risks appropriately captured in market risk-weighted assets.[291]

In practice, for internal risk management purposes, most banking organizations already document the source of risk being hedged and the trading desk providing the hedge.[292] As a result, the agencies do not expect the proposed documentation requirements for such transactions to qualify as eligible internal risk transfers, as described in more detail below, to pose a

[290] An internal risk transfer transaction would comprise two perfectly offsetting segments—one segment for each of two parties to the transaction.

[291] As described in section V.A.7.b.ii. of this **SUPPLEMENTARY INFORMATION**, for transfers of risk between a trading desk that uses the standardized non-default capital requirement and a trading desk that uses the models-based non-default capital requirement, a banking organization may exclude the leg of the transaction acquired by the trading desk using the standardized non-default capital requirement from the residual risk add-on.

[292] The agencies recognize that some internal risk transfers will be executed by means of legally binding contracts entered into between affiliates, while others will be executed between business units within the same legal entity under other arrangements, and that the form of documentation used by a banking organization may vary accordingly.

significant compliance burden on banking organizations. The agencies encourage prudent risk management and view that this aspect of the proposal will help promote consistency and comparability in the risk-based capital treatment of such internal transactions across banking organizations and ensure the appropriate capitalization of such positions.

a. Internal risk transfers of credit risk

The Basel standards introduce a risk-based capital treatment for internal transfers of credit risk executed from a banking unit to a trading desk to hedge the credit risk arising from exposures in the banking unit. The proposal is generally consistent with the Basel standards in specifying the criteria for internal risk transfer eligibility and clarifying the scope of exposures subject to market risk capital requirements. Specifically, a banking organization would be required to maintain documentation identifying the underlying exposure under the standardized approach or the expanded risk-based approach, as applicable, being hedged and its sources of credit risk. In addition, a trading desk would be required to enter into an external hedge that meets the requirements of §__.36 of the current capital rule or §__.120 of the proposed rule and matches the terms, other than amount, of the internal credit risk transfer at trade initiation. The agencies recognize that under certain circumstances a banking organization could choose to novate to a CCP an external transaction entered into in connection with an internal risk transfer. Because such transactions could be subject to compression, the terms of the internal risk transfer, aside from amount, would not be identical to the terms of the external hedge of credit risk post trade initiation. As such, the proposal would require the terms of the external hedge and the internal risk transfer to be identical only at trade initiation.

When these requirements are met, the transaction would qualify as an eligible internal risk transfer, for which the banking unit would be allowed to recognize the amount of the hedge

position received from the trading desk as a credit risk mitigant when calculating the risk-based capital requirements for the underlying exposure under the standardized approach or the expanded risk-based approach. Because the trading desk enters into external hedges to manage credit risk arising from banking unit exposures, such external hedges would be included in the scope of market risk covered positions along with the internal risk transfer (the trading desk segment), where they would cancel out each other provided the amounts and terms of both transactions match. Nevertheless, if the internal risk transfer results in a net short credit position greater than $20 million for the banking unit, the trading desk would be required to calculate market risk-based capital requirements for such positions. A net short risk credit position results when the external hedge exceeds the amount required by the banking unit to hedge the underlying exposure under the standardized approach or the expanded risk-based approach.

For transactions that do not meet these requirements, the proposal would require a banking organization to disregard the internal risk transfer (the trading desk segment) from the market risk covered positions. The proposal would subject the entire amount of the external hedge acquired by the trading desk to the proposed market risk capital requirements and disallow any recognition of risk mitigation benefits of the internal credit risk transfer under the standardized approach or the expanded risk-based approach, as applicable.

b. Internal risk transfers of interest rate risk

The proposal would specify the risk-based capital treatment of internal transfers of interest rate risk from a banking unit to the trading desk to hedge the interest rate risk arising from the banking unit. When a banking organization executes an internal interest rate risk transfer between a banking unit and a trading desk, the transferred interest rate risk exposure would be considered an eligible risk transfer that the banking organization may treat as a market

risk covered position only if such internal risk transfer meets a set of requirements. Specifically, the banking organization would be required to maintain documentation of the underlying exposure being hedged and its sources of interest rate risk.[293] In addition, given the complexity of tracking the direction of internal transfers of interest rate risk, the proposal would allow a banking organization to establish a dedicated notional trading desk for conducting internal risk transfers to hedge interest rate risk. If a banking organization conducts internal transfers of interest rate risk on a dedicated notional trading desk, the proposal would require a banking organization to calculate market risk capital requirements for such positions on the dedicated notional trading desk on a standalone basis apart from all other market risk covered positions. Specifically, a banking organization would be required to calculate either the standardized measure for market risk or the models-based measure for market risk, if applicable, for the internal risk transfer positions on the dedicated notional trading desk separate from all other market risk covered positions.

When these requirements are met, the internal risk transfer would qualify as an eligible internal interest rate risk transfer, for which the banking organization may recognize the hedge benefit of an internal derivative transaction. A trading desk that conducts internal risk transfers of interest rate risk may enter into external hedges to mitigate the risk but would not be required to do so under the proposal. As the amount transferred to the trading desk from the banking unit to hedge the underlying exposure under the standardized approach or the expanded risk-based approach, as applicable, would be a market risk covered position, any such external hedges

[293] The proposal would not require a banking organization to purchase the hedge from a third party for such transactions to qualify as an internal risk transfer, because tracking interest rate risk transfers can be operationally burdensome.

would also be market risk covered positions and thus also subject to the proposed market risk capital requirements.[294]

For transactions that do not meet these requirements, a banking organization would be required to exclude the internal interest rate risk transfer (the trading desk segment) from its market risk covered positions. The entire amount of any external hedge of an ineligible internal risk transfer would be a market risk covered position.

c. Internal risk transfers of CVA risk

For banking organizations that are subject to CVA risk capital requirements, the proposal would specify the capital treatment of internal CVA risk transfers executed between a CVA desk (or the functional equivalent thereof) and a trading desk to hedge CVA risk arising from exposures that are subject to the proposed capital requirements for CVA risk.[295]

Under the proposal, an internal CVA risk transfer would involve two perfectly offsetting positions of a derivative transaction executed between a CVA desk and a trading desk: the position of the CVA desk (the CVA segment) and the position of the trading desk (the trading desk segment). For the CVA desk to recognize the risk mitigation benefits of the internal risk transfer under the risk-based capital requirements for CVA risk, the proposal would require the banking organization to have a dedicated CVA desk or the functional equivalent thereof that, along with other functions performed by the desk, manages internal risk transfers of CVA risk.

[294] As the trading desk segments of eligible internal risk transfers of interest rate risk would be market risk covered positions, to the extent a trading desk enters into external hedges to mitigate the risk of such positions, the external hedge would also be subject to the market risk capital rule and could in whole or in part offset the market risk of the eligible internal risk transfer.

[295] Under the proposal, the requirements for internal CVA risk transfers would not apply to banking organizations that are not subject to the proposed CVA risk capital requirement. *See* section V.B.2. of this **SUPPLEMENTARY INFORMATION** for the scope of banking organizations that would be subject to CVA risk capital requirements under the proposal.

In either case, such a desk would not need to satisfy the proposed trading desk definition, given the proposed risk-based capital requirements for CVA risk are not calibrated at the trading desk level. Additionally, the proposal would require a banking organization to maintain, at either the desk or portfolio level, an internal written record of internal derivative transaction(s) executed between the CVA desk and the trading desk, including identifying the underlying exposure(s) being hedged by the CVA desk and the sources of such risk.

In addition to the above-mentioned requirements for the internal transaction to qualify as an eligible internal risk transfer of CVA risk, the proposal sets forth general requirements for the recognition of CVA hedges that would be applicable to both internal transfers of CVA risk and external CVA hedges. The proposal specifies these requirements for both the basic approach for CVA risk and standardized approach for CVA risk, as described in section V.B.3. of this **SUPPLEMENTARY INFORMATION**.[296]

For eligible internal risk transfers of CVA risk, the banking organization would be required to treat the CVA segment as an eligible CVA hedge when calculating the CVA risk capital requirement and treat the trading desk segment as a market risk covered position. In this way, the proposal would allow the CVA desk to recognize the risk-mitigating benefit of the hedge position received from the trading desk when calculating risk-based capital requirements for CVA risk.

For transactions that do not meet these requirements or the general hedge eligibility requirements under the basic approach for CVA risk or the standardized approach for CVA risk,

[296] While the basic approach for CVA applies certain restrictions on eligible instrument types for hedges to be recognized as eligible, the standardized approach for CVA risk allows for a broader set of hedging instruments. Moreover, the standardized approach for CVA risk would also recognize as eligible hedges instruments that are used to hedge the exposure component of CVA risk.

a banking organization would be required to exclude both the trading desk segment and the CVA segment of the internal transfer of CVA risk from market risk-weighted assets, thus disregarding the ineligible internal CVA risk transfer. In addition, the CVA desk would not be able to recognize any risk mitigation or offsetting benefit from the ineligible internal risk transfer in its capital requirements for CVA risk.

d. Internal risk transfers of equity risk

The agencies are not proposing to allow a banking organization to recognize any risk mitigation benefits for internal equity risk transfers executed between a trading desk and a banking unit to hedge exposures that are subject to either the standardized approach or the expanded risk-based approach, as applicable. The proposed definition of market risk covered position would generally include equity positions that are publicly traded with no restrictions on tradability, with a few exceptions.[297] Given the expanded scope of equity positions that would be subject to the proposed market risk capital requirements, primarily illiquid or irregularly traded equity positions would remain subject to the standardized approach or the expanded risk-based approach, as applicable.[298] In general, banking organizations would not be able to hedge the material risk elements of illiquid or irregularly traded equity positions in a liquid, two-way market. For publicly traded equity exposures still subject to the standardized approach or the expanded risk-based approach, as applicable, banking organizations may apply the hedge pair

[297] For example, the proposed market risk covered position would exclude equity positions arising from deferred compensation plans and hedges of such positions that qualify for effective hedge pair treatment under §__.52(c) of the current capital rule and under §__.141(c) of the proposed rule. *See* section V.A.4.b. of this **SUPPLEMENTARY INFORMATION** for the proposed definition of market risk covered position.

[298] Consistent with the current capital rule, the proposed equity risk framework under the expanded risk-based approach would allow firms to apply the effective hedge pair treatment to equity exposures not subject to market risk capital requirements for which the banking organization can demonstrate that the hedge transaction at initiation satisfies one of the three hedge effectiveness tests.

treatment, which allows for the recognition of risk-mitigating benefits of hedged transactions. Given the narrower scope of equity positions subject to the standardized approach or the expanded risk-based approach, as applicable, and the option to apply hedge pair treatment for publicly traded exposures, the proposal would not allow a banking organization to recognize internal transfers of equity risk of such positions.

Question 108: The agencies seek comment on any operational challenges of the proposed internal risk transfer framework, in particular any potential difficulties related to internal risk transfers executed before implementation of the proposed market risk capital rule. What is the nature of such difficulties and how could they be mitigated?

Question 109: The agencies seek comment on the extent to which the proposed internal risk transfer framework would incentivize hedging and prudent risk management and/or potentially misrepresent the risk profile of a banking organization. What, if any, additional requirements or other modifications should the agencies consider?

Question 110: The agencies seek comment on the appropriateness of the proposed eligibility requirements for a banking unit to recognize the risk mitigation benefit of an eligible internal risk transfer of credit risk. What, if any, additional requirements or other modifications should the agencies consider, and why?

Question 111: What, if any, operational burden might the proposed exclusion for the credit risk segment of internal risk transfers pose for banking organizations? What, if any, alternatives should the agencies consider that would appropriately exclude the types of positions that should be captured under the standardized approach or the expanded risk-based approach, as applicable, and also impose less operational burden relative to the proposal?

Question 112: The agencies seek comment on subjecting the internal risk transfers of interest rate risk to the market risk capital requirements on a standalone basis. What are the benefits and costs associated with this requirement? What would be an alternative approach for calculating a standalone capital requirement for internal transfers of interest rate risk? What would be the advantages and disadvantages of allowing a banking organization to calculate the market risk capital requirements for the internal risk transfers of interest rate risk together with other market risk exposures, and why?

Question 113: The agencies seek comment on the proposed documentation requirements for an internal risk transfer of credit risk, interest rate risk, or CVA risk to qualify as an eligible internal risk transfer. What, if any, changes to the proposed documentation requirements should the agencies consider, particularly in cases in which CVA risk is hedged on a portfolio basis? What, if any, alternatives should the agencies consider that would appropriately capture the types of positions that should be recognized under the standardized approach or the expanded risk-based approach, as applicable?

Question 114: The agencies seek comment on not allowing a banking organization to recognize any risk mitigation benefits for internal equity risk transfers executed between a trading desk and a banking unit to hedge exposures that are subject to either the standardized approach or the expanded risk-based approach, as applicable. Given the proposed scope of equity positions that would be subject to the proposed market risk capital requirements and the retention of effective hedge pair treatment, under what circumstances would there be a need for internal equity risk transfers? What would be advantages and disadvantages of including the concept of internal risk transfer to equity risk and why?

6. General requirements for market risk

The current capital rule requires a banking organization to satisfy certain general risk management requirements related to the identification of trading positions, active management of covered positions, stress testing, control and oversight, and documentation. The proposal would maintain these requirements, as well as introduce additional requirements. The additional requirements are designed to further strengthen a banking organization's risk management of market risk covered positions and to appropriately reflect other changes under the proposal such as the definition of market risk covered position and the introduction of the trading desk concept, as described in sections V.A.4. and V.A.6.b. of this **SUPPLEMENTARY INFORMATION**. The proposal would also make certain technical corrections related to the requirements around valuation of market risk covered positions.[299]

a. Identification of market risk covered positions

The current capital rule requires a banking organization to have clearly defined policies and procedures for determining which trading assets and trading liabilities are trading positions and which trading positions are correlation trading positions, as well as for actively managing all positions subject to the rule.

The proposal would expand these requirements to reflect the proposed scope and definition of market risk covered position as described in section V.A.4. of this **SUPPLEMENTARY INFORMATION**. A banking organization also would be required to update its policies and procedures for identifying market risk covered positions at least annually

[299] Specifically, to align with the GAAP considerations for valuation of market risk covered positions, the proposal would eliminate the market risk capital rule requirement that a banking organization's process for valuing covered positions must consider, as appropriate, unearned credit spreads, close-out costs, early termination costs, investing and funding costs, liquidity, and model risk. *See* 12 CFR 3.203(b)(2) (OCC); 12 CFR 217.203(b)(2) (Board); 12 CFR 324.203(b)(2) (FDIC).

and to identify positions that must be excluded from market risk covered positions. In addition, the proposal would introduce a new requirement for a banking organization to establish a formal framework for re-designating a position after its initial designation as being subject to the market risk capital framework or to the standardized approach or the expanded risk-based approach, as applicable, of the capital rule. Specifically, the proposal would require a banking organization to establish policies and procedures that describe the events or circumstances under which a re-designation would be considered, a process for identifying such events or circumstances, any restrictions on re-designations, and the process for obtaining senior management approval as well as for notifying the primary Federal supervisor of material re-designations. These proposed requirements are intended to complement the proposed capital requirement for re-designations described in section V.A.3.e. of this **SUPPLEMENTARY INFORMATION** by ensuring re-designations would occur in only those circumstances identified by the banking organization's senior management as appropriate to merit re-designation.[300]

In addition to the requirements for identifying market risk covered positions, the proposal would require a banking organization to have clearly defined trading and hedging strategies for its market risk covered positions that are approved by the banking organization's senior management. Consistent with the current capital rule, the trading strategy would need to specify the expected holding period and the market risk of each portfolio of market risk covered positions, and the hedging strategy would need to specify the level of market risk that the

[300] As described in further detail in section V.A.3.e. of this **SUPPLEMENTARY INFORMATION**, the proposal would introduce a capital requirement (the capital add-on for re-designations) to offset any potential capital benefit that a banking organization otherwise might have received from re-classifying an instrument previously treated under the standardized approach or the expanded risk-based approach of the capital rule, as applicable, as a market risk covered position.

banking organization is willing to accept for each portfolio of market risk covered positions, along with the instruments, techniques, and strategies for hedging such risk.

b. Trading desk

i. *Trading desk definition*

To limit overreliance on internal models, support more prudent market risk management practices, and better align operational requirements with the level at which trading activity is conducted, the proposal would introduce the concept of a trading desk and apply the proposed models-based non-default capital requirement at the trading desk level. Regardless of whether a banking organization uses the standardized or the models-based measure for market risk, the proposal would require the banking organization to satisfy certain general operational requirements for each trading desk, as described below in section V.A.6.c. of this **SUPPLEMENTARY INFORMATION**. The proposal would also require the banking organization to satisfy certain additional operational requirements, as described below in section V.A.6.d. of this **SUPPLEMENTARY INFORMATION**, in order for the banking organization to calculate the market risk capital requirements for trading desks under the models-based non-default capital requirement.

The proposal would define a trading desk as a unit of organization of a banking organization that purchases or sells market risk covered positions and satisfies three requirements. First, the proposal would require a banking organization to structure a trading desk pursuant to a well-defined business strategy. In general, a well-defined business strategy would include a written description of the trading desk's general strategy, including the economics behind the business strategy, the trading and hedging strategies and a list of the types of instruments and activities that the desk will use to accomplish its objectives. Second, the

proposal would require a trading desk to be organized to ensure the appropriate setting, monitoring, and management review of the desk's trading and hedging limits and strategies. Third, the proposal would require that a trading desk be characterized by a clearly-defined unit of organization that: (1) engages in coordinated trading activity with a unified approach to the key elements of the proposed rule's requirements for trading desk policies and active management of market risk covered positions; (2) operates subject to a common and calibrated set of risk metrics, risk levels, and joint trading limits; (3) submits compliance reports and other information as a unit for monitoring by management; and (4) books its trades together.

The proposed trading desk definition is intended to help ensure that a banking organization structures its trading desks to capture the level at which trading activities are managed and operated and at which the profit and loss of the trading strategy is attributed.[301] This approach would recognize the different strategies and objectives of discrete units in a banking organization's trading operations. The proposed parameters provide sufficient specificity to enable more precise measures of market risk for the purpose of determining risk-based capital requirements, while taking into account the potential variation in trading practices across banking organizations. In this regard, the proposal aims to reduce the regulatory compliance burden for banking organizations by providing flexibility to align the proposed trading desk definition with the organizational structure that banking organizations may already have in place to carry out their trading activities.

[301] A banking organization subject to the market risk capital requirements under the proposal would be required to use the same trading desk structure it establishes pursuant to the proposed market risk capital framework to demonstrate compliance with the prohibitions and restrictions on proprietary trading under the Volcker Rule. *See* 12 CFR 44.3(e)(14) (OCC); 12 CFR 248.3(e)(14) (Board); 12 CFR 351.3(e)(14) (FDIC).

Question 115: What, if any, changes should the agencies consider making to the definition of a trading desk and why? What, if any, other key factors do banking organizations typically use to define trading desks for business purposes that the agencies should consider including in the trading desk definition to clarify the designation of trading desks for purposes of the market risk capital framework?

Question 116: The agencies seek comment on any implementation challenges banking organizations with cross-border operations could face in applying the proposed trading desk definition. What are the advantages and disadvantages of permitting a U.S. subsidiary of a foreign banking organization to apply trading desk designations consistent with its home country's regulatory requirements, provided those requirements are consistent with the Basel standards?

ii. *Notional trading desk definition*

The proposed definition of market risk covered position would include certain types of instruments and positions that may not arise from, and may be unrelated to, a banking organization's trading activities, such as net short risk positions, certain embedded derivatives on instruments issued by the banking organization that relate to credit or equity risk, as well as foreign exchange and commodity exposures that are not trading assets or trading liabilities. When a banking organization enters into such positions, it may do so in a manner that causes these positions to appear not to originate from a banking organization's existing trading desks.

To address the issue that certain trading desk-level requirements are not applicable to these types of activities and positions, the proposal would introduce the concept of a notional

trading desk[302] to which such positions would be allocated. Under the proposal, notional trading desks would be subject to only a subset of the general risk management requirements applicable to trading desks. Specifically, the proposal would require a banking organization to identify any such positions and activities allocated to notional trading desks, as described in section V.A.6.b.iii. of this **SUPPLEMENTARY INFORMATION**, but would not require a banking organization to establish policies and procedures describing the trading strategy or risk management for the notional trading desks or require a notional trading desk to satisfy the requirements for active management of market risk covered positions. Nevertheless, to qualify for use of the models-based non-default capital requirement, the proposal would require a notional trading desk to satisfy all of the general requirements for trading desks, as well as those applicable for the models-based measure.[303]

The agencies are proposing to require a banking organization to identify any notional trading desks as part of the trading desk structure requirement, described in section V.A.6.b.iii. of this **SUPPLEMENTARY INFORMATION**, to help ensure that a banking organization appropriately treats all market risk covered positions under the capital rule. The agencies would review a banking organization's trading desk structure, including notional trading desks and trading desks used for internal risk transfers, to help ensure that they have been appropriately identified.

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[302] The proposal would define a notional trading desk as a trading desk created for regulatory capital purposes to account for market risk covered positions arising under the standardized approach or the expanded risk-based approach of the capital rule, as applicable, such as net short risk positions, certain embedded derivatives on instruments that the banking organization issued that relate to credit or equity risk, instruments with an embedded derivative that the banking organization issued that relate to credit or equity risk that it elects the fair value option for purposes of financial reporting, and foreign exchange positions and commodity positions that are not trading assets or trading liabilities.

[303] *See* section V.A.6.d. of this **SUPPLEMENTARY INFORMATION** for further discussion on the additional operational requirements applicable to model-eligible trading desks.

Question 117: What, if any, additional requirements should apply to notional trading desks to clarify the level at which market risk capital requirements must be calculated? What, if any, additional types of positions should be assigned to the notional trading desk and why?

iii. *Trading desk structure*

The proposal would require a banking organization to define its trading desk structure. Specifically, the structure must define each constituent trading desk and identify: (1) model-eligible trading desks that are used in the models-based measure for market risk, (2) model-ineligible trading desks used in both the standardized measure and models-based measure for market risk,[304] (3) trading desks that are used for internal risk transfers (as applicable), and (4) notional trading desks (as applicable).[305]

Additionally, before calculating market risk capital requirements under the models-based measure for market risk, the proposal would require a banking organization to receive prior approval from the primary Federal supervisor of its trading desk structure. As part of the model approval process described in section V.A.6.d.iv. of this **SUPPLEMENTARY INFORMATION**, the primary Federal supervisor would consider whether the level at which a banking organization is proposing to establish its trading desks is consistent with the level at which trading activities are actively managed and operated. The primary Federal supervisor would also consider whether the level at which the banking organization defines each trading

[304] The list of model-ineligible trading desks should include both those for which the banking organization has elected to calculate market risk capital requirements under the standardized non-default capital requirement as well as any trading desks that previously received approval to use the models-based non-default capital requirement but subsequently reported the PLA test metric in the red zone, as described in more detail in section V.A.8.e. of this **SUPPLEMENTARY INFORMATION**. A banking organization should maintain a list of all trading desks and make it available for the primary Federal supervisor for review upon request.

[305] A banking organization could also seek approval for a notional trading desk to be a model-eligible trading desk. Any such desk that is approved would be subject to backtesting and profit and loss attribution testing at the trading desk level.

desk is sufficiently granular to allow the banking organization and the primary Federal supervisor to assess the adequacy of the internal models used by the trading desk. For example, a banking organization's proposed trading desk structure may be considered insufficiently detailed if it reflects risk limits, internal controls, and ongoing management at one or more organizational levels above the routine management of the trading desk (for example, at the division-wide or entity level).

iv. *Trading desk policies*

The current capital rule requires a banking organization to have clearly defined trading and hedging strategies for its trading positions that are approved by senior management. In addition to applying these requirements at the trading desk level for trading desks that are not notional trading desks, the proposal would require policies and procedures for each trading desk to describe the strategy and risk management framework established for overseeing the risk-taking activities of the trading desk.

For each trading desk that is not a notional trading desk, the proposal would require a banking organization to have a clearly defined policy, approved by senior management, that describes the general strategy of the trading desk, the risk and position limits established for the trading desk, and the internal controls and governance structure established to oversee the risk-taking activities of the trading desk.[306] At a minimum, this would include the business strategy for each trading desk;[307] a clearly defined trading strategy that details the market risk covered positions in which the trading desk is permitted to trade, identifies the main types of market risk

[306] Under the proposal, these requirements would generally not apply to notional trading desks, except those with prior approval from the primary Federal supervisor to use the models-based non-default capital requirement.

[307] Under the proposal, the business strategy must include regular reports on the revenue, costs, and market risk capital requirements of the trading desk.

covered positions purchased and sold by the trading desk, and articulates the expected holding period of, and market risk associated with, each portfolio of market risk covered positions held by the trading desk; a clearly defined hedging strategy that articulates the acceptable level of market risk and details the instruments, techniques, and strategies that the trading desk will use to hedge the risks of the portfolio; and a brief description of the general strategy of the trading desk that addresses the economics of its business strategy, primary activities, and trading and hedging strategies.

Together, the proposed requirements are intended to help ensure that each trading desk engages only in those activities that are permitted by senior management and that any exceptions would be elevated to the appropriate organizational level. For example, the proposed requirement for a banking organization to document trading, hedging, and business strategies, including the internal controls established to manage the risks arising from the trading strategy, at the level of the organization responsible for implementing the general business strategy, is intended to help ensure appropriate monitoring of the risk limits set by senior management. Additionally, the proposed requirements would help to assist the primary Federal supervisor in monitoring compliance, particularly when assessing whether the trading activities conducted by a trading desk are consistent with the general strategy of the desk and the appropriateness of the limits established for the desk. For example, the requirement for a trading desk to list the types of instruments traded by the desk to hedge risks arising from its business strategy would help to assist the primary Federal supervisor in providing effective supervisory oversight of the trading desk's activities.

c. Operational requirements

The current capital rule requires a banking organization to satisfy certain operational requirements for active management of market risk covered positions, stress testing and internal assessment of capital adequacy, control and oversight, and documentation. The proposal would maintain these requirements and introduce revisions designed to complement changes under the proposed standardized and models-based measures for market risk (including the application of calculations at the trading desk level in the case of the models-based measure for market risk), and to support the proposed requirements described in section V.A.6.a. of this **SUPPLEMENTARY INFORMATION** that would help ensure a banking organization maintains robust risk management processes for identifying and appropriately managing its market risk covered positions.

A key assumption of the proposed market risk framework is that the financial reporting and internal risk management models[308] used by banking organizations provide an adequate basis for determining risk-based capital requirements for market risk covered positions.[309] To help ensure such adequacy, the proposal would reinforce a banking organization's prudent valuation practices by incorporating requirements that build on the agencies' overall framework for market risk management.[310] including In addition to facilitating the regulatory review process, the proposed revisions are intended to assist a banking organization's independent risk

[308] The proposal would define internal risk management model as a valuation model that the independent risk control unit within the banking organization uses to report market risks and risk-theoretical profits and losses to senior management. *See* § __.202 of the proposed rule.

[309] As a banking organization's financial reporting models are already subject to requirements to support the accuracy of the financial data produced (such as the requirements from the Sarbanes-Oxley Act of 2002, Pub. L. 107-204), such models would satisfy the proposed independent validation requirements described in more detail in section V.A.6.c.iii. of this **SUPPLEMENTARY INFORMATION**.

[310] The supervisory guidance set forth in the Board's Supervision and Regulation (SR) Letter 11-7 and OCC's Bulletin 2011-12, Supervisory Guidance on Model Risk Management includes prudent valuation practices for banking organizations subject to market risk capital requirements.

control unit and audit functions in providing appropriate review of and challenge to model risk management, thereby promoting effective model risk management.

The general risk management requirements described in this section would apply to all banking organizations subject to the proposed market risk capital framework.

i. *Active management of market risk covered positions*

The current capital rule requires a banking organization to have clearly defined policies and procedures for actively managing all positions subject to market risk capital requirements, including establishing and conducting daily monitoring of position limits.[311] These requirements are appropriate to support active management and monitoring under the current framework; the proposal adds enhancements to support active management and monitoring at the trading desk level.

Accordingly, the proposal would require a banking organization to have clearly defined policies and procedures that describe its internal controls, as well as its ongoing monitoring, management, and authorization procedures, including escalation procedures, for the active management of all market risk covered positions. At a minimum, these policies and procedures must identify key groups and personnel responsible for overseeing the activities of the banking organization's trading desks that are not notional trading desks.

Further, the proposal would specify a broader set of risk metrics for the monitoring requirement, which would apply at the trading desk level. Specifically, at a minimum, the

[311] The proposal would retain certain other requirements with modifications such as policies and procedures for active management of trading positions subject to the market risk requirements which include, but are not limited to, ongoing assessment of the ability to hedge market risk covered positions and portfolio risks. *See* 12 CFR 3.203(b)(1) (OCC); 12 CFR 217.203(b)(1) (Board); 12 CFR 324.203(b)(1) (FDIC).

proposal would require that a banking organization establish and conduct daily monitoring by trading desks of: (1) trading limits, limit usage, and remedial actions taken in response to limit breaches; (2) sensitivities to risk factors; (3) market risk covered positions and transaction volumes; and, as applicable, (4) VaR and expected shortfall; (5) backtesting and *p*-values[312] at the trading desk level and at the aggregate level for all model-eligible trading desks; and (6) comprehensive profit-and-loss attribution (each as described in sections V.A.8.d.-f. of this **SUPPLEMENTARY INFORMATION**). These risk metrics are the minimum elements necessary to support adequate daily monitoring of market risk covered positions at the trading desk level.

Consistent with the current capital rule, for a banking organization that has approval for at least one model-eligible trading desk, the proposal would require the banking organization's policies and procedures to describe the establishment and monitoring of backtesting and *p*-values at the trading desk level and at the aggregate level for all model-eligible trading desks. Daily information on the probability of observing a loss greater than that which occurred on any given day is a useful metric for a banking organization and supervisors to assess the quality of a banking organization's VaR model. For example, if a banking organization that used a historical simulation VaR model using the most recent 500 business days experienced a loss equal to the second worst day of the 500, it would assign a probability of 0.004 (2/500) to that loss based on its VaR model. Applying this process many times over a long interval provides information about the adequacy of the VaR model's ability to characterize the entire distribution of losses, including information on the size and number of backtesting exceptions. The requirement to

[312] Under the proposal, p-value would be defined as the probability, when using the VaR-based measure for purposes of backtesting, of observing a profit that is less than, or a loss that is greater than, the profit or loss that actually occurred on a given date.

create and retain this information at the entity-wide and trading desk level for model-eligible trading desks may help identify particular products or business lines for which a model does not adequately measure risk. The agencies view active management of model risk at the trading desk level as the best mechanism to address potential risks of reliance on models, such as the possible adverse consequences (including financial loss) of decisions based on models that are incorrect or misused.

ii. *Stress testing and internal assessment of capital adequacy*

The current capital rule requires a banking organization to have a rigorous process for assessing its overall capital adequacy in relation to its market risk. The process must take into account market concentration and liquidity risks under stressed market conditions as well as other risks arising from the banking organization's trading activities that may not be fully captured by a banking organization's internal models. At least quarterly, a banking organization must conduct stress tests at the entity-wide level of the market risk of its covered positions.

The proposal would enhance the current stress testing and internal assessment of capital adequacy requirements to reflect both the entity-wide and the trading-desk level elements for model-eligible positions within the proposed market risk capital requirement calculation. Specifically, the proposal would require a banking organization to stress-test the market risk of its market risk covered positions at both the entity-wide and trading-desk level for model-eligible positions on at least a quarterly basis. The proposal also would require that results of such stress testing be reviewed by senior management of the banking organization and reflected in the policies and limits set by the banking organization's management and the board of directors, or a committee thereof. In addition to concentration and liquidity risks, the proposal would require stress tests to take into account risks arising from a banking organization's trading activities that

may not be adequately captured in the standardized or the models-based measure for market risk, as applicable.

The proposed requirements are intended to help ensure that each trading desk only engages in those activities that are permitted by the banking organization's senior management, and that any weaknesses revealed by the stress testing results would be elevated to the appropriate management levels of the banking organization and addressed in a timely manner.

iii. *Control and oversight*

The current capital rule requires a banking organization to maintain a risk control unit that reports directly to senior management and is independent of the business trading units. The internal audit function is responsible for assessing, at least annually, the effectiveness of the controls supporting the banking organization's market risk measurement systems (including the activities of the business trading units and independent risk control unit), compliance with the banking organization's policies and procedures, and the calculation of the banking organization's market risk capital requirements. At least annually, the internal audit function must report its findings to the banking organization's board of directors (or a committee thereof).

The proposal largely would retain the control, oversight, and validation requirements in the capital rule, including the requirement that a banking organization maintain an independent risk control unit. The proposal would expand the required oversight responsibilities of the independent risk control unit to include the design and implementation of market risk management systems that are used for identifying, measuring, monitoring, and managing market risk. The proposed change is intended to complement other changes under the proposal, in particular allowing a banking organization to calculate risk-based requirements using standardized and models-based measures for market risk (for example, the inclusion of more

rigorous model eligibility tests that apply at the trading desk level), as well as the introduction of a capital add-on requirement for re-designations.

Further, the proposal would enhance the internal review and challenge responsibilities of a banking organization by requiring it to maintain conceptually sound systems and processes for identifying, measuring, monitoring, and managing market risk. In addition to the current requirements in the capital rule, the banking organization's internal audit function would have to assess at least annually the effectiveness of the designations and re-designations of market risk covered positions, and the calculation of the banking organization's measures for market risk, including the mapping of risk factors to liquidity horizons, as applicable. The proposal would enhance the validation requirements by requiring a banking organization to maintain independent validation of its valuation models and valuation adjustments or reserves.[313]

The agencies intend for these elements of the proposal to enhance the accountability of the banking organization's independent risk control unit and internal audit function and provide banking organizations with sufficient flexibility to incorporate the risk management processes required for regulatory capital purposes within those daily risk management processes used by the banking organization, such that managing market risk would be more consistent with the banking organization's overall risk profile and business model.

iv. *Documentation*

[313] A banking organization's financial reporting models provide an appropriate basis for determining risk-based capital requirements because such models are subject to requirements intended to enhance the accuracy of the financial data produced by the models, such as the requirements from the Sarbanes-Oxley Act of 2002. Pub. L. 107-204. Accordingly, banking organizations that rely on financial reporting models for purposes of calculating risk-based capital requirements would satisfy the proposed prudent valuation requirement.

Similar to the enhancements to policies and procedures described above, the proposal would enhance the documentation requirements in the capital rule to reflect the proposed market risk capital framework. Specifically, a banking organization would be required to document adequately all material aspects of its identification, management, and valuation of market risk covered positions, including internal risk transfers and any re-designations of positions between the market risk capital framework and the standardized approach or the expanded risk-based approach of the capital rule, as applicable. Consistent with the current capital rule, the proposal would require a banking organization to document adequately all material aspects of its internal models, and its control, oversight, validation, and review processes and results, as well as its internal assessment of capital adequacy. The proposal also would require a banking organization to document an explanation of the empirical techniques used to measure market risk. Further, a banking organization would be required to establish and document its trading desk structure, including identifying which trading desks are model-eligible, model-ineligible, used for internal risk transfers, or constitute notional trading desks, as well as document policies describing how each desk satisfies applicable requirements. These enhancements would help ensure that a banking organization appropriately treats all market risk covered positions under the capital rule.

d. Additional operational requirements for the models-based measure for market risk

Under the current capital rule, a banking organization must use an internal VaR-based model to calculate risk-based capital requirements for its covered positions. Under the proposal, only a banking organization that receives approval from its primary Federal supervisor to use the models-based non-default capital requirement for at least one model-eligible trading desk would be required to calculate market risk capital requirements under the models-based measure for market risk.

As a condition for use of the models-based non-default capital requirement, the proposal would require a trading desk to satisfy certain additional operational requirements, which are intended to help ensure that the banking organization has allocated sufficient resources for the desk to develop and rely on internal models that appropriately capture the market risk of its market risk covered positions. Specifically, the additional operational requirements, as well as the proposed profit and loss attribution and backtesting requirements described in sections V.A.8.e. and V.A.8.f. of this **SUPPLEMENTARY INFORMATION**, would help ensure that the internal models used to calculate a trading desk's risk-based capital requirements are sufficiently accurate and conservative relative to the models used to report actual profits and losses for financial reporting purposes (financial reporting models).[314] In this way, the additional operational requirements are intended to help ensure that the internal models of a trading desk properly measure all material risks of the market risk covered positions to which they are applied, and the sophistication of the internal models is commensurate with the complexity and extent of trading activity conducted by the trading desk.

As described above, the proposal would require eligibility for use of the models-based non-default capital requirement to be determined at the trading desk level, rather than for the entire banking organization. By aligning the level at which a banking organization may be permitted to model market risk capital requirements with the level at which the banking

[314] The proposed backtesting requirements are intended to measure the conservatism of the forecasting assumptions and valuation methods in the internal models used to determine risk-based capital requirements relative to those used in the financial reporting models. The proposed PLA testing requirement is intended to measure the accuracy of the potential future profits or losses estimated by the valuation models used for internal risk management purposes (internal risk management models) relative to those produced by the valuation models used for financial reporting. If a trading desk fails to satisfy either the backtesting requirements or, after the three-year transition period, the proposed PLA test requirements, it would no longer be able to calculate risk-based capital requirements using the models-based non-default capital requirement. In this way, the proposal would only allow trading desks for which the internal models are sufficiently conservative and accurate to use the models-based non-default capital requirement to calculate market risk capital requirements.

organization applies the controls used for financial reporting, the proposed requirements would enhance prudent capital management for banking organizations that use the models-based measure for market risk.

i. *Trading desk identification*

As part of the model approval process, the proposal would require a banking organization to identify all trading desks within its trading desk structure that it would designate as model-eligible and for which it would seek approval to use the models-based non-default capital requirement from the primary Federal supervisor.

Additionally, the proposal generally would prohibit a banking organization from seeking model approval for trading desks that hold securitization positions, correlation trading positions, or certain equity positions in investment funds (together "model-ineligible positions"), with one exception.[315] Given the operational difficulties of requiring a banking organization to bifurcate trading desks that hold an insignificant amount of model-ineligible positions pursuant to their trading or hedging strategy, the proposal would allow the banking organization to designate such desks as model-eligible. If the primary Federal supervisor were to approve the use of models-based non-default capital requirement for such desks, the proposal would require the banking organization to separately calculate market risk capital requirements for such model-ineligible positions held by a model-eligible trading desk under either the standardized non-default capital

[315] As described in section V.A.10.e.ii. of this **SUPPLEMENTARY INFORMATION**, an equity position in an investment fund could be a model-eligible position to the extent a banking organization is able to identify the underlying positions held by an investment fund on a quarterly basis.

requirement or the fallback capital requirement, and otherwise treat such positions as if they were not held by the desk.[316]

Question 118: The agencies seek comment on the benefits and drawbacks of requiring trading desks that hold an insignificant amount of model-ineligible positions to exclude from the models-based non-default capital requirement such positions and any related hedges, if applicable, in order for such desks to request approval to calculate market risk capital requirements under the models-based measure for market risk. Commenters are encouraged to provide data to support their responses.

ii. *Review, risk management, and validation*

To help ensure that the internal models appropriately capture a model-eligible trading desk's market risk exposure on an ongoing basis, the proposal would require a banking organization to satisfy additional model review and validation standards for model-eligible trading desks to use the models-based non-default risk capital requirement to calculate market risk capital requirements.

Specifically, a banking organization that uses the models-based measure for market risk would be required to (1) review its internal models at least annually and enhance them, as appropriate, to help ensure the models continue to satisfy the regulatory requirements and employ risk measurement methodologies that are the most appropriate for the banking organization's market risk covered positions, (2) integrate its internal models used for calculating the expected shortfall-based measure for market risk into its daily risk management process, and

[316] Specifically, the proposal would require a banking organization to exclude any insignificant amount of model-ineligible positions held by the model-eligible trading desk from the aggregate trading portfolio backtesting and the relevant desk-level backtesting and profit and loss attribution metric, unless the banking organization receives approval from its primary Federal supervisor to include such positions.

(3) independently[317] validate its internal models both initially and on an ongoing basis, and revalidate them when there is a material change to a model, a significant structural change in the market, or changes in the composition of the banking organization's market risk covered positions that might result in the internal models no longer adequately capturing the market risk of the market risk covered positions held by the model-eligible trading desk.

The proposal also would require a banking organization to establish a validation process that, at a minimum, includes an evaluation of the internal models' (1) conceptual soundness[318] and (2) adequacy in appropriately capturing and reflecting all material risks, including ensuring that the assumptions are appropriate and do not underestimate risks. Additionally, the proposal would require a banking organization to perform ongoing monitoring to review and verify processes, including by comparing the outputs of the internal models with relevant internal and external data sources or estimation techniques. The results of this comparison provide a valuable diagnostic tool for identifying potential weaknesses in a banking organization's models. As part of this comparison, a banking organization would be expected to investigate the source of differences between the model estimates and the relevant internal or external data or estimation techniques and whether the extent of the differences is appropriate.

[317] Either the validation process itself would have to be independent, or the validation process would have to be subjected to independent review of its adequacy and effectiveness. The independence of the banking organization's validation process would be characterized by separateness from and impartiality to the development, implementation, and operation of the banking organization's internal models, or otherwise by independent review of its adequacy and effectiveness, though the personnel conducting the validation would not necessarily be required to be external to the banking organization. As a banking organization's financial reporting models provide an appropriate basis for determining risk-based capital requirements because such models are subject to the requirements of the Sarbanes-Oxley Act of 2002, including external audit, banking organizations that rely on financial reporting models for purposes of calculating risk-based capital requirements would satisfy the proposed prudent valuation requirement.

[318] The process should include evaluation of empirical evidence supporting the methodologies used and evidence of a model's strengths and weaknesses.

In addition, the proposal would expand on the outcomes analysis requirements of the current capital rule by requiring validation to include not only any outcomes analysis that includes backtesting at the aggregated level of all model-eligible trading desks, but also backtesting and profit and loss attribution testing at the trading desk level for each model-eligible trading desk. The agencies recognize that financial markets and modeling technologies undergo continual development. Accordingly, a banking organization needs to continually ensure that its models are appropriate. The ongoing review, risk management, and validation requirements in the proposal are intended to help ensure that the internal models used accurately reflect the risks of market risk covered positions in evolving markets.

iii. *Documentation*

In addition to the general documentation requirements applicable to all banking organizations described in section V.A.6.c.iv. of this **SUPPLEMENTARY INFORMATION**, the proposal would require a banking organization that uses the models-based measure for market risk to document policies and procedures regarding (1) the determination of which risk factors are modellable and which are not modellable (risk factor quantitative and qualitative tests), including a description of how the banking organization maps real price observations to risk factors; (2) the alignment of the profits and losses reported by financial reporting models and the internal risk management models for purposes of the PLA test;[319] and (3) the assignment of risk factors to liquidity horizons, and any empirical correlations recognized with respect to risk factor classes.

[319] *See* section V.A.8.e. of this **SUPPLEMENTARY INFORMATION** for a more detailed description of the proposed PLA test.

As with the other enhanced operational requirements applicable to a banking organization that uses the models-based measure for market risk, these requirements are designed to help ensure the use of models-based non-default capital requirement only applies to those trading desks for which the banking organization is able to demonstrate that the internal models appropriately capture the market risk of the market risk covered positions held by the trading desk.

iv. *Model eligibility*

For a banking organization to use the models-based measure for market risk, the proposal would require the banking organization to receive the prior approval from its primary Federal supervisor for at least one trading desk to apply the models-based non-default capital requirement. Accordingly, the proposal would establish a framework for such approval.

I. Initial approval

Under the proposal, the approval for a banking organization to use internal models would be granted at the individual trading desk level.[320] For the primary Federal supervisor to approve an internal model, the proposal would require a banking organization to demonstrate that (1) the internal model properly measures all the material risks of the market risk covered positions to which it would be applied; (2) the internal model has been properly validated in accordance with the validation requirements; (3) the level of sophistication of the internal model or methodology is commensurate with the complexity and amount of the market risk covered positions to which

[320] The proposal would require a banking organization to receive approval from the primary Federal supervisor for both the expected shortfall internal model and the stressed expected shortfall methodology used by the trading desk. As the initial approval process for each would be the same, for simplicity, the term "internal models" used throughout this section is intended to refer to both.

it would be applied; and (4) the internal model or methodology meets all applicable requirements.

To receive approval as a model-eligible trading desk, the proposal would require a trading desk to satisfy one of the following criteria.[321] The banking organization could provide to the primary Federal supervisor at least 250 business days of backtesting and PLA test results for the trading desk. Alternatively, the banking organization could either (1) provide at least 125 business days of backtesting and PLA test results for the trading desk and demonstrate to the satisfaction of the primary Federal supervisor that the internal models would be able to satisfy the backtesting and PLA requirements on an ongoing basis; (2) demonstrate that the trading desk consists of market risk covered positions similar to those of another trading desk that has received approval from the primary Federal supervisor and such other trading desk has provided at least 250 business days of backtesting and PLA results, or (3) subject the trading desk to the PLA add-on until the desk provides at least 250 business days of backtesting and PLA test results that pass the trading-desk level backtesting requirements and produce a PLA metric in the green zone, as further described in sections V.A.8.e. and V.A.8.f. of this **SUPPLEMENTARY INFORMATION**, respectively. [322]

[321] As discussed in section V.A.8.e. of this **SUPPLEMENTARY INFORMATION**, to receive approval as a model-eligible desk during the three-year PLA test transition period, the proposal would require the banking organization to provide backtesting results for the trading desk and demonstrate to the satisfaction of the primary Federal supervisor that the internal models would be able to satisfy the backtesting requirements on an on-going basis. During the three-year transition period, a banking organization would not be required to submit PLA test results to its primary Federal supervisor in order to receive approval to use an internal model by the trading desk. The proposal would nevertheless require a banking organization to submit quarterly PLA test results to its primary Federal supervisor for monitoring purposes without automatic consequences for PLA test results.

[322] Under the proposal, there would be no automatic consequences for the PLA test results during the three-year transition period. Accordingly, during the transition period, a banking organization would not be able to seek model approval for trading desks with less than six months of backtesting results and that do not consist of market risk covered positions similar to those of another trading desk that has received approval as model-eligible.

The proposed criteria would hold trading desks to robust modeling requirements, while providing a banking organization sufficient flexibility to satisfy the standard over time and as the banking organization adapts its business structure. The agencies recognize that when initially requesting approval and in subsequent requests (for example, after a reorganization or upon entering into a new business), a banking organization may not always be able to provide a full year of backtesting and PLA test results for each trading desk, even if the internal models used by the desk provide an adequate basis for determining risk-based capital requirements. The proposed criteria would allow a banking organization to seek model approval for trading desks with at least a six-month track record demonstrating (using the PLA and backtesting results) the accuracy and conservatism of the internal models used by the desk as well as for trading desks that consist of similar market risk covered positions to another trading desk, for which the banking organization has provided at least 250 business days of trading desk level PLA test and backtesting results and has received approval from its primary Federal supervisor. The internal models used by trading desks that meet all the requirements to the satisfaction of the primary Federal supervisor except the PLA test and backtesting requirements would be subject to a PLA add-on until the desk produces one year of satisfactory PLA test and backtesting results in the green zone.[323] Thus, the trading desk would remain subject to an additional capital requirement until it provides sufficient evidence demonstrating the appropriateness of the internal models, at which time application of the PLA add-on would automatically cease.

[323] Based on the PLA test results, a banking organization would be required to allocate each model-eligible trading desk to a PLA test zone (green, amber, or red) as set out in Table 1 to § __.213 of the proposed rule.

II. Ongoing eligibility and changes to trading desk structure or internal models and stressed expected shortfall methodologies

The current capital rule requires a banking organization to promptly notify its primary Federal supervisor when (1) extending the use of a model that the primary Federal supervisor has approved to an additional business line or product type, (2) making any change to an internal model that would result in a material change in the banking organization's total risk-weighted asset amount for an exposure type, or (3) making any material change to its modelling assumptions.

The proposal would expand on these requirements to require a banking organization to receive prior approval from its primary Federal supervisor before implementing any change to its trading desk structure, internal models or methodologies (including any material change to its modelling assumptions) that would (1) in the case of trading desk structure, materially impact the market risk capital requirements for a portfolio of market risk covered positions; or (2) in the case of internal models or methodologies, result in a material change in the banking organization's expected shortfall-based measure for a trading desk, the internally modelled capital calculation, or the stressed expected shortfall calculation under the models-based non-default capital requirement. Additionally, the proposal would require a banking organization to promptly notify its primary Federal supervisor of any change, including non-material changes, to its internal models, modelling assumptions, or trading desk structure.[324] Whether a banking organization would be required to receive prior approval or promptly notify the primary Federal

[324] In such cases, a banking organization should notify the primary Federal supervisor in writing, in a manner acceptable to the supervisor (such as through e-mail, where appropriate).

supervisor before extending the use of an approved model to an additional business line or product type would depend on the nature of and impact of such a change.

The proposal also would require a model-eligible trading desk to perform and successfully pass quarterly backtesting and PLA testing requirements on an ongoing basis in order to maintain its approval status.[325] As banking organizations' quarterly review of backtesting and PLA test results would take place after a quarter is over, the proposal would permit a banking organization to rely on the models-based non-default capital requirement for model-eligible trading desks that previously received approval from the primary Federal supervisor during the 30 calendar day period following the end of a calendar quarter while updating its use of internal models based on the results of the quarterly review.

Even if a model-eligible trading desk were to satisfy the above requirements, a banking organization's primary Federal supervisor could determine that the desk no longer complies with any of the proposed applicable requirements for use of the models-based measure for market risk or that the banking organization's internal model for the trading desk or methodology fails to either comply with any of the applicable requirements or to accurately reflect the risks of the desk's market risk covered positions. In such cases, the primary Federal supervisor could (1) rescind the desk's model approval and require the desk to calculate market risk capital requirements under the standardized non-default capital requirement, or (2) subject the desk to a

[325] The desk-level backtesting and PLA testing requirements are described in sections V.A.8.e. and V.A.8.f. of this **SUPPLEMENTARY INFORMATION**, respectively. While the proposal would require a banking organization to submit quarterly PLA test results to its primary Federal supervisor during the three-year transition period, a banking organization's model-eligible trading desk would only be required to successfully pass quarterly backtesting requirements on an on-going basis to maintain its approval status during that three-year transition period.

PLA add-on capital requirement until it restores the desk's full approval, in the case of trading desk noncompliance.[326]

The agencies recognize that even if a banking organization's internal model for a trading desk satisfies the proposed backtesting, PLA testing, and operational requirements, the model may not appropriately capture the risk of the market risk covered positions held by the desk (for example, if the model develops specific shortcomings in risk identification, risk aggregation and representation, or validation). Thus, as an alternative to requiring a trading desk to use the standardized non-default capital requirement, the proposal would allow the primary Federal supervisor to subject the trading desk to the PLA add-on if the desk were to continue to satisfy all of the proposed backtesting, PLA testing, and operational requirements for use of the models-based non-default capital requirement. In this way, the proposal would help to ensure that the market risk capital requirements for the trading desk appropriately reflect the materiality of the shortcomings of the internal model, as the PLA add-on would apply until such time that the banking organization enhances the accuracy and conservatism of the trading desk's internal model to the satisfaction of its primary Federal supervisor.

Similarly, after approving a banking organization's stressed expected shortfall methodology to capture non-modellable risk factors for use by one or more trading desks, as described in section V.A.8.c. of this **SUPPLEMENTARY INFORMATION**, the primary Federal supervisor may subsequently determine that the methodology no longer complies with the operational requirements for use of the models-based measure for market risk or that the

[326] Under the proposal, there would be no automatic consequences for the PLA test results during the three-year transition period. Thus, the PLA add-on would not be an alternative if the primary Federal supervisor rescinds its approval during the three-year transition period.

methodology fails to accurately reflect the risks of the market risk covered positions held by the trading desk. In such cases, the proposal would allow the primary Federal supervisor to rescind its approval of the banking organization's methodology and require the affected trading desk(s) to calculate market risk capital requirements for the trading desk under the standardized non-default capital requirement. As the methodologies used to capture the market risk of non-modellable risk factors would not be subject to the proposed PLA testing requirements, which inform the calibration of the PLA add-on as described in section V.A.8.e. of this **SUPPLEMENTARY INFORMATION**, the PLA add-on would not be an alternative if the primary Federal supervisor rescinds its approval of such a methodology.

7. Standardized non-default capital requirement

Under the proposal, the standardized non-default risk capital requirement would comprise two components: (1) the sensitivities-based capital requirement, which captures non-default market risk based on the estimated losses produced by risk factor sensitivities under regulatorily determined stressed conditions, and (2) the residual risk add-on, which serves to produce a simple, conservative capital requirement for any other risks that are not already fully captured by sensitivities-based measure or the default risk capital requirement, such as gap risk, correlation risk, and behavioral risks such as prepayments.

a. Sensitivities-based method

Conceptually, the proposed sensitivities-based method is similar to a simple stress test in which a banking organization estimates the change in value of its market risk covered positions by applying standardized shocks to relevant market risk covered positions. The sensitivities-based method uses risk weights that represent the standardized shocks, with each prescribed risk

weight calibrated to a defined liquidity time horizon consistent with the expected shortfall measurement framework under stressed conditions. To help ensure consistency in the application of risk-based capital requirements across banking organizations, the proposal would establish the following process to determine the sensitivities-based capital requirement: (1) identify all relevant risk factors associated with a market risk covered position and allocate them to one of seven risk classes; (2) allocate such risk factors to a corresponding bucket within the appropriate risk classes; (3) calculate the sensitivity of a market risk covered position for each of the prescribed risk factors by applying regulatory prescribed risk weights to the net sensitivity of risk factors within each bucket; (4) aggregate the weighted sensitivities across risk factors within a corresponding bucket (bucket-level capital requirement); (5) aggregate the bucket-level risk positions for each risk class (risk class-level capital requirement); and (6) aggregate the risk class-level capital requirements for each risk class under each correlation scenario.

First, under the proposal, a banking organization would identify all relevant risk factors associated with its market risk covered positions and then assign such risk factors to one or more of seven risk classes. The seven prescribed risk classes, which are based on standard industry classifications, are interest rate risk, credit spread risk for non-securitization positions,[327] credit spread risk for correlation trading positions, credit spread risk for securitization positions that are not correlation trading positions, equity risk, commodity risk, and foreign exchange risk. The risk factors are separately defined to measure their individual impact on market risk covered positions' value from small changes in the value of a risk factor (the movement in price (delta) and, where applicable, the movement in volatility (vega)), and the additional change in the

[327] Under the proposal, a non-securitization position would be defined as a market risk covered position that is not a securitization position or a correlation trading position and that has a value that reacts primarily to changes in interest rates or credit spreads.

positions' value not captured by delta for each relevant risk factor (curvature) in stress).[328] For example, the price of a typical corporate bond fluctuates primarily due to changes in interest rates and issuer credit spreads. Therefore, a position in a corporate bond would be placed in two separate risk classes, one for interest rate risk and one for credit spread risk for non-securitization positions. [329]

Second, the proposal would require a banking organization to allocate all identified risk factors associated with a market risk covered positions to a corresponding bucket within the appropriate risk class. The proposal specifies buckets for each risk class, which represent common risk characteristics of a given risk class, in recognition that positions sharing such risk characteristics are highly correlated and therefore their values tend to change in substantially the same manner. Further, the proposed buckets correspond to common industry practice as large trading banking organizations often use bucketing structures similar to those set forth in the proposal. For example, for positions within the credit spread non-securitization risk class, a banking organization would group the corporate bond position and other positions with similar credit quality and issuers operating in the same sector together in one bucket. Further, the banking organization would apply the proposed risk factors to each position within that bucket based on credit spread curves and tenors of each position.

Third, a banking organization would calculate the sensitivity of a market risk covered position as prescribed under the proposal to each of the proposed risk factors for delta, vega, and

[328] Vega and curvature risk estimates are required for instruments with optionality or embedded prepayment option risk. For example, for an equity option, the proposed delta risk factor (equity spot price) would capture the impact on the option's value from changes in the equity spot price, the proposed vega risk factor (implied volatility) would capture the impact from changes in the implied volatility, and the proposed curvature risk factors (equity spot prices for the issuer) would capture other higher-order factors from nonlinear risks.

[329] Under the proposal, a banking organization would have to separately calculate the potential losses arising from the position's sensitivity to changes in interest rates and changes in the issuer's credit spread.

curvature sensitivities, as applicable. The proposed sensitivity calculations for delta, vega, and curvature risk factors are intended to estimate how much a market risk covered position's value might change as a result of a specified change in the risk factor, assuming all other relevant risk factors remain constant. For each risk factor, the banking organization would separately sum the resulting delta, vega, and curvature sensitivities for all market risk covered positions within the same bucket to produce a net sensitivity for each risk factor, which is the potential value impact on all of the banking organization's market risk covered positions in the bucket as a result of a uniform change in a risk factor.[330]

To capture how much the risk factor might change over a defined time horizon in stress conditions and how that would change the value of the market risk covered position, a banking organization would multiply the net delta sensitivity and the net vega sensitivity, respectively, for each risk factor within a bucket by the proposed standardized risk weight for the bucket. The proposed risk weights are intended to capture the amount that a risk factor would be expected to move during the liquidity horizon of the risk factor in stress conditions.[331] To capture curvature risk, a banking organization would be required to aggregate the incremental loss above the delta

[330] The proposed risk factors are intended to be sufficiently granular such that only long and short exposures without basis risk would be able to fully offset for purposes of calculating the net sensitivity to a risk factor. For example, by defining the risk factors for equity risk at the issuer level, the proposal would allow long and short equity risk exposures to the same issuer to fully offset for purposes of calculating the net equity risk factor sensitivity, but only partially offset (correlations than one) for exposures to different issuers with the same level of market capitalization, the same type of economy, and the same market sector (such as those within the same equity risk bucket).

[331] The prescribed risk weights represent the estimated change in the value of the market risk covered position as a result of a standardized shock to the risk factor based on characteristics of the position and historic price movements. Additionally, the proposed risk weights are intended to help ensure comparability with the proposed models-based non-default capital requirement described in section V.A.8. of this **SUPPLEMENTARY INFORMATION**, which generally would require banking organizations' internal models to follow a methodology similar to the one used to calibrate the risk weights when determining risk-based requirements for market risk covered positions under the standardized non-default capital requirement.

capital requirement from applying larger upward and downward shock scenarios to each risk factor.

Fourth, to account for the potential price impact of interactions between the risk factors, the proposal would prescribe aggregation formulas for calculating the total delta, vega, and curvature capital requirements within buckets and across buckets. Specifically, the risk-weighted sensitivities for delta, vega, and curvature risk, respectively, first would be summed for a risk factor, then aggregated across risk factors with common characteristics within their respective buckets to arrive at bucket-level risk positions. Lastly, these bucket-level risk positions would then be aggregated for each risk class using the prescribed aggregation formulas to produce the respective delta, vega, and curvature risk capital requirements.

The aggregation formulas prescribe offsetting and diversification benefits via correlation parameters. Under the proposal, the correlation parameters specified for each risk factor pair are intended to limit the risk-mitigating benefit of hedges and diversification, given that the hedge relationship between an underlying position and its hedge, as well as the relationship between different types of risk factors, could decrease or become less effective in a time of stress. Specifically, taking into account prescribed correlation parameters, a banking organization would need to calculate the aggregate requirements first within a bucket and then across buckets within one risk class to produce the risk-class-level capital requirement for delta, vega, and curvature risk. The resulting capital requirements for delta, vega, and curvature risk then would be summed across risk classes, respectively, with no recognition of any diversification benefits, because in stress diversification across different risk classes may become less effective.

To capture the potential for risk factor correlations to increase or decrease in periods of stress, the calculation of bucket-level capital requirements and risk class-level capital

requirements for each risk class would be calculated using three different correlation scenarios – assuming high, medium and low correlations between risk factor shocks. The banking organization would use this process to calculate the overall delta, vega, and curvature capital requirements for all risk classes and determine the overall capital requirement for each scenario. The prescribed correlation parameters in the intra-bucket and inter-bucket aggregation formulas would be those used in the medium correlation scenario. For the high and low correlation scenarios, a banking organization generally would increase and decrease the medium correlation parameters by 25 percent, respectively, to appropriately reflect the potential changes in the historical correlations during a crisis.[332]

Finally, to determine the overall capital requirements for each of the three correlation scenarios, the banking organization would sum the separately calculated delta, vega, and curvature capital requirements for all risk classes without recognition of any diversification benefits, given that delta, vega, and curvature sensitivities are intended to separately capture different risks. The sensitivities-based capital requirement would be the largest capital requirement resulting from the three correlation scenarios.

Question 119: The agencies seek comment on the sensitivities-based method for market risk. To what extent does the sensitivities-based method appropriately capture the risks of positions subject to the market risk capital requirement? What additional features, adjustments (such as to the treatment of diversification of risks), or alternative methodology could the

[332] As the degree to which a pair of variables are linearly related (the correlation) can only range from negative one to one, the proposal would cap the correlation parameters under the high scenario at no more than one (100 percent) and floor those under the low scenario at no less than negative one. For highly correlated positions, the low correlation scenario also would not always reduce the correlation parameter by 25 percent.

sensitivities-based method include to reflect these risks more appropriately and why? Commenters are encouraged to provide supporting data.

Question 120: The agencies seek comment on approaches to allow further recognition of diversification between risk classes that are not eligible for the models-based non-default capital requirement (such as securitizations) and risk classes that are eligible for the models-based non-default capital requirement within the sensitivities-based method of the standardized non-default capital requirement. What other areas in the sensitivities-based method should the agencies consider where it would be prudent to enhance the recognition of diversification, and why? Commenters should provide evidence to demonstrate the additional recognition of diversification is commensurate with the risk of the combined positions both in normal times and under stress.

i. *Risk factors*

The proposal would require a banking organization to map all relevant risk factors associated with a market risk covered position to a risk class and then allocate such risk factors to a corresponding bucket within the appropriate risk classes in order to calculate the capital requirements for delta, vega, and curvature. The proposed risk factors differ for each risk class to reflect the specific market risk variables relevant for each risk class (for example, no tenor is specified for the delta risk factor for equity risk as equities do not have a stated maturity, whereas the proposed tenors for credit spread delta risk reflect the common maturities of positions within those risk classes). The granular level at which the proposed risk factors would be defined is intended to promote consistency and comparability in regulatory capital requirements across banking organizations and to help ensure the appropriate capitalization of market risk covered positions.

For risk classes that include specific tenors or maturities as risk factors (for example, delta risk factors for interest rate risk), the proposal would require a banking organization to assign the risk factors to the proposed tenors through linear interpolation or a method that is consistent with the pricing functions used by the internal risk management models. The banking organization's internal risk management models, which are used by risk control units and reviewed by auditors and regulators, would provide an appropriate basis for determining regulatory capital requirements, without imposing the operational burden of the time-consuming methods used by the financial reporting models. Additionally, relying on banking organizations' internal risk management models, rather than the financial reporting models, to identify the relevant risk factors would help ensure that a control function that is independent of business-line management would determine the regulatory capital requirement for market risk.

I. Interest rate risk

Under the proposal, the delta risk factors for interest rate risk would be separately defined for each currency along two dimensions: tenor and interest rate curve. To value market risk covered positions with interest rate risk, the proposal would require a banking organization to construct and use interest rate curves for the each currency in which interest rate-sensitive market risk covered positions are denominated. By defining each interest rate curve as a distinct risk factor, the proposed delta risk factors for interest rate risk would require banking organizations to reflect the basis risk between different interest rate curves (for example, interest rate curves from the overnight index swap curve (OIS) or an alternative reference rate curve).

As interest rate curves incorporate nominal inflation, an additional delta risk factor would be required for instruments with cash flows that are functionally dependent on a measure of inflation (such as TIPS) to appropriately account for inflation risk. Furthermore, the proposal

would require an additional delta risk factor for instruments with cash flows in different currencies to appropriately reflect the cross-currency basis risk of each currency over USD or EUR.[333] Under the proposal, a banking organization would not recognize the term structure for inflation risk and cross-currency basis risk for each currency. A banking organization would be required to consider the inflation risk factor and the cross-currency basis risk factor, if applicable, in addition to the sensitivity for the other delta risk factors for the interest rate risk (currency, tenor and interest rate curve) of the market risk covered position. Accordingly, a banking organization would be required to allocate the sensitivities for inflation risk and cross-currency basis risk to the interest rate bucket for each currency.

The vega risk factors for interest rate risk would be the implied volatilities of options referencing the interest rate of the underlying instrument. The implied volatilities of inflation rate risk-sensitive options and cross-currency basis risk-sensitive options would be defined along the maturity of the option, whereas the implied volatilities of interest-rate risk-sensitive options would be defined along two dimensions: the maturity of the option and the residual maturity of the underlying instrument at the expiration date of the option. For example, a banking organization would calculate the vega sensitivity of a European interest rate swaption that expires in 12 months referring to a one-year swap based on the maturity of the option (12 months) as well as the residual maturity of the underlying instrument (the swap's maturity of 12 months).

[333] Cross-currency basis is a basis added to a yield curve in order to evaluate a swap for which the two legs are paid in two different currencies. Market participants use cross-currency basis to price cross currency interest rate swaps paying a fixed or a floating leg in one currency, receiving a fixed or a floating leg in a second currency, and including an exchange of the notional amount in the two currencies at the start date and at the end date of the swap.

The proposal would define the curvature risk factors for interest rate risk along one dimension: the interest rate curve of each currency (no term structure would be considered).

II. Credit spread risk

The proposal would separately define the credit spread risk factors for non-securitization positions,[334] securitization positions that are not correlation trading positions (securitization positions non-CTP), and correlation trading positions. The proposal would define the delta risk factors for credit spread risk for non-securitization positions along two dimensions: the credit spread curve of a relevant issuer and the tenor of the position. The delta risk factors for credit spread risk for securitization positions non-CTP would be defined also along two dimensions: the credit spread curve of the tranche and the tenor of the tranche. Lastly, the delta risk factors for credit spread risk for correlation trading positions would be defined along two dimensions: the credit spread curve of the underlying name and the tenor of the underlying name. Under the proposal, the vega risk factors for credit spread risk are the implied volatilities of options referencing the credit spreads,[335] defined along one dimension: the option's maturity.

The proposal would define the curvature risk factors for credit spread risk for non-securitization positions along one dimension: the credit spread curve of the issuer. The curvature risk factors for credit spread risk for securitization positions non-CTP would be defined along the relevant bond and CDS credit spread curve of the tranche, and for correlation trading positions

[334] Under the proposal, a non-securitization position would be defined as a market risk covered position that is not a securitization position or a correlation trading position and that has a value that reacts primarily to changes in interest rates or credit spreads.

[335] When calculating the sensitivity for securitization positions non-CTP, a banking organization would calculate the sensitivities for credit spread risk based on the embedded subordination of the position, such as the spread of the tranche. For correlation trading positions, the credit spread risk sensitivity would be based on the underlying names in the securitization position, or nth-to-default position.

along the bond and CDS credit spread curve of each underlying name. The agencies recognize that requiring a banking organization to estimate the bond-CDS basis for each issuer would impose a significant operational burden with limited benefit in terms of risk capture. To simplify the sensitivities-based method calculation for curvature risk in these cases, the proposal would require banking organizations to ignore any bond-CDS basis that may exist between the bond and CDS spreads and to calculate the credit spread risk sensitivity as a single spread curve across the relevant tenor points.

III. Equity risk

Similar to interest rate risk, the delta risk factors for equity risk would be separately defined for each issuer as the spot prices of each equity (for example, for cash equity positions) and an equity repo rate (for example, for term repo-style transactions), as appropriate. Under the proposal, the vega risk factors for equity risk would be the implied volatilities of options referencing the equity spot price, defined along the maturity of the option. The curvature risk factors for equity risk would be the equity spot price. There are no curvature risk factors for equity repo rates.

IV. Commodity risk

Similar to interest rate and equity risk, the delta risk factors for commodity risk would be separately defined for each commodity type[336] along two dimensions: the contracted delivery location of the commodity and the remaining maturity of the contract. A banking organization could only treat separate contracts as having the same delivery location if both contracts allow

[336] Under the proposal, any two commodities would be considered distinct if the underlying commodity to be delivered would cause the market to treat the two contracts as distinct (for example, West Texas Intermediate oil and Brent oil).

delivery in all of the same locations.[337] Additionally, the proposal would follow the established pricing convention for commodities and require a banking organization to use the remaining maturity of the contract to measure the delta sensitivity for instruments with commodity risk. As the price impact of risk factor changes varies significantly between different types of commodities, the proposal would define the delta risk factors for each commodity type to limit offsetting across commodity types, as such offsetting could drastically understate the potential losses arising from those positions.

To measure the price sensitivity of a commodity market risk covered position, the proposal would require a banking organization to use either the spot price or the forward price, depending on which risk factor is used by the internal risk management models to price commodity transactions. For example, if the internal risk management model typically values electricity contracts based on forward prices (rather than spot prices), the proposal would require the banking organization to compute the delta capital requirement using the current prices for futures and forward contracts. Similar to equity risk, the proposal would define the commodity vega risk factors based on the implied volatilities of commodity-sensitive options as defined along the maturity of the option and the curvature risk factors based on the constructed curve per commodity spot price.

[337] For example, a contract that can be delivered in four ports may have less sensitivity to each location defined risk factor than a contract that can only be delivered in three of those ports. If a banking organization has entered into a contract to deliver 1000 barrels of oil in port A, B, C or D, and a hedge contract to receive 1000 barrels of oil on the same date in port A, B or C, if on delivery day ports A, B and C are closed, the banking organization is exposed to commodity risk in that it must deliver 1000 barrels of oil to port D without receiving 1000 barrels. As a result, the two contracts would have different sensitivity to location defined risk factors.

V. Foreign exchange risk

The proposal would define the delta risk factors for foreign exchange risk as the exchange rate between the currency in which the market risk covered position is denominated and the reporting currency of the banking organization. For market risk covered positions that reference two currencies other than the reporting currency, the banking organization generally would be required to calculate the delta risk factors for foreign exchange risk using the exchange rates between each of the non-reporting currencies and the reporting currency. For example, for a foreign exchange forward referencing EUR/JPY, the relevant risk factors for a USD-reporting banking organization would be the exchange rates for USD/EUR and USD/JPY.

To reduce operational burden, the proposal would allow a banking organization to calculate delta risk factors for foreign exchange risk relative to a base currency instead of the reporting currency, if approved by the primary Federal supervisor.[338] In this case, after designating a single currency as the base currency, a banking organization would calculate the foreign exchange risk for all currencies relative to the base currency, and then convert the foreign exchange risk into the reporting currency using the spot exchange rate (reporting currency/base currency). For example, if a USD-reporting banking organization receives approval to calculate foreign exchange risk using JPY as the base currency, for a foreign exchange forward

[338] A banking organization would have to demonstrate to its primary Federal supervisor that calculating foreign exchange risk relative to its base currency provides an appropriate risk representation of the banking organization's market risk covered positions and that the foreign exchange risk between the base currency and the reporting currency is addressed. In general, the base currency would be the functional currency in which the banking organization generates or expends cash. For example, a multinational banking organization headquartered in the United States that primarily transacts in and uses EUR to value its assets and liabilities for internal accounting and risk management purposes could use EUR as its base currency. As its consolidated financial statement must be reported in USD, this multinational banking organization would need to translate the value of those assets and liabilities from the base currency (EUR) to the reporting currency (USD). Because exchange rates fluctuate continuously, this conversion could increase or decrease the value of those assets and liabilities and thus generate foreign exchange gains (or losses) from non-operating activity.

referencing EUR/JPY, the banking organization would calculate separate deltas for the EUR/JPY exchange rate risk and USD/JPY foreign exchange translation risk and then translate the resulting capital requirement to USD at the USD/JPY spot exchange rate.

The proposal would define the vega risk factors for foreign exchange risk as the implied volatility of options that reference exchange rates between currency pairs along one dimension: the maturity of the option. For curvature, the foreign exchange risk factors would be all exchange rates between the currency in which a market risk covered position is denominated and the reporting currency (or the base currency, if approved by the primary Federal supervisor).

ii. *Risk factor sensitivities*

A fundamental element of the sensitivities-based method is the risk factor sensitivity calculation, which estimates the change in the value of a market risk covered position as a result of a regulatorily prescribed change in the value of a risk factor, assuming all other risk factors are held constant. To help ensure consistency and conservatism across banking organizations, the proposal would set requirements on the valuation models, currency, inputs, and sensitivity calculation, as applicable, that a banking organization could use to measure the risk factor sensitivity of a market risk covered position.

The proposal would require a banking organization to calculate risk factor sensitivities using either the valuation methods used in its financial reporting models or internal risk management models.[339] The agencies recognize that a banking organization can calculate risk

[339] The proposal would require banking organizations to have a prudent valuation process, including the independent validations of the valuation models used in the standardized non-default capital requirement. The financial reporting models provide an appropriate basis for determining risk-based capital requirements because such models are subject to requirements intended to enhance the accuracy of the financial data produced by the models, such as the requirements from the Sarbanes-Oxley Act of 2002. Pub. L. 107-204. Accordingly, banking organizations that rely

sensitivities for delta and vega or estimate curvature using valuation methods and systems from equivalent internal risk management models. Accordingly, the proposal would also permit a banking organization to use the valuation methods used in its internal risk management models to calculate delta and vega sensitivities and curvature scenarios.

For consistency and comparability in risk-based capital requirements across banking organizations, the proposal would require each banking organization to calculate all risk factor sensitivities in the reporting currency of the banking organization, except for the foreign exchange risk class where, with prior approval of the primary Federal supervisor, the banking organization may calculate the sensitivities relative to a base currency instead of the reporting currency. To appropriately capture a banking organization's exposure to market risk, the proposal would require banking organizations to use fair values that exclude CVA in the calculation of risk factor sensitivities.

Question 121: The agencies seek comment on the advantages and disadvantages of allowing a banking organization to use the risk factor sensitivities from the previous day in limited circumstances when a banking organization is unable to calculate such sensitivity for the day, and why?

I. Delta

Under the proposal, a banking organization would calculate the delta capital requirement using the steps previously outlined in section V.A.7.a. of this **SUPPLEMENTARY INFORMATION** for its market risk covered positions except those whose value exclusively

on financial reporting models for purposes of calculating risk factor sensitivities would satisfy the proposed prudent valuation requirement.

depends on risk factors not captured by any of the proposed risk classes (exotic exposures).[340] The proposal would require a banking organization to separately calculate the market risk capital requirements for such positions under the residual risk add-on as described in section V.A.7.b. of this **SUPPLEMENTARY INFORMATION**.

For purposes of calculating the delta capital requirement, the proposal would require a banking organization to calculate the delta sensitivity of a position using the sensitivity definitions provided in the proposal for each risk factor. Based on the proposed sensitivity definitions, the delta sensitivity would reflect the change in the value of a market risk covered position resulting from a small specified shift of one basis point or one percent change to a risk factor, assuming all other relevant risk factors are held at the current level, divided by the same specified shift to the risk factor.

For the equity spot price, commodity, and foreign exchange risk factors, the delta sensitivity would equal the change in value of a market risk covered position due to a one percentage point increase in the risk factor divided by one percentage point. For the interest rate, credit spread, and equity repo rate risk factors, the delta sensitivity would equal the change in value of a market risk covered position due to a one basis point increase in the risk factor divided by one basis point. In the case of credit spread risk for securitizations non-CTP, a banking organization would calculate the delta sensitivity for the positions with respect to the credit spread of the tranche rather than the credit spread of the underlying positions. For credit spread risk for correlation trading positions, the delta sensitivity for credit spread risk would be

[340] Examples of exotic exposures not captured by any of the proposed risk classes include but are not limited to longevity, weather, and natural disasters derivatives.

computed using a one basis point shift in the credit spreads of the individual underlying names of the securitization position or nth-to-default position.

When calculating the delta sensitivity for positions with optionality, a banking organization would apply either the sticky strike rule,[341] the sticky delta rule,[342] or, with the prior approval from its primary Federal supervisor, another assumption that is consistent with the banking organization's internal models. Each of these methods, or various combinations of such methods, is intended to measure appropriately the sensitivity of a risk factor within any of the risk classes.

II. Vega

For market risk covered positions with optionality, the vega sensitivity to a risk factor would equal the vega of an option, which represents approximately the change in the option's value as the result of a one percentage point increase in the value of the option's volatility, multiplied by the volatility of the option. To measure the vega sensitivity of a market risk covered position, the proposal would require a banking organization to use either the at-the-money volatility of an option or the implied volatility of an option, depending on which is used by the financial reporting models or the internal risk management models to determine the intrinsic value of volatility in the price of the option.

The vega capital requirement would only apply to options or instruments with embedded optionality, including instruments with material prepayment risk. For purposes of calculating the

[341] Under the sticky strike rule, a banking organization would assume that the implied volatility for an option remains unaffected by changes in the underlying asset price for any given strike price.

[342] Under the sticky delta rule, the banking organization would assume that the implied volatility for a particular maturity depends only on the ratio of the price of the underlying asset to the strike price (sometimes called the moneyness of the option).

vega capital requirement, a banking organization would follow the steps previously outlined for purposes of calculating the delta capital requirements and use the same buckets for each risk class as those specified for the delta capital calculation and use the corresponding vega risk weights.

Callable and puttable bonds that are priced based on the yield to maturity of the instrument would not be subject to the vega capital requirement. The agencies recognize that in practice a banking organization may not be able to calculate vega risk for callable and puttable bonds, as implied volatility for credit spread typically is not used as an input for the pricing of such instruments, and thus implied volatility is not captured by the internal models. Therefore, the proposal would allow banking organizations to exclude from the vega capital requirement callable and puttable bonds that are priced based on the yield to maturity of the instrument, as the delta capital requirement in these cases would be sufficiently conservative to capture the potential vega risk arising from such exposures.

The proposal would require a banking organization to assign the sensitivity to implied volatility based on the option maturity. As the proposal defines the vega risk factors for interest rate risk along two dimensions: the maturity (or expiry) of the option and the maturity of the option's underlying instrument – a banking organization would be required to group options within the interest rate risk class along both of these two dimensions. To help ensure appropriately conservative capital requirements, the proposal would require a banking organization to (1) assign instruments with optionality that either do not have a stated maturity (for example, cancelable swaps) or that have an undefined maturity to the longest prescribed maturity tenor for vega, and (2) subject such instruments to the residual risk add-on, as described in section V.A.7.b. of this **SUPPLEMENTARY INFORMATION**. Similarly, for options that

do not have a stated strike price or that have multiple strike prices, or that are barrier options, the proposal would require a banking organization to apply the maturity and strike price used in either its financial reporting models or internal risk management models to value the position and apply a residual risk add-on.[343] The agencies are proposing these constraints as a simple and conservative approach for market risk covered positions that are difficult to value in practice.

Question 122: The agencies solicit comment on the appropriateness of relying on a banking organization's internal pricing methods for determining the maturity and strike price of positions without a stated strike price or with multiple strike prices. What, if any, alternative approaches (such as using the average maturity of options with multiple exercise dates) would better serve to promote consistency and comparability in risk-based capital requirements across banking organizations? What are the benefits and drawbacks of such alternatives compared to the proposed reliance on the internal pricing models of banking organizations?

III. Curvature

The proposed curvature capital requirements are intended to capture the price risks inherent in instruments with optionality that are not already captured by delta (for example, the change in the value of an option that exceeds what can be explained by the delta of the option alone). Under the proposal, only options or positions that contain embedded optionality, including positions with material prepayment risk, would be subject to the curvature capital requirement because they present material price risks not captured by delta. While linear instruments may also exhibit a certain degree of non-linearity, it is not always material for such instruments. Therefore, to allow for a more accurate representation of risk, the proposal would

[343] Tranches of correlation trading positions that do not have an implied volatility would not be subject to the vega risk capital requirement. Such instruments would not be exempt from delta and curvature capital requirements.

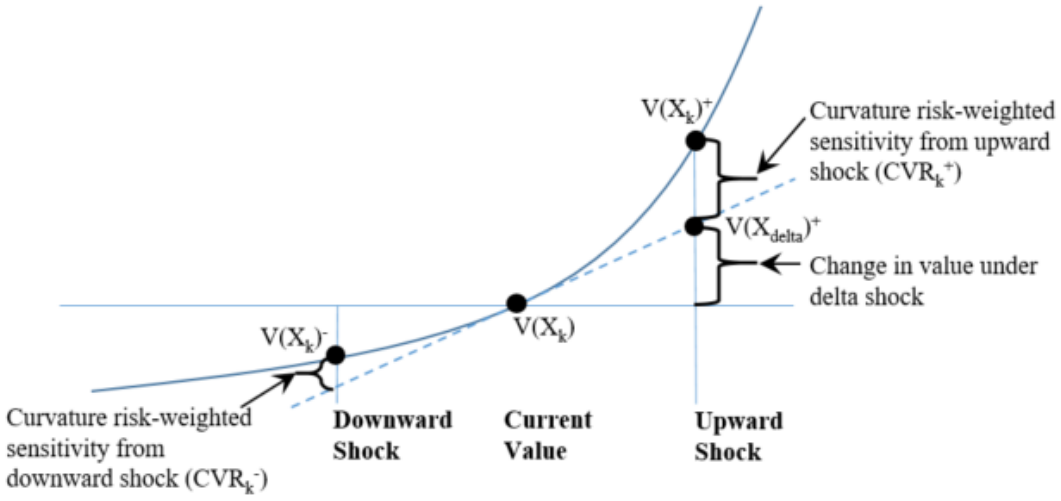
permit a banking organization, at its discretion, to make an election for a trading desk[344] to include instruments without optionality in the curvature capital requirement, provided that the trading desk consistently includes such positions through time.

The proposal would require a banking organization to use the same buckets applied in the delta capital calculation to calculate curvature capital requirements. To calculate the risk-weighted sensitivity for each curvature risk factor within a bucket, the proposal would require a banking organization to fully revalue all of its market risk covered positions with optionality as well as any market risk covered position that a banking organization has elected to include in the calculation of its curvature capital requirement, as applicable, after applying an upward shock and a downward shock to the current value of the market risk covered position. To avoid double counting, the banking organization would calculate the incremental loss in excess of that already captured by the delta capital requirement for all market risk covered positions subject to the curvature capital requirements. The larger incremental loss resulting from the upward and the downward shock would be the curvature risk-weighted sensitivity.[345] The below graphic provides a conceptual illustration of the calculation of the curvature risk-weighted sensitivity based on the upward and the downward shock scenarios.

[344] For a banking organization that has established a trading desk structure with a single trading desk that uses the standardized measure to calculate market risk capital requirements, the proposal would allow such banking organization to make such an election for the entire organization rather than on a trading desk by trading desk basis. If such an election is made at the enterprise-wide level, the proposal would require the banking organization to consistently include positions without optionality within the curvature calculation.

[345] To promote consistency and comparability in regulatory capital requirements across banking organizations, the proposal would require that in cases where the incremental loss resulting from the upward and the downward shock is the same, the banking organization must select the scenario in which the sum of the capital requirements of the curvature risk factors is greater.

Graphic 1: Calculation of curvature risk-weighted sensitivity in upward and downward shock scenarios



In calculating the curvature risk-weighted sensitivity for the interest rate, credit spread, and commodity risk classes, a banking organization would apply the upward and downward shocks assuming a relative shift of all tenors for each curve based on the highest prescribed delta risk weight for the applicable bucket.[346, 347] The proposal would require a banking organization to apply the highest risk weight for each bucket to all tenor points along the curve to help ensure the curvature capital requirements reflect incremental losses from curvature and not those due to changes in the shape or slope of the curve. The proposal would require a banking organization to perform this calculation at the bucket level (not the risk class level). To the extent that applying

[346] As described in section V.A.7.a.iii.I. of this **SUPPLEMENTARY INFORMATION**, the proposed bucket structure used to group the delta risk factors for interest rate risk (and the corresponding risk weight for each bucket) is solely based on the tenor of market risk covered position. For purposes of calculating the curvature sensitivity for interest rate risk, the proposal would require a banking organization to disregard the bucketing structure and apply the highest prescribed delta risk weight (the 1.7 percent risk weight applicable to the 0.25-year tenor, or 1.7 percent divided by √2 if the interest rate curve references a currency that is eligible for a reduced risk weight) to all tenors simultaneously for each yield curve.

[347] As the curvature capital requirements would capture an option's change in the value above that captured by delta, a banking organization would calculate the curvature sensitivity to credit spread risk for securitization positions non-CTP and correlation trading positions using the spread of the tranche and the spread of the underlying names, respectively.

the downward shocks results in negative credit spreads, the proposal would allow a banking organization to floor credit spreads at zero, which is the natural floor for credit spreads given that negative CDS spreads are not meaningful.

For the foreign exchange and equity risk classes, the upward and downward shocks represent a relative shift of the foreign exchange spot prices or equity spot prices, respectively, equal to the delta risk weight prescribed for the risk factor. The agencies recognize that the conversion of other currencies into either the reporting currency or base currency, if applicable, would capture exchange rate fluctuations, and thus overstate the sensitivity for foreign exchange risk. Thus, for options that do not reference the reporting or base currency of the banking organization as an underlying exposure, the proposal would allow the banking organization to divide the net curvature risk positions by a scalar of 1.5, provided that the banking organization consistently applies the scalar to all market risk covered positions with foreign exchange risk through time.

To aggregate the bucket-level capital requirements and risk class-level capital requirements for curvature, a banking organization would bifurcate positions into those with positive curvature and those with negative curvature. For the purposes of calculating risk-based capital requirements for curvature, positions with negative curvature represent a capital benefit – as they reduce rather than increase risk, and thus lower risk-based capital requirements. For example, the downward shock as depicted in the above graphic produces less of an estimated price reduction under the curvature scenario than under the linear delta shock (negative curvature). To limit the effect of negative curvature capital requirements on the overall capital required under the sensitivities-based method, both the intra-bucket and inter-bucket aggregation formulas would floor the curvature capital requirement at zero. Additionally, both formulas

include a variable[348] to allow a banking organization to recognize the risk-reducing benefits of market risk covered positions with negative curvature in offsetting those with positive curvature, while limiting the reduction in the overall capital resulting from the aggregation of market risk covered positions with negative curvature.

Question 123: For consistency with flooring credit spreads at zero when the downward shock for curvature results in negative credit spreads, the agencies seek comment on whether the agencies should allow banking organizations to cap the level of shock (for example, $RW_K^{Curvature}$) at the difference between the current level of the credit spread risk curvature risk factor and zero when calculating the curvature risk. What would be advantages and disadvantages of this cap and why?

Question 124: The agencies solicit comment on the appropriateness of calculating the curvature risk-weighted sensitivity for the commodity risk class using the upward and downward shocks assuming a parallel shift of all tenors for each curve. Would a relative shift be more appropriate for calculating risk-weighted sensitivity for the commodity risk class and why?

iii. *Buckets and corresponding risk weights*

After determining the net sensitivity for each of the proposed risk factors within each risk class, a banking organization would calculate the risk-weighted sensitivity by multiplying the net sensitivity for each risk factor by the risk weight prescribed for the applicable bucket.[349] The proposed buckets and corresponding risk weights are largely consistent with the framework

[348] Specifically, this refers to the psi variable (Ψ) within the intra and inter-bucket aggregation formulas in §_.206(d)(2) and §_.206(d)(3) of the proposed rule.

[349] Vega and curvature capital requirements would use the same risk buckets as prescribed for delta. *See* §_.209(c) and (d) of the proposed rule. Table 11 to §_.209 of the proposed rule provides the proposed vega risk weights for each risk class, which incorporate the liquidity horizons for each risk class (risk of market illiquidity) from the Basel standards.

issued by the Basel Committee. However, to reflect the potential systematic risks that positions may experience in a time of stress and avoid reliance on external ratings in accordance with U.S. law, the agencies are proposing to use alternative criteria to define the bucketing structure for risk factors related to credit spread risk and to clarify the application of the credit spread buckets for certain U.S. products, as described in section V.A.7.a.iii.II. of this **SUPPLEMENTARY INFORMATION**.[350] Additionally, to appropriately reflect a jurisdiction's stage of economic development, the agencies are proposing to use objective market economy criteria to define the bucketing structure for risk factors related to equity risk, as described in section V.A.7.a.iii.III. of this **SUPPLEMENTARY INFORMATION**. Furthermore, the proposal would include electricity in the same bucket as gaseous combustibles in view of the inherent relationship between the price of electricity and natural gas and to simplify the proposal, as described in section V.A.7.a.iii.IV. of this **SUPPLEMENTARY INFORMATION**.

The proposed buckets and associated risk weights are intended to appropriately capture the specific, idiosyncratic risks of market risk covered positions (for example, negative betas or variations in capital structure). These components of the proposal also are largely consistent with the Basel standards and would promote consistency and comparability in market risk capital requirements among banking organizations domestically and across jurisdictions. The sections that follow describe the proposed buckets and associated risk weights for each risk factor.

I. Interest rate risk

Table 1 to §__.209 of the proposed rule sets forth the ten proposed buckets for the interest rate risk factors of market risk covered positions and the corresponding risk weight

[350] *See* 15 U.S.C. 78o-7 note.

applicable to each bucket.[351] The proposal would require a banking organization to use separate buckets for each currency, for each of ten proposed tenors to capture most commonly traded instruments across market risk covered positions held by a banking organization and align with bucketing structures used by trading firms.

By delineating interest rate risk factors based on currency[352] and tenor, the granularity of the proposed buckets is intended to appropriately balance the risk sensitivity of the proposed framework with providing consistency in risk-based requirements across banking organizations by assigning similar risk weights to similar kinds of positions.

Factors such as the stage of the economic cycle and the role of exchange rates can cause interest rate risk to diverge significantly across different currencies, particularly in stress periods. Accordingly, the proposal would require banking organizations to establish separate interest rate buckets for each currency.

OTC interest rate derivatives for liquid currencies have significant trading activity relative to non-liquid currencies, which means a banking organization faces a shorter liquidity horizon to offload exposure to interest rate risk factors in liquid currencies. Therefore, the proposal would allow a banking organization to divide the proposed risk weight applicable to each interest rate risk factor bucket by the square root of two if the interest rate risk factor relates to a liquid currency listed in §__.209(b)(1)(iv) of the proposed rule or any other currencies specified by the primary Federal supervisor. This approach would allow a banking organization to apply a lower risk weight for purposes of the delta, vega, and curvature capital requirements,

[351] The buckets reflect that interest rates at a longer tenor have less uncertainty and thus lower volatility than interest rates at a shorter tenor that are more receptive to changes in interest rate risk.

[352] As noted in section V.A.7.a.i.I. of this **SUPPLEMENTARY INFORMATION**, under the proposal, each currency would represent a separate risk factor for interest rate risk.

as applicable, for interest rate risk factors for the listed liquid currencies and any other currencies specified by the primary Federal supervisor.

II. Credit spread risk

Tables 3, 5, and 7 to §__.209 of the proposed rule set forth the buckets and corresponding risk weights for the credit spread risk factors of non-securitization positions, correlation trading positions, and securitization positions non-CTP, respectively. Under the proposal, a banking organization would group the credit spread risk factors for non-securitization positions, correlation trading positions, and securitization positions non-CTP into one of twenty, sixteen, or twenty-five proposed buckets, respectively, based on market sector and credit quality.

The credit quality of a market risk covered position in a given sector is inversely related to its credit spread. Accordingly, the buckets for credit spread risk consider the credit quality of a given market risk covered position. More specifically, the proposal would generally use the same approach to delta credit spread buckets and corresponding risk weights provided in the Basel standards for non-securitization positions, correlation trading positions, and securitization positions non-CTP, except that the proposal would define the buckets using alternative criteria to capture the creditworthiness of the obligor. The delta credit spread buckets in the Basel standards are defined based on the applicable credit ratings of the reference entity. Section 939A of the Dodd-Frank Act required the agencies to remove references to credit ratings in Federal regulations.[353] Therefore, the agencies are proposing an approach that would allow for a level of risk sensitivity in the delta credit spread buckets and corresponding risk weights that would be generally consistent with the Basel standards and not rely on external credit ratings. Specifically,

[353] 15 U.S.C. 78o-7 note.

the proposal would categorize the delta credit spread buckets and corresponding risk weights for non-securitizations, correlation trading positions, and securitization positions non-CTP based on the definitions for investment grade as defined in the agencies' existing capital rule[354] and the definitions of speculative grade[355] and sub-speculative grade[356] as defined in the proposal.

The credit spread risks of industries within the proposed sectors react similarly to the same market or economic events by principle of shared economic risk factors (for example, technology and telecommunications). Furthermore, the proposal would provide sectors similar to those contained in the Basel standards and specify a treatment for certain U.S.-specific sectors (for example, GSE debt and public sector entities). Specifically, the proposal would include GSE debt and public sector entities in the sector for government-backed non-financials, education, and public administration to appropriately reflect the potential variability in the credit spreads of such positions. Accordingly, assigning the same risk weight to these positively correlated sectors would reduce administrative burden and not have a material effect on risk sensitivity. Relative to the Basel standards, the proposal would expand the scope of the financials, including government-backed financials, bucket to apply to real estate activities. This clarification aligns the treatment of real estate activities across the credit spread risk sector buckets and equity sector buckets.

[354] *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

[355] The proposal would define speculative grade to mean that the entity to which a banking organization is exposed through a loan or security, or the reference entity with respect to a credit derivative, has adequate capacity to meet financial commitments in the near term, but is vulnerable to adverse economic conditions, such that should economic conditions deteriorate, the issuer or the reference entity would present an elevated default risk.

[356] The proposal would define sub-speculative grade to mean that the entity to which a banking organization is exposed through a loan or a security, or the reference entity with respect to a credit derivative, depends on favorable economic conditions to meet its financial commitments, such that should economic conditions deteriorate, the issuer or the reference entity likely would default on its financial commitments.

Some of the proposed sector buckets consist of different industries, for example basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying. Positions within the same sector that are the same credit quality would be assigned to the same bucket because from a market risk perspective an economic event causing volatility in a sector tends to similarly affect all positions in the industries operating in that sector, even if there may be differences in credit quality between individual issuers within a sector. When calculating the delta and curvature capital requirements for securitization indices, the proposal would allow a banking organization to apply the look-through approach or treat the index as a single position, as described in section V.A.10.d.i. of this **SUPPLEMENTARY INFORMATION**.

The agencies recognize that there may be sectors that are not expressly categorized by the proposed buckets, and that specifying all sectors for such purpose may not be possible. The proposed buckets would include an "other sector" category for market risk covered positions that do not belong to any of the other buckets.

The proposed risk weights are based on empirical data which reflect the historical stress period for which the risk factors within the bucket caused the largest cumulative loss at various liquidity horizons. As such, for speculative grade sovereign exposures, multilateral development banks, and specified supranational entities[357] the agencies are proposing a 3 percent risk weight for such positions that are non-securitization positions (Table 3 to §__.209) and a 13 percent risk

[357] Under the proposal, specified supranational entities would include the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, and the European Financial Stability Facility. Consistent with the current capital rule, exposures to such entities would continue to be subject to a zero percent risk weight for purposes of general credit risk under the proposal.

weight for such positions that are correlation trading positions (Table 5 to §__.209).[358] Based on the agencies' quantitative analysis of the historical data, the credit spreads of speculative grade sovereign bonds have typically widened more than 200 basis points after a downgrade, and significantly more for sub-speculative grade sovereigns.[359] Multilateral development banks and specified supranational entities exhibit similar credit spread risk as sovereign exposures and merit similar risk weights. Additionally, for non-securitization positions and correlation trading positions, the proposal would include separate buckets with higher risk weights (7 percent and 16 percent, respectively) for sub-speculative grade sovereign exposures, multilateral development banks, and specified supranational entities than for those of speculative grade, because of the additional risk posed by sub-speculative exposures.

For securitization positions non-CTP (Table 7 to §__.209), the proposal would clarify the treatment of personal loans and dealer floorplan loans within the delta credit spread buckets. Specifically, the proposal would require a banking organization to include personal loans within

[358] The agencies calibrated the credit spread risk weights for speculative and sub-speculative sovereign exposures by applying a methodology similar to what the Basel Committee used for calibrating risk weights for other asset classes. In particular, the agencies used a methodology that aligned the sensitivities-based method risk weight calibration to the liquidity horizon-adjusted stressed expected shortfall specified in the models-based non-default capital requirement. For calibration, the agencies used IHS Markit credit default swap data and calculated ten-day overlapping absolute changes in sovereign credit default swap spreads. For the period of stress, the agencies used the period from May 2011 to May 2012 during the European sovereign debt crisis, which is representative of stress risk for these exposures. The agencies calibrated the risk weight by multiplying the standard deviation of the absolute changes in sovereign spreads over the stress period by 2.34 and by the square root of the applicable liquidity horizon divided by ten days. The agencies multiplied the standard deviation by 2.34 to ensure the risk weight was calibrated to the same 97.5 percent threshold required in the expected shortfall measure and to align with the calculation of other risk weights. The multiplication by the square root of the ratio of the liquidity horizon to ten days was done to convert the metric to the appropriate liquidity horizon specified in the models-based non-default capital requirement.

[359] The result of calibration based on the IHS Markit credit default swap data is a seven percent risk weight for sub-speculative grade. Credit default swap data were used for sub-speculative sovereign exposures because credit default swap spreads generally reflect the credit spread risk characteristics of sub-speculative grade sovereign issuers. For speculative grade sovereign exposures, the proposal would assign a three percent risk weight, rather than the two percent risk weight specified in the Basel standards, because the analysis described above shows that the credit spreads of speculative grade sovereign bonds have typically widened more than two percent after a downgrade. In addition, the proposed three percent risk weight for such exposures would support the agencies' objectives of ensuring an appropriate level of conservativeness while also differentiating between the relative risks of speculative and sub-speculative grade sovereign exposures.

the bucket for credit card securitizations and dealer floorplans within the bucket for auto securitizations in order to appropriately reflect the lower credit spread risk of these positions relative to those within the other sector bucket.[360]

For securitization positions non-CTP, the proposal would also clarify the delta credit spread buckets for residential mortgage-backed securities to help ensure consistency in bucketing assignments across banking organizations. Specifically, the proposal would define prime residential mortgage-backed securities based on the definition of qualified residential mortgages in the credit risk retention rule[361] and would define sub-prime residential mortgage-backed securities based on the definitions of higher-priced mortgage loans and high-cost mortgages in Regulation Z,[362] respectively.

Under the proposal, prime residential mortgage-backed securities would be defined as securities in which the underlying exposures consist primarily of qualified residential mortgages as defined under the credit risk retention rule. The eligibility criteria of the qualified residential mortgage definition are designed to help ensure the borrower's ability to repay.[363] Residential mortgage-backed securities that are primarily backed by qualified residential mortgage loans carry significantly lower credit risk than those backed primarily by non-qualifying loans. Therefore, the proposal would use the existing definition of qualified residential mortgage in the

[360] The other sector risk bucket refers to bucket 25 in Table 7 to §_.209 of the proposed rule.

[361] The credit risk retention rule generally requires a securitizer to retain not less than 5 percent of the credit risk of certain assets that the securitizer, through the issuance of an asset-backed security, transfers, sells, or conveys to a third party. *See* 12 CFR part 43 (OCC); 12 CFR part 244 (Board); 12 CFR part 373 (FDIC).

[362] To help ensure that credit terms are disclosed in a meaningful way so consumers can compare credit terms more readily and knowledgeably, Regulation Z mandates regulations on how lenders may calculate and disclose loan costs. *See* 12 CFR part 1026.

[363] Under the general definition for qualified mortgages in 12 CFR 1026.43(e)(2), a creditor must satisfy the statutory criteria restricting certain product features and points and fees on the loan, consider and verify certain underwriting requirements that are part of the general ability-to-repay standard, and meet certain other requirements.

credit risk retention rule, which refers to the Regulation Z definition of qualified mortgage to identify residential mortgage-backed securities that are primarily backed by underlying loans with sufficiently low credit risk to be classified as prime.

Similarly, the proposal would define a sub-prime residential mortgage-backed security as a security in which the underlying exposures consist primarily of higher-priced mortgage loans as defined under Regulation Z (12 CFR 1026.35), high-cost mortgages as defined under Regulation Z (12 CFR 1026.32), or both. In general, Regulation Z defines higher-priced mortgage loans[364] and high-cost mortgages[365] to include consumer credit transactions secured by the consumer's principal dwelling with an annual percentage rate[366] that exceeds the average prime offer rate (APOR)[367] for a comparable transaction. Consistent with Regulation Z, the subprime market is identified by loan price rather than by borrower characteristics, which could present operational difficulties and other problems. Therefore, the proposal would use the existing definitions in Regulation Z, which rely on a loan's annual percentage rate and other

[364] Under Regulation Z, a higher-priced mortgage loan is defined as a closed-end consumer credit transaction secured by the consumer's principal dwelling with an annual percentage rate that exceeds the average prime offer rate for a comparable transaction as of the date the interest rate is set by a certain amount of percentage points depending on the type of loan. *See* 12 CFR 1026.35(a)(1).

[365] Under Regulation Z, a high-cost mortgage is defined as a closed- or open-end consumer credit transaction secured by the consumer's principal dwelling and in which the annual percentage rate exceeds the average prime offer rate for a comparable transaction by a certain amount, or the transaction's total points and fees exceed a certain amount, or under the terms of the loan contract or open-end credit agreement, the creditor can charge a prepayment penalty more than 36 months after consummation or account opening, or prepayment penalties that can exceed, in total, more than 2 percent of the amount prepaid. *See* 12 CFR 1026.32(a).

[366] Annual percentage rates are derived from average interest rates, points, and other loan pricing terms currently offered to consumers by a representative sample of creditors for mortgage transactions that have low-risk pricing characteristics. Other pricing terms include commonly used indices, margins, and initial fixed-rate periods for variable-rate transactions. Relevant pricing characteristics include a consumer's credit history and transaction characteristics such as the loan-to-value ratio, owner-occupant status, and purpose of the transaction.

[367] Loans with higher annual percentage rates or that have higher points and fees or prepayment penalties generally are extended to less creditworthy borrowers (for example, weaker borrower credit histories, higher borrower debt-to-income ratios, higher loan-to-value ratios, less complete income or asset documentation, less traditional loan terms or payment schedules, or combinations of these or other risk factors) and thus pose higher credit risk.

characteristics, to identify residential mortgage-backed securities that are primarily backed by underlying loans with sufficiently high credit risk to be classified as sub-prime. In addition, the proposal would reduce compliance burden for banking organizations by allowing them to leverage criteria already being used to evaluate mortgage loans for coverage under the prescribed Regulation Z thresholds.

The agencies recognize that a securitization vehicle that holds residential mortgage-backed securities may hold assets other than the residential mortgage loans, such as interest rate swaps, to support its liabilities. Furthermore, not all mortgage loans that satisfy the requirements of the proposed definitions when the securitization vehicle acquires the residential mortgage-backed securities will continue to do so throughout the lifecycle of the position. To minimize variability in risk-based capital requirements, reduce the operational burdens imposed on banking organizations and help ensure consistency and comparability in risk-based capital requirements across banking organizations, the proposal would define prime and sub-prime as those vehicles that primarily hold qualified residential mortgages or high-priced mortgage loans and high-cost mortgages, respectively. All other mortgage-backed securities would be defined as mid-prime mortgage-backed securities.

Question 125: The agencies seek comment on the appropriateness of adding the sub-speculative grade category for non-securitizations and for correlation trading positions. What, if any, operational challenges might the proposed bucketing structure pose for banking organizations and why? What, if any, alternatives should the agencies consider to better capture the risk of these positions?

Question 126: The agencies seek comment on the treatment of certain sovereign exposures. What would be the advantages and disadvantages of applying a zero percent credit

spread risk weight to short-term (less than one year) U.S. sovereign exposures such as U.S. Treasury securities that are investment grade, and why? What, if any, alternative risk weight treatment should the agencies consider for sovereign exposures that are primarily exposed to interest rate risk, rather than credit spread risk, and why?

Question 127: The agencies seek comment on the risk weight for covered bonds. What, if any, alternative approaches would better serve to differentiate the credit quality of highly rated covered bonds without referring to credit ratings and why?

Question 128: The agencies seek comment on whether the proposed definitions for each sector bucket appropriately capture the characteristics to distinguish between the categories of residential mortgage-backed securities. What would be the benefits and drawbacks of using the definition of qualified residential mortgage in the credit risk retention rule? What, if any, alternative approaches should the agencies consider to more appropriately distinguish between the categories of residential mortgage-backed securities?

Question 129: The agencies seek comment on whether the proposed sector bucket definitions for residential mortgage-backed securities are sufficiently clear. What, if any, additional criteria should the agencies consider to define "primarily" in the context of residential mortgage-backed securities (for example, quantitative limits or other thresholds) and what are the associated benefits and drawbacks of doing so?

Question 130: What, if any, operational challenges might the proposed sector bucket definitions pose for banking organizations in allocating the credit spread risk sensitivities of existing mortgage exposures to the respective buckets and why? To what extent would using one metric (for example, average prime offer rate) to define the sector buckets address any such concerns?

Question 131: What, if any, other sector buckets require additional clarification, and why?

III. Equity risk

Table 8 to §_.209 of the proposed rule provides the proposed delta buckets and corresponding risk weights for market risk covered positions with equity risk, which would be generally consistent with those in the Basel standards.[368] Under the proposal, a banking organization would group the equity risk factors for market risk covered positions into one of thirteen buckets based on market capitalization, market economy, and sector.

The proposed sector buckets and associated risk weights would differentiate between large and small market capitalization issuers to appropriately reflect the relatively higher volatility and increased equity risk of small market capitalization issuers.[369] Under the proposal, issuers with a consolidated market capitalization equal to or greater than $2 billion, adjusted to reflect CPI-W,[370] would be classified as large market capitalization issuers, and all other issuers would be classified as small market capitalization issuers. The proposed large market capitalization designation would help ensure an amount of information and trading activity related to an issuer that is suitable for differentiating risks between large and small market

[368] Vega and curvature capital requirements use the same buckets as prescribed for delta. *See* §_.209(c)(1), (d)(1) of the proposed rule.

[369] Relative to large market capitalization issuers, instruments issued by those with small market capitalization are typically less liquid and thus pose greater equity risk, as investors holding these instruments may encounter difficulty in buying or selling shares particularly during a stress event. Small market capitalization issuers also typically have less access to capital (such that they are less capable of obtaining sufficient financing to bridge gaps in cash flow) and have a relatively shorter operational history and thereby less evidence of a durable business model. During downturns in the economic cycle, such complications can increase the volatility (and therefore the equity risk) of investments in such issuers.

[370] *See* section II.E. of this **SUPPLEMENTARY INFORMATION** for a more detailed discussion on indexing nominal thresholds in the proposal going forward to reflect CPI-W.

capitalization issuers. The market capitalization data of publicly traded firms is readily available and therefore would not be burdensome to identify.

For purposes of the market economy criteria, the proposal would differentiate between "liquid market economy" countries and territorial entities and emerging market economy countries and territorial entities to appropriately reflect the higher volatility associated with emerging market equities. Under the proposal, a banking organization would use the following criteria to identify annually a country or territorial entity with a liquid market economy: (1) $10,000 or more in per capita income, (2) $95 billion or more in market capitalization of all domestic stock markets, (3) no single export sector or commodity comprises more than 50 percent of the country or entity's total annual exports, (4) no material controls on liquidation of direct investment, and (5) free of sanctions imposed by the U.S. Office of Foreign Assets Control against a sovereign entity, public sector entity, or sovereign-controlled enterprise of the country or territorial entity.[371] Countries or territorial entities that satisfy all five criteria or that are in a currency union[372] with at least one country or territorial entity that satisfies all five criteria would be classified as liquid market economies, and all others would be classified as emerging market economies.

In relying on a set of objective criteria, the proposed approach for market economy buckets is designed to increase risk sensitivity by distinguishing between equities with lower

[371] According to the agencies' analysis of the data, the initial list of "Liquid Market Economies" would include: United States, Canada, Mexico, the 19 Euro area countries (Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia, and Spain), non-Eurozone, western European nations (the United Kingdom, Sweden, Denmark and Switzerland), Japan, Australia, New Zealand, Singapore, Israel, South Korea, Taiwan, Chile, and Malaysia.

[372] The proposal would define a currency union as an agreement by treaty among countries or territorial entities, under which the members agree to use a single currency, where the currency used is described in § _.209(b)(1)(i) of the proposed rule.

volatility or higher volatility in a manner consistent with the Basel standards while also providing sufficient flexibility to reflect changes to the list of market economies as countries' profiles evolve.

For market risk covered positions with exposure to large market capitalization issuers, the proposal would group equity risk factors into one of four sectors for each of the emerging market and liquid market economy categories: (1) consumer goods and services, transportation and storage, administrative and support service activities, healthcare, and utilities; (2) telecommunications and industrials; (3) basic materials, energy, agriculture, manufacturing, and mining and quarrying; and (4) financials including government-backed financials, real estate activities, and technology.

The proposed equity buckets are intended to reflect differences in the extent to which equity prices in varying sectors are affected by the business cycle (such as GDP growth). Differentiating sectors for purposes of assigning risk weights to exposures to large market capitalization issuers is relevant because some sectors are more sensitive than others to the given phase in a business cycle. The proposal groups together industries into sectors that tend to have similar economic sensitivities and therefore are sufficiently homogenous from a risk perspective. Conversely, among small market capitalization issuers, volatility is more attributable to whether a market risk covered position is related to an emerging market economy or liquid market economy, regardless of the sector. Therefore, the proposed buckets for small market capitalization issuers delineate emerging market economies from liquid market economies but do not delineate sectors.

In addition, the proposal includes three buckets representing other sectors; equity indices that are both large market capitalization and liquid market economy (non-sector specific); and

other equity indices (non-sector specific). As is the case with credit spread buckets, the agencies recognize that specifying all sectors for the purpose of applying buckets is infeasible. Accordingly, the last three buckets set forth in Table 8 to §_.209 are intended to strike a balance between risk sensitivity and operational burden. Equity indices aggregate risk across different sectors and accordingly require separate treatment from sector-specific buckets. Nonetheless, equity indices that are both large market capitalization and liquid market economy are relatively less risky than other equity indices and can be identified in the course of determining large market capitalization issuers and liquid market economies, such that it would not impose a great burden to delineate them as a separate bucket.

Question 132: The agencies solicit comment on the proposed definition of liquid market economy. Specifically, would the proposed criteria sufficiently differentiate between economies that have liquid and deep equity markets? What, if any, alternative criteria should the agencies consider and why? What, if any, of the proposed criteria should the agencies consider eliminating and why?

Question 133: The agencies solicit comment related to the proposed bucket structure for equity risk. What, if any, other relationships should the agencies consider for highly correlated risks among different equity types that are currently in different buckets and why? Please describe the historical correlations between such equities, and historical price shocks for purposes of assigning the appropriate risk weight.

Question 134: The agencies solicit comment related to the use of materiality criteria to identify annually a country or territorial entity with a liquid market economy. What are the advantages and disadvantages of indexing such thresholds in the proposal to reflect CPI-W going forward, and why?

IV. Commodity risk

Table 9 to §_.209 of the proposed rule provides the proposed delta buckets and corresponding risk weights for positions with commodity risk. Under the proposal, a banking organization would group commodity risk factors into one of twelve buckets based on the following commodity classes: energy – solid combustibles; energy – liquid combustibles; energy – carbon trading; freight; metals – non-precious; gaseous combustibles and electricity; precious metals (including gold); grains and oilseed; livestock and dairy; forestry and agriculturals; other commodity; and commodity index.

The proposed buckets and associated risk weights for commodity risk would be distinguished by the underlying commodity types described above to appropriately reflect differences in volatility (and therefore market risk) between those commodity types. In general, the price sensitivity of a commodity to changes in global supply and demand can vary between commodity types due to production and storage cycles, along with other factors. For example, energy commodities are generally delivered year-round, whereas grain production is seasonal such that deliverable futures contracts are available on dates to coincide with harvest. Further, commodities within the proposed commodity types have generally historically similar levels of volatility and high correlation. The proposed commodity buckets are intended to strike a balance between the risk sensitivity of measuring market risk for the delineated commodity groups and the operational burden of capturing the market risk of all commodities. As is the case with credit spread buckets and equity buckets, the agencies recognize that specifying all commodities for the purpose of applying buckets is operationally difficult. Accordingly, the proposal includes an additional "other commodity" bucket to conservatively capture the risk of additional commodities that are not otherwise specified and a commodity index bucket to include indexes

that may track multiple commodities. The commodity index bucket is introduced to capture the diversified risk of pooling several commodities together that do not concentrate into a particular sector.

As is the case with other buckets, the proposed risk weights for commodity risk factors are based on empirical data during historical periods of stress. The agencies are proposing to align the delta risk factor buckets and corresponding risk weights with those provided in the Basel standards, with two exceptions. First, the Basel standards prescribe separate buckets with different risk weights for electricity and gaseous combustibles. The proposal would include a single bucket for electricity and gaseous combustibles to allow for greater recognition of hedges between these two commodities.[373] The proposed bucketing structure would reflect appropriately the inherent relationship between the price of electricity and natural gas, as empirical evidence demonstrates a strong correlation between price movements of natural gas and electricity

[373] The agencies are proposing to include electricity and gas in the same bucket based on an analysis of correlations between natural gas and electricity futures prices pairs across multiple geographical regions. The analysis shows that pairwise correlations between gas and electricity prices within the same region are high and stable and in excess of the inter bucket correlation that would be applied if the two financial instruments were bucketed separately.

contracts.[374] Second, the proposal would introduce a bucket for commodity indices with a prescribed risk weight of 30 percent and intra bucket correlation of 50 percent.[375]

Question 135: The agencies solicit comment related to the proposed bucket structure and risk weights for commodities. What, if any, other relationships should the agencies consider for highly correlated risks among different commodity types that are currently in different buckets and why? Please describe the historical correlations between such commodities, and historical price shocks for purposes of assigning the appropriate risk weight.

[374] The calibration of the risk weight for the gas and electricity commodity risk bucket in the sensitivities-based method followed the stressed expected shortfall calibration methodology specified in the models-based non-default capital requirement, accounting for variations in liquidity horizons. The agencies used Thomson Reuters to obtain spot price data for electricity and gas risk factors and calculated ten-day overlapping returns constructed as $r_t = (p_t - p_{t-10})/p_{t-10}$, where r is the return, p is the spot price for gas and electricity risk factors for the most recent outcome, denoted as t, and for the date that is 10 business days prior to t, denoted as $t-10$. The 97.5 percent expected shortfall was calculated as the average of the m worst returns, where $m = n * 2.5$ percent rounded to the nearest integer, and n is the number of ten-day returns that had all values for both p_t and p_{t-10}. For the period of stress, the agencies used the period between September 1, 2008 and August 31, 2009, when the S&P Goldman Sachs Commodity Index had the highest month-end 99th percentile VaR. The resulting estimated risk weight for electricity and gas was 48 percent. For the calibration of the intra-bucket correlation parameter between natural gas and electricity, the agencies used Bloomberg to source data on 10 series of commodity futures (five series for each commodity, representing five distinct markets with high trading activity for both natural gas and electricity, specifically, the United States, United Kingdom, France, Germany, and the Netherlands) and calculated ten-day overlapping returns for each series as $r_t = (p_t - p_{t-10})/p_{t-10}$. To estimate the pairwise correlation between gas and electricity, the agencies used the period between January 2018 and December 2022, which included the time of unprecedented commodity market volatility. The resulting estimated average pairwise correlation between electricity and natural gas was 66 percent.

[375] The agencies are applying a similar methodology for the calibration of the commodity index bucket risk weight as the Basel Committee used for calibrating risk weights for all asset classes, which aligns the sensitivities-based method risk weight calibration to the liquidity horizon adjusted stressed expected shortfall specified in the internal model approach. When calibrating commodity risk weights the Basel Committee used data on prices and calculated ten day overlapping returns (such as relative changes in prices). For the period of stress, the agencies used the second half of 2008 and the first half 2009 stress period. The standard deviation obtained was multiplied by 2.34 to reflect the expected shortfall quantile of 97.5. The estimate was adjusted to meet the commodity liquidity horizon specified for internal models. The last step takes the average of the estimates across several commodity indices. The intra-bucket correlation was calibrated following the Basel Committees methodology of calculating long term correlations for the sensitivities-based method. Specifically, the index bucket intra-bucket correlation was estimated for returns over the period starting in late 2000 to early 2024.

Question 136: The agencies solicit comment on the bucket for energy – carbon trading. To what extent is the proposed 60 percent risk weight reflective of the risk in carbon trading under stressed conditions?

V. Foreign exchange risk

The proposal would require a banking organization to establish separate buckets for each exchange rate between the currency in which a market risk covered position is denominated and the reporting currency (or, as applicable, alternative base currency). To calculate the risk-weighted delta sensitivity for foreign exchange risk, the proposal would require a banking organization to apply a 15 percent risk weight to each currency pair, with one exception. Similar to the proposed risk weights for interest rate risk, the proposal would allow a banking organization to divide the proposed 15 percent risk weight by the square root of two for certain liquid currency pairs specified under the proposal,[376] as well as any additional currencies specified by the primary Federal supervisor. Given high trading activity and use of such liquid currency pairs relative to non-liquid pairs, the proposal incorporates the effect of a shorter liquidity horizon for liquid currency pairs and would allow a banking organization to appropriately reflect the lower foreign exchange risk posed by such liquid currency pairs.

iv. *Correlation parameters*

To appropriately reflect the risk-mitigating benefits of hedges and diversification, the proposal would prescribe the correlation parameters[377] that a banking organization would be

[376] The proposal would allow a banking organization to apply a lower risk weight for any currency pair formed of the following currencies: USD, EUR, JPY, GBP, AUD, CAD, CHF, MXN, CNY, NZD, HKD, SGD, TRY, KRW, SEK, ZAR, INR, NOK, and BRL.

[377] The correlation parameter measures how different risk factors (for example, interest rates at various points on a curve) move together and determines how banking organizations could diversify risk and offset risks with each other.

required to use for each risk factor pair when calculating the aggregate bucket and risk class level capital requirements for delta, vega, and curvature.[378] The proposed correlation parameters which closely follow those in the Basel standards are calibrated to capture market correlations observed over a long time horizon that included a period of stress based on empirical data.[379] To determine the applicable correlation parameter for purposes of calculating the bucket or risk class level capital requirements, a banking organization would apply the same criteria used to define the risk factors within each risk class, as described in section V.A.7.a.i. of this **SUPPLEMENTARY INFORMATION**, with two exceptions.

First, in addition to the proposed risk factors for credit spread risk of non-securitizations, securitization positions non-CTP, and correlation trading positions,[380] the proposal would require a banking organization to consider the name (in the case of non-securitization positions and correlation trading positions) and tranche (in the case of securitization positions non-CTP) to determine the applicable correlation parameters for risk factors within the same bucket when calculating the aggregate bucket level capital requirements for delta and vega.

In the case of credit spread risk for securitization positions non-CTP, the agencies generally are proposing to require a 100 percent intra-bucket correlation parameter for securitization positions in the same bucket and related to the same securitization tranche with more than 80 percent overlap in notional terms and a 40 percent intra-bucket correlation

[378] As there is only one risk factor prescribed for foreign exchange risk, the proposal does not specify an intra-bucket correlation parameter.

[379] For example, the correlation parameters for vega, curvature, delta interest rate risk, and delta equity risk are identical to those in the Basel standards.

[380] As described in section V.A.7.a.i.II. of this **SUPPLEMENTARY INFORMATION**, the proposal would define the delta risk factors for credit spread risk along two dimensions: the credit spread curve of the reference entity and the tenor of the position.

parameter otherwise. Furthermore, in the case of credit spread risk for non-securitization and correlation trading positions, the proposal would allow banking organizations to treat Uniform Mortgage-Backed Security (UMBS) positions, including to-be-announced (TBA) securities and UMBS-eligible deliverable pools,[381] as exposures to a single obligor, regardless of the issuing entity of the UMBS. The single security initiative led by Fannie Mae and Freddie Mac has homogenized the mortgage pool and security characteristics for UMBS, such that positions issued by different obligors have immaterial observed basis risk.[382] In addition, because mortgage pools delivered by either Fannie Mae or Freddie Mac can satisfy an UMBS TBA security, no significant pricing difference has been observed since the introduction of the single security initiative, as shown by empirical studies on agency mortgage-backed securities.[383]

Second, for risk factors allocated to the "other sector" bucket within the credit spread and equity risk classes,[384] the bucket level capital requirement would equal the sum of the absolute values of the risk-weighted sensitivities for both the delta capital requirement and the vega capital requirement (no correlation parameters would apply to such exposures). Additionally, the proposal would require a banking organization to assign a zero percent correlation parameter when aggregating the delta risk-weighted sensitivity of exposures within the "other sector"

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[381] Chapter 8 of the Securities Industry and Financial Markets Association (SIFMA) Uniform Practices guidelines states that all UMBS and Supers, which are single class, pass-through, TBA-eligible securities, are good delivery for an UMBS TBA trade, regardless of issuer. *See* SIFMA, Chapter 8: Standard Requirements for Delivery on Settlements of UMBS and Ginnie Mae Securities, Uniform Practices (2024), *https://www.sifma.org/wp-content/uploads/2023/02/uniform-practices-2023-chapter-8.pdf*.

[382] *See*, *e.g.*, Haoyang Liu, Zhaogang Song, and James Vickery, "Defragmenting Markets: Evidence from Agency MBS" (December 2021), *https://www.newyorkfed.org/research/staff_reports/sr965.html*. The research paper finds that Fannie Mae mortgage-backed securities command a liquidity premium over Freddie Mac, of about 17 cents per $100 face value in price and about 4 basis points in yield. Furthermore, the difference in trading costs between Fannie Mae and Freddie Mac in the TBA market overall is extremely small, only 2 basis points.

[383] *See id.*

[384] The other sector buckets refer to buckets 18 and 16 in Tables 3 and 5, respectively, as well as buckets 25 and 11 in[Tables 7 and 8, respectively, of §_.209 of the proposed rule.

bucket with those in any of the other bucket-level capital requirements for credit spread and equity risk.

The agencies consider that the proposed correlation parameters are sufficiently conservative to appropriately capture the potential interactions between risk factors that the market risk covered positions may experience in a time of stress.

Question 137: Related to securitization positions non-CTP, the agencies seek comments on requiring banking organizations to apply a 100 percent delta correlation parameter for cases where the securitization positions are in the same bucket, are related to the same securitization tranche, and have more than 80 percent overlap in notional terms. What, if any, alternative criteria should the agencies consider for application of the 100 percent correlation parameter and why? For example, what are benefits and drawbacks of allowing a banking organization to apply a 100 percent delta correlation parameter if the securitization tranches can offset all or substantially all of the price risk of the position? What challenges exist, if any, with respect to banking organizations' ability to implement such criteria? What quantitative measures can be used to implement these criteria? How would a market stress impact the basis risk between securitization tranches within the same buckets, and the ability to adequately hedge all or substantially all of the price risk using similar but unrelated securitized tranches?

Question 138: The agencies request comment on the appropriateness of allowing banking organizations to apply a higher intra-bucket correlation parameter of 99.5 percent to 99.9 percent for energy – carbon trading. What would be the benefits and drawbacks of such a higher correlation parameter relative to the correlation parameter of 40 percent currently contained in the proposal?

Question 139: The agencies request comment on requiring banking organizations to apply a 35 percent correlation parameter for Uniform Mortgage Backed Securities. What alternative correlation parameter should the agencies consider for Uniform Mortgage Backed Securities and why?

b. Residual risk capital requirement

It is not possible in a standardized methodology, such as the sensitivities-based method, to sufficiently specify all relevant distinctions between different market risks to capture appropriately existing and future financial products. Accordingly, the proposed residual risk add-on capital requirement (residual risk add-on) is intended to reflect risks that would not be fully reflected in the sensitivities-based capital requirement or the default risk capital requirement, as described in sections V.A.7.a. and V.A.9. of this **SUPPLEMENTARY INFORMATION**, respectively. Specifically, the residual risk add-on is intended to capture exotic risks, such as weather, longevity, and natural disasters, as well as other residual risks, such as gap risk, correlation risk, and behavioral risks such as prepayments.

To calculate the residual risk add-on, the proposal would require a banking organization to risk weight the gross effective notional amount of a market risk covered position by 1 percent for market risk covered positions that have an exotic exposure[385] and by 0.1 percent for other market risk covered positions with residual risks (described in the next section). The total residual risk add-on capital requirement would equal the sum of such capital requirements across subject market risk covered positions.

[385] Under the proposal, an exotic exposure means an underlying exposure that is not in scope of any of the risk classes under the sensitivities-based capital requirement or is not captured by the default risk capital requirement, which includes, but is not limited to, longevity risk, weather risk, and natural disaster risk.

i. *Positions subject to the residual risk add-on*

The proposal would require a banking organization to calculate a residual risk add-on for market risk covered positions that have an exotic exposure, and those with known residual risks that are not captured by the sensitivities-based method or the default risk capital requirement. As the potential losses of market risk covered positions with exotic exposures (longevity risk, weather, natural disaster, among many) would not be adequately captured under the sensitivities-based method, the proposed residual risk add-on capital requirement would equal to 1 percent of the gross effective notional amount of the market risk covered position, which is intended as an appropriately conservative capital requirement for such exposures.

In contrast, market risk covered positions with other residual risks would include those for which the primary risk factors are mostly captured under the sensitivities-based method or the default risk capital requirement, but for which there are additional risks that are not fully captured by those components. Specifically, under the proposal, market risk positions with other residual risks would include: (1) correlation trading positions with three or more underlying exposures that are not hedges of correlation trading positions; (2) options or positions with embedded optionality, where the payoffs could not be replicated by a finite linear combination of vanilla options or the underlying instrument; and (3) options or positions with embedded optionality that do not have a stated maturity or strike price or barrier, or that have multiple strike prices or barriers.[386] As the residual risk add-on is intended as a supplement to the capital requirements under the sensitivities-based method or default risk capital requirement for these

[386] As proposed, the criteria are intended to capture (1) correlation risks for basket options, best of options, basis options, Bermudan options, and quanto options; (2) gap risks for path dependent options, barrier options, Asian options and digital options; and (3) behavior risks that might arise from early exercise (call or put features, or pre-payment).

known risks, the residual risk add-on capital requirement for market risk covered positions with other residual risks would equal to 0.1 percent of the gross effective notional amount of the market risk covered position.

Furthermore, in situations when a banking organization cannot use the look-through approach to calculate the market risk capital requirements for an equity position in investment fund and when the investment fund's mandate permits the fund to invest in exposures with exotic or other residual risks, the proposal would require a banking organization to subject that portion of the exposure amount resulting from an equity position in an investment fund to the residual risk add-on.

In addition to positions with exotic or other residual risks, a primary Federal supervisor may require a banking organization to subject other market risk covered positions to the residual risk add-on, if the proposed framework would not otherwise appropriately capture the material risks of such positions. While the proposed definitions are intended to reasonably identify positions with risks not appropriately captured by other aspects of the proposed framework, there could be instances where a market risk covered position should be subject to the residual risk add-on in order to capture appropriately the associated market risk of the exposure in risk-based capital requirements. To allow the agencies to address such instances on a case-by-case basis, the proposal would allow the primary Federal supervisor to make such determinations, as appropriate.

ii. *Excluded positions*

To promote appropriate capitalization of risk, the proposal would allow certain market risk covered positions to be excluded from the calculation of the residual risk add-on if such positions meet the following set of exclusions. Specifically, the proposal would permit a banking

organization to exclude market risk covered positions, other than those that have an exotic exposure, from the residual risk add-on, if the position is (1) listed on an exchange; (2) eligible to be cleared by a CCP or QCCP; or (3) an option that has two or fewer underlying positions and does not contain path dependent pay-offs. The proposed exclusions would permit a banking organization to exclude simple options, such as spread options, which have two underlying positions, but not those for which the payoffs cannot be replicated by a combination of traded instruments. As spread options would be subject to the vega and curvature requirements under the sensitivities-based method, subjecting spread options to the residual risk add-on would be incommensurate with the risks of such positions and could increase inappropriately the cost of hedging without a corresponding reduction in risk. Additionally, as most agency mortgage-backed securities and certain convertible instruments (for example, callable bonds) are eligible to be cleared, the proposal would allow a banking organization to exclude these instruments that are eligible to be cleared from the residual risk add-on, despite the pre-payment risk of such instruments.[387]

The proposal would also allow a banking organization to exclude market risk covered positions, including those with exotic exposures, from the residual risk add-on if the banking organization has entered into a third-party transaction that exactly matches the market risk covered position (a back-to-back transaction). As the long position and short position of two identical trades would completely offset, excluding such transactions from the residual risk add-on would appropriately reflect the lack of residual risk inherent in such transactions.

[387] As discussed in section V.A.7.a.ii.II. of this **SUPPLEMENTARY INFORMATION**, callable bonds that are priced as yield to maturity would not be subject vega risk, as the risk factors for such instruments would already be sufficiently captured by the delta capital requirement under the sensitivities-based method.

Furthermore, the proposal would allow a banking organization to exclude certain offsetting positions that may exhibit insignificant residual risks and for which the residual risk add-on would be overly punitive. Specifically, the proposal would allow a banking organization to exclude the following from the residual risk add-on: (1) positions that can be delivered into a derivative contract where the positions are held as hedges of the banking organization's obligation to fulfill the derivative contract (for example, TBA and security interests in associated mortgage pools) as well as the associated derivative exposure; (2) any debt issued or guaranteed by a GSE or any securities issued and guaranteed by the U.S. government; (3) positions subject to the fallback capital requirement; (4) internal transactions between two trading desks, if only one trading desk is model-eligible; and (5) any other types of positions that the primary Federal supervisor determines are not required to be subject to the residual risk add-on, as the material risks would be sufficiently captured under other aspects of the proposed market risk framework. Based on these criteria, the agencies expect that a banking organization would not need to calculate a residual risk add on for the following risks: risks from cheapest-to-deliver options; volatility smile risk; correlation risk arising from multi-underlying European or American plain vanilla options; dividend risk; and index and multi-underlying options that are well-diversified or listed on exchanges for which sensitivities are captured by the capital requirement under the sensitivities-based method.

Question 140: The agencies seek comment on all aspects of the proposed residual risk add-on. Specifically, the agencies request comment on whether there are alternative methods to identify more precisely exotic exposures and other residual risks for which the residual risk capital requirement is appropriate. What, if any, additional instruments and offsetting positions

should be excluded from the residual risk add-on and why? What, if any, quantitative measures should the agencies consider to identify or distinguish residual risks and why?

Question 141: Would characterizing volatility and variance swaps as bearing other residual risk more appropriately reflect the risks of such exposures and why?

8. Models-based non-default capital requirement

Under the proposal, the models-based non-default capital requirement for model-eligible positions ($IMA_{G,A}$)[388] would consist of four components: (1) the internally modelled capital calculation (IMCC); (2) the stressed expected shortfall (SES); (3) the aggregate trading portfolio backtesting capital multiplier; and (4) the PLA add-on.

Like the sensitivities-based method in the standardized non-default capital requirement, the first two components, IMCC and SES, are intended to capture the potential losses arising from changes in risk factors during a period of substantial market stress. The IMCC and SES would distinguish between risk factors for which there is appropriate data for the twelve-month historical stress period used by the model and a sufficient number of real prices in the current period to qualify as modellable risk factors and those for which there is not (non-modellable risk factors or NMRFs).[389] The proposal would generally require banking organizations to separately calculate the capital requirement for both types of risk factors using an expected shortfall methodology. Under the proposal, the capital requirement for both modellable and non-

[388] As described in section V.A.3.b. of this **SUPPLEMENTARY INFORMATION**, the total non-default capital requirement under the models-based measure generally would equal to the sum of (1) the models-based non-default capital requirement ($IMA_{G,A}$) and (2) the difference between the standardized non-default capital requirement for all trading desks ($SA_{all\ desks}$) and the standardized non-default capital requirement for model-eligible positions ($SA_{G,A}$).

[389] Non-modellable risk factors for which there is appropriate data for the twelve-month historical stress period used by the expected shortfall models, but insufficient real prices in the current period (type A non-modellable risk factors) would be subject to both IMCC and SES as described in section V.A.8.a. of this **SUPPLEMENTARY INFORMATION**.

modellable risk factors would reflect the losses calibrated to a 97.5 percent threshold over a twelve-month period of substantial market stress and incorporate the prescribed liquidity horizons applicable to each risk factor.

Relative to the IMCC for modellable risk factors, the SES calculation for non-modellable risk factors would provide significantly less recognition of hedging and portfolio diversification due to the lower quality inputs to the expected shortfall models; for example, limited data on the market prices observed or quoted during the twelve-month historical stress period are available to estimate the correlations between non-modellable risk factors used by the expected shortfall model. These data limitations can increase the possibility that a banking organization's expected shortfall models overstate the diversification benefits or understate price volatility (and therefore, understate the magnitude of potential losses) of such non-modellable risk factors. Furthermore, the conservative treatment of non-modellable risk factors that do not meet the proposed data quality standards would provide appropriate incentives for banking organizations to enhance the quality of data inputs used in the expected shortfall models.

Under the proposal, the overall capital required under the models-based non-default capital requirement ($IMA_{G,A}$) would equal the sum of the capital requirements for modellable and non-modellable risk factors and the PLA add-on to address shortcomings in the valuation models used to determine regulatory capital, if applicable. The capital requirements for modellable and non-modellable risk factors would equal the greater of (i) the sum of such capital requirements as of the most recent reporting date ($IMCC_{t-1}$ and SES_{t-1}, respectively), or (ii) the sum of the average of such capital requirements for non-modellable risk factors over the prior 60 business days ($SES_{average}$) and the product of the average capital requirements for modellable risk factors over the prior 60 business days ($IMCC_{average}$) and a multiplication factor (m_c) of at least 1.5,

which serves to capture a model's performance over time based on the aggregate trading portfolio backtesting.[390] The overall capital requirement under the models-based non-default capital requirement can be expressed by the following formula:

$$IMA_{G,A} = max\left((IMCC_{t-1} + SES_{t-1}), \left(\left(m_c \times IMCC_{average}\right) + SES_{average}\right)\right) + PLA\ add\text{-}on$$

Due to the capital multiplier (m_c), the agencies generally expect the capital requirements for modellable and non-modellable risk factors to reflect those based on the prior 60 business day average, which would reduce quarterly variation. The proposal would require a banking organization to take into account the capital requirements as of the most recent reporting date to capture situations where the banking organization has significantly increased its risk taking relative to the prior 60-day average with the capital multiplier. Thus, the max function in the above formula would capture cases where risk has risen significantly throughout the quarter such that the average over the quarter is significantly less than the risk the banking organization faces at the end of the quarter.

Question 142: The agencies seek comment on the models-based non-default capital requirement. To what extent does the approach appropriately capture the risks of positions subject to the market risk capital requirement? What additional features, adjustments (such as to the treatment of diversification of risks), or alternative methodology could the approach include to reflect these risks more appropriately and why? Commenters are encouraged to provide supporting data.

a. Risk factor identification and model eligibility

[390] The size of the multiplication factor could vary from 1.5 to 2 based on the results of the entity-wide backtesting for all model-eligible positions. *See* section V.A.8.d. of this **SUPPLEMENTARY INFORMATION** for further discussion on the entity-wide backtesting for all model-eligible positions, otherwise known as the aggregate trading portfolio backtesting multiplier.

Under the proposal, a banking organization that intends to use the models-based non-default capital requirement would be required to identify an appropriate set of risk factors that is sufficiently representative of the risks inherent in all of the model-eligible positions on model-eligible trading desks. Specifically, the proposal would require a banking organization's expected shortfall models to include all the applicable risk factors specified in the sensitivities-based method under the standardized non-default capital requirement as well as those used in either the banking organization's financial reporting or internal risk management models. If the risk factors specified in the sensitivities-based method are not included in the expected shortfall models, the banking organization would be required to justify the exclusions to the satisfaction of its primary Federal supervisor. To help ensure that the expected shortfall models appropriately capture the market risk of a banking organization's model-eligible positions held by model-eligible trading desks,[391] model-eligible trading desks would be subject to PLA test[392] and backtesting requirements, which would help ensure the accuracy and conservativism of the risk-based capital requirements estimated by the banking organization's expected shortfall models.

For each identified risk factor, a banking organization would conduct two separate risk factor eligibility tests to determine whether the risk factor is subject to the IMCC, SES, or both. The first is a qualitative test, which determines whether the data and other information used to calibrate the expected shortfall models for IMCC appropriately capture the risk factor. The second is a quantitative test, which determines whether there are a sufficient number of real

[391] For example, unlike the proposed standardized non-default capital requirement, which would require a banking organization to use a prescribed set of risk buckets and correlation parameters, as described in section V.A.7.a.iii. of this **SUPPLEMENTARY INFORMATION**, the models-based non-default capital requirement would allow a banking organization to use its own bucketing structure and correlation parameters.

[392] As described in section V.A.1.b. of this **SUPPLEMENTARY INFORMATION**, the proposal would provide a three-year transition period during which there would be no automatic consequences for PLA test results.

prices over the prior twelve months that are representative of the risk factor to infer the value of the risk factor.[393] A risk factor that satisfies both tests would be classified as a modellable risk factor and would be subject to the IMCC, but not SES. Non-modellable risk factors would be classified as either type A or type B. Type A non-modellable risk factors would be those that satisfy the qualitative test but not the quantitative test and would be subject to both IMCC and SES; all other risk factors would be type B non-modellable risk factors and would be subject to SES.

The agencies recognize that requiring banking organizations to exclude all non-modellable risk factors from expected shortfall models used to calculate the IMCC could be operationally burdensome and can render the models-based non-default risk capital requirement relatively unstable given that some modelling approaches rely on co-dependencies between risk factors that are modellable and non-modellable. Accordingly, the proposal would require type A non-modellable risk factors to be included in the calculation of both the IMCC and SES. The inclusion of type A non-modellable risk factors in IMCC is intended to reflect the higher quality data available for such risk factors relative to type B non-modellable risk factors. The agencies also recognize that if type A non-modellable risk factors are not included in the calculation of the IMCC, it could create perverse incentives for banking organizations to claim a modellable risk factor that is highly correlated with other risk factors as a type A non-modellable risk factor to receive more favorable diversification treatment in the SES under the proposal. As such, requiring type A non-modellable risk factors to be included in the IMCC would help address

[393] Evidence of a sufficient number of real prices demonstrates the liquidity of the underlying risk factor and helps to ensure there is a sufficient quantity of historical data to appropriately capture the risk factor under expected shortfall models used in the IMCC calculation.

regulatory arbitrage concerns by ensuring that capital requirements would not fall in response to a modellable risk factor becoming a type A non-modellable risk factor.

The agencies recognize, however, that type A non-modellable risk factors may have inherently higher risk than typical modellable risk factors due to infrequent price observations that can lead to model risk and a more elevated liquidity risk. Therefore, the proposal would also require type A non-modellable risk factors to be included in SES to account for any additional risks that might not be fully captured within the IMCC calculation. Given that the IMCC calculation captures model-estimated correlations among risk factors, type A non-modellable risk factors would therefore receive full diversification (zero correlation) within the SES calculation. The remaining type B non-modellable risk factors would be subject to a more conservative treatment with a supervisory correlation, or rho, of 0.36.

To capture the inherently higher risk associated with type A non-modellable risk factors in the models-based non-default capital requirement, the agencies also considered an alternative approach that would only require banking organizations to capture type A non-modellable risk factors in IMCC but not in the SES. The alternative approach would instead require banking organizations to assign minimum liquidity horizons to type A non-modellable risk factors that are one-level higher than those required for modellable risk factors in the IMCC calculation, as described in section V.A.8.b.ii. of this **SUPPLEMENTARY INFORMATION**, unless the position's maturity is shorter than the respective liquidity horizon.[394] As the proposed IMCC calculation limits model-estimated diversification across risk classes, assigning higher minimum

[394] For example, for an investment grade corporate bond, the banking organization would be required to assign a liquidity horizon of sixty days rather than forty days, if the associated credit spread risk factor was a type A non-modellable risk factor.

liquidity horizons to type A non-modellable risk factors could appropriately capture the inherently higher model and liquidity risk of such risk factors.

The agencies recognize that implementing this alternative approach could increase the operational burden associated with the proposal. This alternative may also increase variability in the market risk capital requirements across banking organizations, if banking organizations are also allowed to increase the minimum liquidity horizon assigned to modellable risk factors to align with the higher minimum liquidity horizon assigned to type A non-modellable risk factors, as under the current proposal. Accordingly, to capture the elevated model and liquidity risk of type A non-modellable risk factors in a consistent manner across banking organizations without imposing undue operational burden, the proposal would require banking organizations to include type A non-modellable risk factors in both IMCC and SES.

Question 143: The agencies request comment on the appropriateness of the proposed requirements for the risk factors included in the models-based non-default capital requirement. What, if any, alternative requirements should the agencies consider, such as requiring risk factor coverage to align with the financial reporting models, and why? Specifically, please describe any operational challenges and impact on banking organizations' minimum capital requirements that requiring the expected shortfall model to align with the financial reporting models would create relative to the proposal.

Question 144: The agencies seek comment on whether it is appropriate to include type A non-modellable risk factors within IMCC and SES calculations. What, if any, adjustments (such as permitting banking organizations to treat type A non-modellable risk factors as type B non-modellable risk factors) should the agencies consider to more appropriately reflect type A non-

modellable risk factors within the models-based non-default capital requirement and why? Commenters are encouraged to provide supporting data.

Question 145: The agencies seek comment on whether the alternative approach described above would more appropriately capture the inherently higher model and liquidity risk associated with a type A non-modellable risk factors due to infrequent price observations. What would be advantages and disadvantages of requiring a higher minimum liquidity horizon for type A non-modellable risk factors to capture their risks within IMCC? How would banking organizations implement and ensure consistency in the appropriate treatment of these risk factors when there is already flexibility to scale up liquidity horizons above the minimum requirement for both modellable risk factors and non-modellable risk factors? What would be the impact on capital requirements of capturing type A non-modellable risk factors with a higher minimum liquidity horizon only within the IMCC calculation? What, if any, other alternative approaches should the agencies consider to more appropriately capture the risks of type A non-modellable risk factors (for example, applying capital multiplier (m_c) adjustment to the 60-day average IMCC when it incorporates type A non-modellable risk factors), and why? In such cases, what would be the appropriate higher capital multiplier for the IMCC? What are the advantages and disadvantages of using a higher capital multiplier (m_c) adjustment to the 60-day average IMCC as shown in the example table below in place of the higher minimum liquidity horizon?

Number of Backtesting Exceptions	Multiplication factor for (m_c)
0	1.70
1	1.70
2	1.70
3	1.70
4	1.70
5	1.90

6	1.96
7	2.03
8	2.08
9	2.12
10 or more	2.20

i. *Qualitative test*

To help ensure the appropriateness of the data and other information used to calibrate the expected shortfall models for the IMCC, the proposal would establish data quality requirements for risk factors to be eligible for inclusion within the IMCC. A risk factor that fails to meet any of the following six proposed data quality requirements would be a type B non-modellable risk factor, excluded from the calculation of IMCC and subject to the more conservative treatment within the SES calculation.

First, the proposal would require the data used in the expected shortfall models to calculate the IMCC to capture both the systematic risk and idiosyncratic risk, as applicable, of a risk factor, so that the IMCC appropriately reflects the potential losses arising from the risk factor.

Second, the proposal would require the data used to calculate the expected shortfall-based measure to reflect the volatility and correlation of risk factors of model-eligible positions. Different data sources can provide dramatically different volatility and correlation estimates for asset prices. When selecting the data sources to be used in calculating the IMCC, a banking organization should assess the quality and relevance of the data to ensure it would be appropriately representative of real prices, not understate price volatility, and accurately reflect the correlation of asset prices, rates across yield curves, and volatilities within volatility surfaces.

Third, the proposal would generally require that the data used to calculate the expected shortfall-based measure reflect prices observed or quoted in the market. For any data not derived from real prices, the banking organization must be able to demonstrate that such data are reasonably representative of real prices. A banking organization should periodically reconcile the price data used to calibrate its expected shortfall models for the IMCC with that used by its financial reporting[395] and internal risk management models, to confirm the validity of the price data used to calculate the IMCC.

Fourth, the proposal would require a banking organization to update the data at a sufficient frequency to accurately reflect the performance of the risk factor, at a minimum on a weekly basis. While generally banking organizations should strive to update the data inputs as frequently as possible, the proposal would only require banking organizations to update the data on a weekly basis, as requiring large data sets to be updated more frequently may pose significant operational challenges.[396] The proposal would also require a banking organization that uses regressions to estimate risk factor parameters to re-estimate the parameters on a regular basis. In addition, the agencies would expect a banking organization to calibrate its expected shortfall models to current market prices at a sufficient frequency to accurately reflect the performance of the risk factor, ideally no less frequently than the calibration of financial reporting models. The proposal would also require a banking organization to have clear policies and procedures for updating the sources of data used as well as for backfilling and gap-filling missing data.

[395] As described in section V.A.6.d. of this **SUPPLEMENTARY INFORMATION**, the term "financial reporting models" used throughout this section is intended to refer to the models a banking organization uses to report actual profits and losses for financial reporting purposes.

[396] For example, a banking organization that relies on a third-party provider may not be able to receive updated data on a real time or daily basis.

Fifth, in determining the liquidity horizon-adjusted expected shortfall-based measure within IMCC, a banking organization that uses a reduced set of risk factors to calculate the expected shortfall-based measure[397] would be required to use data that are reflective of market prices observed or quoted in the twelve-month historical stress period used by the expected shortfall model.[398] Under the proposal, banking organizations should source the data directly from the historical stress period, whenever possible. There may be cases where the characteristics of positions currently being traded in the market differ from those traded during the historical stress period used by the expected shortfall model. The proposal would require a banking organization to empirically justify any instance where the market prices used for the historical stress period in the expected shortfall calculation differ from the market prices actually observed for that period. For model-eligible positions that did not exist during the historical stress period, the proposal would require banking organizations to demonstrate that the prices used match changes in the prices or spreads of similar instruments traded during that period.

Sixth, the proposal would allow the data for risk factors to include proxies if the banking organization is able to demonstrate the appropriateness of such proxies to the satisfaction of the primary Federal supervisor. At a minimum, a banking organization would be required to have sufficient evidence demonstrating the appropriateness of the proxies, such as an appropriate track record for their representation of model-eligible positions. Additionally, any proxies used would

[397] As discussed in section V.A.8.b.i. of this **SUPPLEMENTARY INFORMATION**, a banking organization may elect to either use (1) the full set of risk factors employed by its internal risk management models and directly calculate the daily expected shortfall measure under the selected twelve-month historical stress period or (2) an appropriate subset of risk factors to estimate the potential losses that would be incurred throughout the selected stress period, which would require the banking organization to estimate a daily expected shortfall measure for both the current and stress period.

[398] As described in more detail in section V.A.8.b.iii. of this **SUPPLEMENTARY INFORMATION**, for purposes of calculating the IMCC daily expected shortall measures, the proposal would require a banking organization to use the twelve-month historical stress period in which its model-eligible positions on model-eligible trading desks would experience the largest loss.

be required to (1) exhibit sufficiently similar characteristics to the transactions they represent in terms of volatility level and correlations, and (2) be appropriate for the region, credit spread cohort, quality, and type of instrument they are intended to represent.

Even if a risk factor satisfies each of the six proposed data quality requirements, a banking organization's primary Federal supervisor may determine the data inputs to be unsuitable for use in calculating the IMCC (for example, where the data inputs reflect variation that is less than the bid-ask spread for a product). Any risk factor that does not satisfy the proposed data quality requirements would be a type B non-modellable risk factor, which the banking organization would be required to exclude from the IMCC calculation and include in the more conservative SES calculation.

Question 146: The agencies request comment on the appropriateness of the proposed data quality requirements for risk factors. What, if any, challenges might the proposed requirements pose for banking organizations? What, if any, additional requirements should the agencies consider to help ensure the data used to calculate the IMCC appropriately capture the potential losses arising from modellable and type A non-modellable risk factors?

Question 147: The agencies request comment on the appropriateness of requiring banking organizations to re-estimate parameters in line with the frequency specified in their policies and procedures. What, if any, challenges might this pose for banking organizations?

ii. *Quantitative test*

For risk factors that pass the qualitative test, the banking organization would then need to determine whether there are a sufficient number of real prices in the prior twelve months (quantitative test) for the risk factor to qualify as a modellable risk factor. The quantitative test

would require a banking organization to establish buckets for each relevant risk factor or set of risk factors, and assign real prices to the relevant bucket(s). If the number of real prices allocated to the bucket equals or exceeds the minimum number required under the proposal, the risk factor would qualify as a modellable risk factor.

I. Real Price

To perform the quantitative test, the proposal would first require a banking organization to map real prices observed over the prior twelve months to each of the risk factors that affect the value of the model-eligible positions. For example, as the price of a typical corporate bond fluctuates primarily due to changes in interest rates and issuer credit spreads, a banking organization could map the price of a corporate bond to a credit spread risk factor and an interest rate risk factor. The proposal would define a real price as (1) a price at which the banking organization has executed a transaction, (2) a price provided by an exchange, a qualifying central counterparty, a sovereign entity, a specified supranational entity, or a multilateral development bank, (3) a verifiable price for an actual transaction between third parties transacting at arm's length or obtained from a bona fide competitive bid or offer made by the banking organization itself or another party transacting at arm's length, subject to certain conditions discussed below.

The agencies recognize that a banking organization may need to obtain pricing information from third parties to demonstrate the market liquidity of the underlying risk factors, and this may pose unique challenges for validation and other model risk management activities. Therefore, the proposed definition of a real price would generally limit recognition of prices obtained from third-party providers to only those for which (1) the transaction, bid, or offer has

been processed through a third-party provider, or (2) the third-party provider agrees to provide evidence of the transaction, bid, or offer to the banking organization upon request.[399]

In certain cases, obtaining information on the prices of individual transactions from third parties may raise legal concerns for a banking organization, a third-party provider, or both.[400] Therefore, the proposal would allow a banking organization to consider information obtained from a third party on the number of corresponding real prices observed and the dates at which they have been observed in determining whether a risk factor satisfies the quantitative test, if the banking organization is able to appropriately map this information to the risk factors relevant to the model-eligible positions. For a banking organization to be able to use such information for determining the model eligibility of a risk factor, the proposal would require that either the third-party provider's internal audit function or another external party audit the validity of the third-party provider's pricing information. Additionally, the proposal would require that the results and reports of the audit either be made public or available upon request to the banking organization.[401]

The additional requirements described above for prices or other information obtained from third parties to qualify as a real price for purposes of the quantitative test would allow

[399] The additional requirements for prices or other information obtained from third parties to qualify as a real price would not apply to prices (1) obtained from an exchange or a qualifying central counterparty, or (2) provided by an exchange, a qualifying central counterparty, a sovereign entity, a specified supranational entity or a multilateral development bank. As such entities are subject to extensive regulation and oversight (including requirements regarding maintaining accurate data), the proposed requirements are unnecessary to assess the validity of the prices or other information obtained from such third-parties.

[400] Banking organizations must ensure that exchanges of price information among competitors or with third parties are not likely to include acts or omissions that could result in a violation of antitrust laws, including the Sherman Act, 15 U.S.C. 1 *et seq.*, and the Federal Trade Commission Act, 15 U.S.C. 41 *et seq.*

[401] If the audit on the third-party provider is not satisfactory to a banking organization's primary Federal supervisor (for example, the auditor does not meet the independence or expertise standards of U.S. securities exchanges), the supervisor may determine that data from the third-party provider may not be used for purposes of the quantitative test.

banking organizations to appropriately demonstrate the market liquidity of a risk factor, while also ensuring there is sufficient documentation for the banking organization and the primary Federal supervisor to assess the validity of the prices or other information obtained from a third party.

Question 148: What, if any, other information should the agencies consider in defining a real price that would better demonstrate the market liquidity for risk factors, such as valuations of individual derivative contracts for the purpose of exchanging variation margin? What, if any, conditions or limitations should the agencies consider applying to help ensure the validity of such information, such as only allowing information related to individual derivative transactions to qualify as a real price and not information provided on a pooled basis or subject to a loss threshold or minimum transfer requirement for exchanging variation margins?

II. Bucketing approach

Under the proposal, a banking organization would be required to (1) establish buckets for each relevant risk factor or set of risk factors, and (2) assign real prices to each relevant bucket to determine whether each bucket has the minimum number of real price observations to satisfy the quantitative test. A banking organization could choose to apply either its own bucketing approach or the standard bucketing approach. As the choice of approach is at the risk factor level, the proposal would allow a banking organization to adopt its own bucketing approach for some risk factors and the standard bucketing approach for others. The number of buckets should be driven by the banking organization's trading strategies. For example, a banking organization with a complex portfolio across many points on the yield curve could elect to define more granular buckets for interest rate risk, such as separate 3-month and 6-month buckets, than those prescribed under the standard bucketing approach, which puts all maturities of less than 9

months in one bucket. Conversely, a banking organization with less complex products could elect to use the less granular standard bucketing approach.

Table 1 to §__.214 of the proposal provides the proposed buckets a banking organization would be required to use to group real prices under the standard bucketing approach. The proposal would define the buckets under the standard bucketing approach based on the type of risk factor, the maturity of the instruments used for the real prices, and the probability that an option has value (is "in the money") at the maturity of the instrument.[402] The proposed buckets are intended to balance between the granularity of the risk factors allocated to each standardized bucket and the compliance burden of tracking and mapping the allocation of real prices to more granular buckets, especially as market conditions change. Too frequent re-allocation of real prices may lead to artificial and unwarranted regulatory capital requirement volatility.

When using its own bucketing approach, a banking organization would be able to define more granular buckets than those prescribed under the standard bucketing approach. While the use of more granular buckets could facilitate a model-eligible trading desk's ability to pass the proposed PLA test, it would also render the quantitative test more challenging as the banking organization would need to source a sufficient number of real prices for each additional bucket. Therefore, the proposal would provide a banking organization the flexibility to define its own bucketing structures and would place an additional operational burden on the banking organization to demonstrate the appropriateness of using a more granular bucketing structure.

[402] Whether an option has value (is "in the money") at the maturity of the instrument depends on the relationship between the strike price of the option and the market price for the underlying instrument (the spot price). A call option has value at maturity if the strike price is below the spot price. A put option has value at maturity if the strike price is above the spot price.

As positions mature, a banking organization could continue to allocate real prices identified within the prior twelve months to the bucket that the banking organization initially used to reflect the maturity of such positions. Alternatively, the banking organization could re-allocate the real prices for maturing positions to the adjacent (shorter) maturity bucket. To avoid overstating the market liquidity of a risk factor, the proposal would allow the banking organization to count a real price observation only once, either in the initial bucket or the adjacent bucket to which it was re-allocated, but not in both.

To enable banking organizations' expected shortfall models to capture market-wide movements for a given economy, region, or sector, the proposal would allow, but not require, a banking organization to decompose risks associated with credit or equity indices into systematic risk factors[403] within its expected shortfall models.[404] The proposal would allow a banking organization, where possible, to consider real prices of market indices (for example, CDX.NA.IG and S&P 500 Index) and instruments of individual issuers as representative for a systematic risk factor as long as they share the same attributes (for example, economy, region, sector, and rating) as the systematic risk factor. The proposed treatment would allow banking organizations to align the treatment of real prices for market indices with those for single-name positions and, thus, provide greater hedging recognition.

To determine whether each bucket has the minimum number of real prices required to satisfy the quantitative test, the proposal would require a banking organization to allocate each real price to any bucket for which the price is representative of the risk factor(s) within the

[403] The proposal would define systematic risk factors as categories of risk factors that present systematic risk, such as economy, region, and sector. Systematic risk would be defined as the risk of loss that could arise from changes in risk factors that represent broad market movements and that are not specific to an issue or issuer.

[404] As banking organizations may not always be able to model each constituent of the index, the proposal would not require banking organizations to always decompose credit spread and equity risk factors.

bucket and to count all real prices mapped to a bucket. As real price may often be used to infer values for multiple risk factors, requiring banking organizations to assign real prices to all of the buckets for which it is representative would more accurately capture the market liquidity for the relevant risk factors.

Question 149: What, if any, modifications to the proposed bucketing structure should the agencies consider to better reflect the risk factors used to price certain classes of products. What would be the benefits or drawbacks of such alternatives compared to the proposed bucketing structure?

III. Minimum number of real price observations

For a risk factor to pass the quantitative test, the proposal would require a banking organization on a quarterly basis to identify a minimum number of real prices for the bucket corresponding to the relevant risk factor(s). Specifically, the proposal would require the banking organization to identify in the previous twelve-month period at least 24 real prices for the most liquid risk factors (those with a liquidity horizon of 20 days or less, as described in section V.A.8.b.ii. of this **SUPPLEMENTARY INFORMATION**) and at least 16 real prices for all other risk factors.

The proposed criteria are intended to help ensure real prices capture products that exhibit a minimum level of trading activity throughout the year. Aligning the minimum number of real prices required to pass the quantitative test with the liquidity horizon assigned to the risk factor in the IMCC calculation is intended to enhance the risk sensitivity of the models-based non-default capital requirement. The longer liquidity horizons assigned to less liquid risk factors within the IMCC calculation should appropriately capture the illiquidity of such risk factors. As

such, the proposal would require a banking organization to identify fewer real prices for less liquid risk factors to pass the quantitative test and qualify as modellable risk factors.

For risk factors associated with new issuances, the proposal would allow a banking organization to consider the observation period for purposes of the quantitative test to begin on the issuance date and pro-rate the minimum number of real prices required to pass the quantitative test until twelve months after the issuance date. For example, for a bond that was issued six months prior, the proposal would require at least 8 real prices for the bucket relating to for the issuer credit spread risk, prorated from the 16 real price annual requirement.

For any model-eligible position, the banking organization could not count more than one real price in any single day and would be required to count the real price for all of the buckets for which it is representative. The agencies recognize that the banking organization may use a combination of internal and external data for the quantitative test. When a banking organization relies on external data, the real prices may be provided with a time lag. Therefore, the proposal would allow the banking organization to use a different time period for purposes of the quantitative test than that used to calibrate the expected shortfall model, if such difference is not greater than one month. Together, these requirements are intended to help ensure that real prices capture more accurately the market liquidity for the relevant risk factors and prevent outdated prices from being used as model inputs.[405]

If a bucket contains a sufficient number of real prices to pass the quantitative test, the risk factor(s) within that bucket would qualify as a modellable risk factor. Risk factors that pass both

[405] For example, if several transactions occur on day one, followed by a long period for which there are no real price observations, the proposal would prevent a banking organization from using the outdated day-one prices to estimate the fair value of its current model-eligible positions on model-eligible trading desks.

the quantitative and qualitative tests would be deemed modellable and included in the IMCC, but not the SES.

Question 150: What, if any, restrictions on the minimum observation period for new issuances should the agencies consider and why?

Question 151: What, if any, operational challenges could the proposed quantitative test pose? What, if any, changes should the agencies consider making to the quantitative test, such as excluding risk factors from the quarterly real price observation requirement if the banking organization can demonstrate the substantial market depth and liquidity of such risk factors over time? What criteria (such as exchange listing criteria for the New York Stock Exchange) should the agencies consider to appropriately differentiate between risk factors with liquid and deep markets that should be subject to the qualitative test only once versus those that should be subject on a quarterly basis, and why?

Question 152: The agencies seek comment on the framework of identifying a minimum number of real prices for the bucket corresponding to the relevant risk factor(s) in order to pass the quantitative test. Specifically, the agencies seek comment on adjusting the real price observations based on liquidity horizons for risk factor category. For example, for investment grade corporate positions (the credit spread risk category) with a liquidity horizon of 40 days, a banking organization would be required to have at least 8 real price observations for the risk factor in the last 12 months to be able to pass the quantitative test. What would the advantages and disadvantages of this approach and why?

b. Internally modelled capital calculation (IMCC)

The IMCC is intended to capture the estimated losses for model-eligible positions arising from changes in modellable and type A non-modellable risk factors over a twelve-month historical period of substantial market stress. As described in this section, the IMCC would begin with the calculation of a daily expected shortfall-based measure over a twelve-month historical stress period on both an entity-wide level for each risk class and on an entity-wide level across risk classes for all model-eligible positions, each of which then would be adjusted using risk-factor specific liquidity horizons.[406]

While the proposal would allow a banking organization's expected shortfall models to use any generally accepted modelling approach (for example, variance-covariance models, historical simulations,[407] or Monte Carlo simulations) to calculate the expected shortfall-based measure, the proposal would require the models to satisfy the proposed backtesting and PLA testing requirements on an on-going basis to help ensure that the models are functioning effectively over time as conditions and model applications change.[408]

Additionally, the proposal would require a banking organization's expected shortfall models to appropriately capture the risks associated with options, including non-linear price characteristics, within each of the risk classes, as well as correlation and relevant basis risks, such as basis risks between credit default swaps and bonds. For options, at a minimum, the proposal would require a banking organization's expected shortfall models to have a set of risk

[406] As discussed in section V.A.8.b.i. of this **SUPPLEMENTARY INFORMATION**, if a banking organization elects to use a subset of modellable risk factors to estimate the potential losses that would be incurred throughout the selected stress period, the proposal would require the banking organization to estimate a daily expected shortfall measure for the current period as well as the historical stress period.

[407] The proposal would allow a banking organization to use filtered historical simulation, as the approach generally reflects current volatility and would maintain equal weighting of the observations by rescaling all of the observations.

[408] *See* sections V.A.8.e. and V.A.8.f. of this **SUPPLEMENTARY INFORMATION** for further discussion on the proposed desk-level PLA testing and backtesting requirements, respectively.

factors that capture the volatilities of the underlying rates and prices and model the volatility surface across both strike price and maturity, which are necessary inputs for appropriately valuing the options.

i. *Expected shortfall-based measure*

To reflect the potential losses arising from the risk factors throughout an appropriately severe, historical twelve-month period of stress (as described in section V.A.8.b.iii. of this **SUPPLEMENTARY INFORMATION**), the proposal would require a banking organization to use one or more expected shortfall models to calculate on each business day an expected shortfall-based measure using a one-tail, 97.5^{th} percentile confidence interval at the entity-wide level for each risk class and across all risk classes for all model-eligible positions.[409]

To calculate the daily expected shortfall-based measure, a banking organization would apply a base liquidity horizon of 10 days (the shortest liquidity horizon applicable to any risk factor category) to either the full set of risk factors for its model-eligible positions or an appropriate subset of risk factors throughout the twelve-month historical stress period (base expected shortfall). Requiring a banking organization to directly estimate the potential change in value of each of its model-eligible positions arising from the full set of risk factors throughout the twelve-month historical stress period may pose significant operational challenges. For example, a banking organization may not be able to source sufficient data for all risk factors during the identified twelve-month historical stress period. Thus, the proposal would allow a banking organization to use either the full set of risk factors employed by the expected shortfall

[409] The proposal would also require banking organizations to calculate a daily expected shortfall-based measure at the trading desk level for the purposes of backtesting to calculate the PLA add-on. *See* section V.A.8.f. of this **SUPPLEMENTARY INFORMATION** for further discussion.

models (direct approach) or an appropriate subset (indirect approach) to estimate the losses that would be incurred throughout the twelve-month historical stress period.[410]

Under the direct approach, the banking organization would directly calculate the daily expected shortfall measure at the entity-wide level for each risk class and across all risk classes for all model-eligible positions throughout the twelve-month historical stress period and then apply the liquidity horizon adjustments discussed in the following section.

Under the indirect approach, a banking organization would use a reduced set of risk factors in IMCC to estimate the losses that would be incurred throughout the twelve-month historical stress period for the full set of risk factors. The proposal would require a banking organization using the indirect approach to calculate three separate daily expected shortfall measures at the entity-wide level for each risk class and at the entity-wide level across risk classes: one using a reduced set of risk factors for the twelve-month historical stress period, one using the same reduced set of risk factors for the current period, and one using the full set of risk factors for the current period. Similar to the direct approach, the proposal would require the banking organization to apply the liquidity horizon adjustments discussed in the following section to each of the three expected shortfall measures to approximate the entity-wide liquidity horizon-adjusted expected shortfall-based measures for the full set of risk factors in stress.

[410] In calculating the IMCC, a banking organization could use other data than that used to demonstrate the market liquidity of a risk factor for purposes of the quantitative test, provided that such data satisfy the qualitative test. Alternative sources may provide updated data more frequently than would otherwise be available from those used to obtain real prices. For example, banking organizations may be able to obtain updated data more frequently from internal systems than from third-party providers. Additionally, in certain cases, a banking organization may not be able to use the real prices to calculate the IMCC. For example, a banking organization may receive data from a third-party provider on the dates and number of real prices, as described in section V.A.8.a.ii.I. of this **SUPPLEMENTARY INFORMATION**. While such data demonstrates the liquidity of a risk factor for purposes of the quantitative test, without the transaction prices, such real prices would not provide any value to calibrate potential losses for a particular risk factor.

Specifically, the proposal would require banking organizations that use the indirect approach to multiply the liquidity horizon-adjusted expected shortfall-based measure for the historical stress period based on the reduced set of risk factors ($ES_{R,S}$) by the ratio of the liquidity horizon-adjusted expected shortfall-based measure in the current period based on the full set of risk factors ($ES_{F,C}$) to the liquidity horizon-adjusted expected shortfall-based measure using the reduced set of risk factors based on the most recent twelve-month period ($ES_{R,C}$), as provided according to the following formula under §__.215(b)(6)(ii)(B) of the proposed rule:

$$ES = ES_{R,S} \cdot max\left(1, \frac{ES_{F,C}}{ES_{R,C}}\right)$$

The proposal would floor this ratio at one to prevent a reduction in capital requirements due to using the reduced set of risk factors.

Additionally, the proposal would require the entity-wide liquidity horizon-adjusted expected shortfall-based measure for the current period based on the reduced set of risk factors ($ES_{R,C}$) to explain at least 75 percent of the variability of the losses estimated by the liquidity horizon-adjusted expected shortfall-based measure in the current period for the full set of risk factors ($ES_{F,C}$) over the preceding 60 business days. Under the proposal, compliance with the 75 percent variation requirement would be determined based on an out-of-sample R^2 measure, as defined according to the following formula under §__.215(b)(5)(ii)(C) of the proposed rule:

$$1 - \frac{\sum_{h=t-60}^{t-1}\left(ES_{F,C,h} - ES_{R,C,h}\right)^2}{\sum_{h=t-60}^{t-1}\left(ES_{F,C,h} - Mean\left(ES_{F,C}\right)\right)^2}$$

Where,

$ES_{F,\mathrm{C,h}}$ is the liquidity horizon-adjusted ES-based measure based on the most recent 12-month observation period (the current ES-based measure) using the full set of risk factors calculated at date *h*, which ranges from one day prior to date *t* to 60 days prior to date *t*;

$ES_{R,\mathrm{C,h}}$ is the current liquidity horizon-adjusted ES-based measure using the reduced set of risk factors calculated at date *h*, which ranges from one day prior to date *t* to 60 days prior to date *t*; and

$Mean\left(ES_{F,C}\right)$ is the mean of $ES_{F,\mathrm{C}}$ over the previous 60 business days.

This formula is intended to help ensure that the potential losses estimated under the indirect approach appropriately reflect those that would be produced by the full set of modellable risk factors, if the historical stress were to occur in the current period.

Furthermore, to help ensure the accuracy of this comparison, the proposal would require a banking organization that uses the indirect approach to update the reduced set of risk factors whenever it updates its twelve-month historical stress period, as described in section V.A.8.b.iii. of this **SUPPLEMENTARY INFORMATION**. The proposal would also require the reduced set of risk factors used to calculate the liquidity horizon-adjusted expected shortfall-based measure for the twelve-month historical stress period in IMCC to have a sufficiently long history of observations that satisfies criteria five within the qualitative risk factor eligibility test, as described in section V.A.8.a.i. of this **SUPPLEMENTARY INFORMATION**. In this manner, the proposal would hold the inputs used for the indirect approach to the same data quality standards requirements as those for inputs used in the direct approach.

Question 153: The agencies request comment on the appropriateness of requiring the election of either the direct or the indirect approach to be made at the entity-wide level for all risk factors of model-eligible positions on model-eligible trading desks. What, if any, alternatives

should the agencies consider that would enable banking organizations' expected shortfall models to more accurately measure potential losses under the selected stress period, such as allowing banking organizations to make this election at the level of the trading desk, risk class, or risk factor?

ii. *Liquidity horizon adjustments*

To capture appropriately the potential losses from the longer periods of time needed to reduce the exposure to certain risk factors (for example, by selling assets or entering into hedges), a banking organization would assign each risk factor in IMCC to a proposed minimum liquidity horizons, as specified in Table 2 to § __.215 of the proposed rule.

Table 2 to §__.215. Liquidity horizon, *n* (number of days), by risk factor category

Risk factor category	*n*	Risk factor category	*n*
Interest rate and inflation: specified currencies - EUR, USD, GBP, AUD, JPY, SEK, CAD, and the domestic currency of the banking organization	10	Equity (small market cap): volatility	60
Interest rate and inflation: unspecified currencies	20	Equity: other types	60
Interest rate: volatility	60	Foreign exchange rate: specified currency pairs[411]	10
Interest rate: other types	60	Foreign exchange rate: currency pairs	20
Credit spread: Sovereign exposures, MDBs and specified supranational entities (investment grade)	20	Foreign exchange: volatility	40
Credit spread: Sovereign exposures, MDBs and specified supranational entities	40	Foreign exchange: other types	40

[411] Any currency pair formed by the following list of currencies: USD, EUR, JPY, GBP, AUD, CAD, CHF, MXN, CNY, NZD, HKD, SGD, TRY, KRW, SEK, ZAR, INR, NOK, BRL, and any additional currencies specified by the primary Federal supervisor.

(speculative grade and sub-speculative grade)			
Credit spread: GSE debt	40	Energy and carbon emissions trading price	20
Credit spread: corporate positions (investment grade)	40	Precious metals and non-ferrous metals price	20
Credit spread: corporate positions (speculative grade and sub-speculative grade)	60	Other commodities	60
Credit spread: volatility	120	Energy and carbon emissions trading price: volatility	60
Credit spread: other types	120	Precious metals and non-ferrous metals price: volatility	60
Equity (large market cap or index)	10	Other commodities: volatility	120
Equity (small market cap)	20	Commodity: other types	120
Equity (large market cap or index): volatility	20		

The proposed liquidity horizons (10, 20, 40, 60, and 120 days) would vary across risk factors, with longer horizons assigned to those that would require longer periods of time to sell or hedge. For each model-eligible trading desk, the proposal would generally require banking organizations to assign the same minimum liquidity horizon to each risk factor within the same risk categories as specified in Table 2 to § __.215 for all model-eligible positions, with two exceptions.

For instruments with a maturity shorter than the respective liquidity horizon assigned to the risk factor, the proposal would require banking organizations to use the next longer liquidity horizon compared to the maturity of the model-eligible position. For example, if an investment grade corporate bond matures in nineteen days, the proposal would require a banking organization to assign the associated credit spread risk factor a liquidity horizon of twenty days rather than the proposed forty-day liquidity horizon.

To map liquidity horizons for multi-underlying instruments, such as credit and equity indices, the proposal would require a banking organization to take a weighted average of the

liquidity horizons of risk factors corresponding to the underlying constituents and the respective weighting of each within the index and use the shortest liquidity horizon that is equal to or longer than the weighted average.[412] Furthermore, the proposal would require a banking organization to apply a consistent liquidity horizon to both the inflation risk factors and interest rate risk factors for a given currency, as specified in Table 2 to §__.215 of the proposal.

The proposal would also specify the applicable liquidity horizon for non-securitization positions issued by GSEs, as such instruments are unique to the United States. Consistent with the current capital rule, the proposal would assign a longer forty-day liquidity horizon to debt instruments issued by the GSEs, as such instruments are not as liquid or readily marketable as U.S. Treasury securities and other exposures directly and unconditionally backed by the full faith and credit of the United States (such as mortgage-backed securities issued by Ginnie Mae). Additionally, as multilateral development banks and specified supranational entities have similar liquidity risk profiles as sovereign exposures, the proposal would require banking organizations to apply the liquidity horizons applicable to sovereigns to multilateral development banks and specified supranational entities. Together, the proposed treatment is intended to promote consistency and comparability in regulatory capital requirements across banking organizations and to help ensure appropriate capitalization of such positions under the proposed market risk framework.

To encourage sound risk management and enable banking organizations and the agencies to appropriately evaluate the conceptual soundness of the expected shortfall models used to calculate the IMCC, the proposal would require a banking organization to have in place internal

[412] A weighted average would be based on the market value of the instruments with the same liquidity horizon.

risk management systems and processes for performing risk factor mappings consistently over time. Additionally, the proposal would require a banking organization to map each of its risk factors to one of the risk factor categories and the corresponding liquidity horizon in a consistent manner on a quarterly basis to help ensure that the selected historical stress period continues to appropriately reflect potential losses for the risk factors of model-eligible positions over time.[413]

To conservatively recognize empirical correlations across risk classes, the proposal would require a banking organization to calculate the liquidity horizon-adjusted expected shortfall-based measure both at the entity-wide level for each risk class and at the entity-wide level across risk classes for all model-eligible positions. To calculate the entity-wide liquidity horizon-adjusted expected shortfall-based measure for each risk class, the banking organization would (1) calculate the ten-day base expected shortfall measure for each risk factor category as specified in Table 2 to §__.215 of the proposal, (2) scale up the ten-day base expected shortfall measure using the longer proposed liquidity horizons for each risk factor category within the same risk class. When scaling up the ten-day base expected shortfall measure for the risk factor category(s) assigned a liquidity horizon of more than ten-days within the same risk class, the banking organization would hold all other risk factors, including those within the same risk class but assigned a shorter liquidity horizon, constant to appropriately reflect the incremental losses attributable to the specific risk factor categories within the same risk class over the longer proposed liquidity horizon. In this manner, the proposal would require a banking organization to calculate separately the liquidity horizon-adjusted expected shortfall-based measure for risk

[413] As described in section V.A.8.b.iii. of this **SUPPLEMENTARY INFORMATION**, the proposal would require banking organizations to calculate the entity-wide expected shortfall-based measures for each risk class and across risk classes using the twelve-month historical stress period in which either the full or reduced set of risk factors would incur the largest loss.

factors within the same risk class at each proposed liquidity horizon consecutively, starting with the shortest (ten days). Specifically, for each risk factor category within the same risk class, a banking organization would first compute the potential loss over the zero to ten-day period,[414] then the potential loss over the subsequent ten- to twenty-day period—assuming that its exposure to risk factors within the ten-day liquidity horizon has been eliminated—and continue this calculation for each of the proposed liquidity horizons, as described in Table 1 to §__.215 of the proposed rule. A banking organization would then aggregate the losses for each period to determine the total liquidity horizon-adjusted expected shortfall-based measure for the risk class.

The liquidity horizon-adjusted expected shortfall-based measure for each risk class would reflect both the losses under the expected shortfall-based measure and the incremental losses at each proposed liquidity horizon, according to the following formula, as provided under §__.215(b)(3) of the proposed rule:

$$ES = \sqrt{\left(ES_T(P)\right)^2 + \sum_{j \geq 2} \left(ES_T(P,j) \sqrt{\frac{\left(LH_j - LH_{j-1}\right)}{T}} \right)^2}$$

where,

ES is the liquidity horizon-adjusted expected shortfall-based measure;

T is the length of the base liquidity horizon, 10 days;

$ES_T(P)$ is *ES* at base liquidity horizon *T* of a portfolio with market risk covered positions *P*;

[414] When computing losses over the zero to ten-day period, the proposal would require a banking organization to floor the time period for extinguishing its exposure to a risk factor exposure at ten days. For example, if an instrument would mature in two days, the banking organization must still calculate the potential losses assuming a ten-day liquidity horizon.

$ES_T(P,j)$ is the *ES* at base liquidity horizon *T* of a portfolio with market risk covered positions *P* for all risk factors whose liquidity horizon is at least as long as the liquidity horizon corresponding to the index value, *j*, LH_j, as specified in Table 1 to §__.215 of the proposed rule;

LH_j is the liquidity horizon corresponding to the index value, *j*, specified in Table 1 to §__.215 of the proposed rule.

To calculate the liquidity horizon-adjusted expected shortfall-based measure at the entity-wide level across risk classes for all model-eligible positions, a banking organization would scale up the ten-day expected shortfall-based measure for all risk factors assigned either the same or a longer liquidity horizon, without distinguishing between risk classes. Otherwise, the process to calculate the entity-wide liquidity horizon-adjusted expected shortfall-based measure would be the same as the risk-class level calculation.

For example, assume that a banking organization would be required to calculate the liquidity horizon-adjusted expected shortfall-based measure for a single, USD denominated, investment grade corporate bond, whose price is driven by two risk factors, interest rate risk and credit spread risk. Under the proposal, the banking organization would calculate the expected shortfall-based measure for both interest rate risk and credit risk factors using the ten-day liquidity horizon, as expressed by $ES_T(P)$ in the above formula. According to Table 2 to §__.215 in the proposed rule, the liquidity horizon for interest rate risk denominated in USD is ten days and the liquidity horizon for credit spread risk of investment grade issuers is forty days. Therefore, the banking organization would not extend the liquidity horizon for interest rate risk factor but would for the credit spread risk factor. To determine the liquidity horizon-adjusted expected shortfall-based measure for the credit spread risk factor, the banking organization

would (1) scale the credit spread risk factor by the square root of the incremental increase in time (one for liquidity horizon from ten to twenty days and the square root of two for liquidity horizon from twenty to forty days),[415] (2) add the resulting liquidity horizon adjustment for credit spread risk factor, as expressed by the second term in the above formula and repeated below, to the base ten-day liquidity horizon squared, and (3) calculate the square root of the sum of (1) and (2):

$$\sum_{j\geq 2}\left(ES_T(P,j)\sqrt{\frac{\left(LH_j - LH_{j-1}\right)}{T}}\right)^2$$

As described above, the proposal would require the banking organization to perform this calculation for all model-eligible positions at the entity-wide level across risk classes and separately at the entity-wide level for each risk class, such as interest rate risk and credit spread risk. The proposal would require the banking organization to use the results of these calculations as inputs into the overall models-based non-default capital requirement, described in more detail below in section V.A.8.b.iv. of this **SUPPLEMENTARY INFORMATION**.

Question 154: What, if any, risk factors exist that would not be captured by the proposal for which the agencies should consider designating a specific liquidity horizon and why?

Question 155: The agencies request comment on the appropriateness of assigning a liquidity horizon for multi-underlying instruments based on the weighted average of the liquidity horizons for the risk factors corresponding to the underlying constituents and the respective weighting of each within the index. What, if any, alternative methodologies should the agencies

[415] The incremental increase in time is represented by the difference in the liquidity horizons, $LH_j - LH_{j-1}$. In the example, the incremental increase in time for the liquidity horizon of twenty days and forty days would be twenty days (forty days minus twenty days). The incremental increase in time is divided by the base horizon of ten days. Thus, the time scaling factor for credit spread risk is the square root of two.

consider, such as assigning the liquidity horizon for credit and equity indices based on the longest liquidity horizon applicable to the risk factors corresponding to the underlying constituents? What would be the benefits and drawbacks of such alternatives compared to the proposal? Commenters are encouraged to provide data to support their responses.

Question 156: The agencies request comment on the appropriateness of requiring banking organizations to use the next-longer liquidity horizon for instruments with a maturity shorter than the respective liquidity horizon assigned to the risk factor. What, if any, operational challenges might this pose for banking organizations? How could such concerns be mitigated while still ensuring consistency and comparability in regulatory capital requirements across banking organizations?

iii. *Stress period*

To appropriately account for potential losses in stress, the proposal would require a banking organization to calculate the entity-wide expected shortfall-based measures for each risk class and across risk classes described in section V.A.8.b.i. of this **SUPPLEMENTARY INFORMATION** using the twelve-month historical stress period during which its model-eligible positions would experience the largest loss according to the banking organizations' policies and procedures approved by its primary Federal supervisor. To identify the appropriate stress period, the proposal would require a banking organization to consider all twelve-month periods spanning back to at least 2007 and, depending on whether the banking organization elected to employ the direct or indirect approach, select the period in which either the full or

reduced set of risk factors would incur the largest loss.[416] The proposal would require a banking organization to equally weight observations within each twelve-month historical stress period when selecting the appropriate stress period.

To help ensure that the twelve-month historical stress period continues to appropriately reflect potential losses for the risk factors of model-eligible positions over time, the proposal would require a banking organization to review and update the twelve-month historical stress period on at least a quarterly basis, if appropriate, or whenever there are material changes in the risk factors of model-eligible positions.

Question 157: The agencies seek comment on the appropriateness of requiring banking organizations to use the same reduced set of risk factors to both identify the appropriate twelve-month historical stress period and calculate the IMCCs. To what extent does the proposed approach provide banking organizations sufficient flexibility to appropriately capture the risk factors that may be present in some, but not all stress periods? What, if any, alternative approaches should the agencies consider that would better serve to capture such risk factors relative to the proposal?

Question 158: The agencies are considering options to define the largest loss when identifying the appropriate twelve-month historical stress period. For example, what are the advantages and disadvantages of defining the largest loss based on amounts banking organizations use for financial reporting, and why? What are the advantages and disadvantages of requiring firms to have policies and procedures approved by a banking organization's

[416] Under the proposal, a banking organization that has elected to use the direct approach would select the relevant stress period using the full set of modellable risk factors, while that using the indirect approach would use the reduced set of risk factors to select the stress period.

primary Federal supervisor to identify the twelve-month historical stress period during based on the largest loss, and why?

iv. *Total internal models capital calculations (IMCC)*

The proposal would require banking organizations to use the liquidity horizon-adjusted expected shortfall-based measures calculated throughout the twelve-month historical stress period at the entity-wide level for each risk class ($IMCC(C_i)$) and at the entity-wide level across risk classes ($IMCC(C)$) to calculate the IMCC for model-eligible positions. To constrain the empirical correlations and provide an appropriate balance between perfect diversification and no diversification across risk classes, the IMCC would equal half of the entity-wide liquidity horizon-adjusted expected shortfall-based measure across all risk classes plus half of the sum of the liquidity horizon-adjusted expected shortfall measures for each risk class, according to the following formula, as provided under §__.215(c)(4) of the proposed rule:

$$IMCC = \omega\big(IMCC(C)\big) + (1-\omega)\left(\sum_i IMCC(C_i)\right)$$

Where,

ω equals 0.5;

i is the index of risk classes, which are the following: interest rate risk, credit spread risk, equity risk, commodity risk and foreign exchange risk.

$IMCC(C)$ equals the aggregate liquidity horizon-adjusted ES-based measure across all risk classes; and

(iv) $IMCC(C_i)$ equals the partial liquidity horizon-adjusted ES-based measure for each risk class (i).

c. Stressed expected shortfall (SES) for non-modellable risk factors

Under the proposal, the SES for non-modellable risk factors would be similar to the IMCC for modellable and type A non-modellable risk factors, except that, relative to the IMCC, the SES calculation would provide significantly less recognition for hedging and portfolio diversification for type B non-modellable risk factors and significantly more for type A non-modellable risk factors.

Under the proposal, a banking organization would have to calculate the liquidity horizon-adjusted expected shortfall-based measure for non-modellable risk factors using the same general process as proposed for modellable and type A non-modellable risk factors in IMCC, with three key differences. First, the proposal would require a banking organization to separately carry out such calculation for each non-modellable risk factor, rather than at the risk class level. Second, the proposal would require a banking organization to apply a minimum liquidity horizon adjustment of at least twenty days, rather than ten days. Third, the proposal would require a banking organization to identify a common twelve-month historical stress period for all non-modellable risk factors within the same risk class, which is calibrated to be at least as conservative as the twelve-month historical stress period used within IMCC. To reduce operational burden, the proposal would allow banking organizations to apply the same twelve-month historical stress period used to calculate IMCC for purposes of the common twelve-month historical stress period used for each risk class within the SES calculation. If a banking organization is not able to determine a stress scenario capital requirement for a risk factor, the

proposal would require the banking organization to set the SES capital requirement equal to the maximum possible loss for that risk factor.

Alternatively, with approval from its primary Federal supervisor, a banking organization may use an alternative approach to design the stress scenario for each risk class of non-modellable risk factors.

In recognition of the data limitations of non-modellable risk factors, the proposal would allow a banking organization that receives approval to use an alternative approach to use proxies in determining the common twelve-month historical stress period for each risk class of non-modellable risk factors, as long as such proxies satisfy the data quality requirements of the qualitative test.[417]

To calculate the SES for non-modellable risk factors, the proposal would require a banking organization to separate non-modellable risk factors into type A and type B non-modellable risk factors. A banking organization would calculate the SES for both types of non-modellable risk factors, according to the following formula as provided under §__.215(d)(2) of the proposed rule:

$$SES = \sqrt{\left(\sum_{k=1}^{K} SES_{NM,k}^2\right) + \left((1-\rho_b)\sum_{j=1}^{J} SES_{NM,j}^2 + \rho_b\left(\sum_{j=1}^{J} SES_{NM,j}\right)^2\right)}$$

where,

[417] *See* section V.A.8.a.i. of this **SUPPLEMENTARY INFORMATION** for a description of the data quality requirements in the qualitative test.

(i) $SES_{NM,k}$ is the stress scenario capital measure for the type A non-modellable risk factor k;

(i) K is the number of type A non-modellable risk factors;

(iii) ρ_b is 0.36;

(iv) $SES_{NM,\mathrm{j}}$ is the stress scenario capital measure for the type B non-modellable risk factor j; and

(ii) J is the number of type B non-modellable risk factors.

For type B non-modellable risk factors, the second term would allow for a limited and appropriate diversification benefit that depends on the level of ρ parameter. The first term would provide type A non-modellable risk factors a greater diversification benefit by allowing such non-modellable risk factors to be aggregated with zero correlation because they passed the qualitative test.

Given the limited data available for type B non-modellable risk factors from which to estimate correlations between such factors throughout the twelve-month historical stress period, the proposed conservative capital treatment of type B non-modellable risk factors would address the potential risk of lower quality inputs being used in calculating market risk capital requirements for such factors (for example, the risk that the limited data set overstates the diversification benefits and, therefore, understates the magnitude of potential losses of type B non-modellable risk factors).

Type A non-modellable risk factors would already be captured within the IMCC, which limits the model-estimated diversification benefit across risk classes. Thus, the IMCC would capture most of the risk arising from type A non-modellable risk factors. Yet, unlike modellable risk factors, type A non-modellable risk factors can pose higher model risk and elevated liquidity

risk due to infrequent price observations. To appropriately capture such additional risks that may not be fully captured by IMCC, type A non-modellable risk factors would also be included in the SES calculation.[418]

Question 159: The agencies seek comment on the proposed rho parameter (ρ_b) for type B non-modellable risk factors. What are the advantages and disadvantages of the proposed rho parameter (ρ_b)? What are the advantages and disadvantages of reducing the rho parameter (ρ_b) to a lower value (such as 0.0625 or 0.16), and why? Please provide any data and rationale that would be useful to consider for this purpose.

Question 160: What are the advantages and disadvantages of the proposed calculation of the stressed expected shortfall capital requirement for non-modellable risk factors? Alternatively, what are the advantages and disadvantages of requiring a banking organization to separate non-modellable risk factors into those with idiosyncratic credit spread risk, those with idiosyncratic equity risk, and those with systematic risk, according to the following formula, and why? Specifically, what are the advantages and disadvantages of the following alternative formula for calculating the stressed expected shortfall capital requirement for non-modellable risk factors:

$$SES = \sqrt{\sum_{i=1}^{I} ISES_{NM,i}^2} + \sqrt{\sum_{j=1}^{J} ISES_{NM,j}^2} + \sqrt{\left(\rho \sum_{k=1}^{K} SES_{NM,k}\right)^2 + (1-\rho^2)\sum_{k=1}^{K} SES_{NM,k}^2}$$

Where:

[418] Unlike type B non-modellable risk factors, type A non-modellable risk factors would receive full diversification (zero correlation) with other type A non-modellable risk factors in the SES calculation.

$ISES_{NM,i}$ is the stress scenario capital measure for non-modellable idiosyncratic credit spread risk, i, aggregated with zero correlation, and where I is a non-modellable idiosyncratic credit spread risk factor;

$ISES_{NM,j}$ is the stress scenario capital measure for non-modellable idiosyncratic equity risk, j, aggregated with zero correlation, and where J is a non-modellable idiosyncratic equity risk factor;

$SES_{NM,k}$ is the stress scenario capital measure for the remaining non-modellable systematic risk factors, k, and where K is the remaining non-modellable risk factors in a model-eligible trading desk; and

ρ is equal to 0.6.

If the agencies were to consider this alternative approach, what further adjustments should they also consider (such as using a different correlation parameter, ρ, between 0 and 1.0)? Please provide any data and rationale, including data from a wide range of stressed market conditions, that would be useful for evaluating this alternative.

d. Aggregate trading portfolio backtesting capital multiplier

Under the current capital rule, each quarter, a banking organization must compare each of its most recent 250 business days of entity-wide trading losses (excluding fees, commissions, reserves, net interest income, and intraday trading) with the corresponding daily VaR-based measure calibrated to a one-day holding period and at a one-tail, 99.0 percent confidence level. Depending on the number of exceptions in the entity-wide backtesting results, a banking organization must apply a multiplication factor, which can range from 3 to 4, to a banking organization's VaR-based and stressed VaR-based capital requirements for market risk.

The proposal generally would retain the backtesting requirements in the current capital rule, with two modifications. First, the proposal would require backtesting of the VaR-based measures against both the actual and the hypothetical profits and losses produced by the financial

reporting models.[419] Specifically, for the most recent 250 business days,[420] a banking organization would be required to separately compare each business day's aggregate actual profit and loss for transactions on model-eligible trading desks and aggregate hypothetical profit and loss for transactions on model-eligible trading desks with the corresponding aggregate VaR-based measures for that business day calibrated to a one-day holding period at a one-tail, 99.0 percent confidence level for transactions on all model-eligible trading desks.[421] Second, the proposal generally would require a banking organization to apply a lower capital multiplier (m_c), that could range from a factor of 1.5 to 2, to the 60-day average estimated capital required for modellable and type A non-modellable risk factors, based on the number of exceptions in the entity-wide backtesting results.[422]

$$IMA_{G,A} = max\left((IMCC_{t-1} + SES_{t-1}), \left(\left(m_c \times IMCC_{average}\right) + SES_{average}\right)\right) + PLA\ add\ on$$

[419] The proposal would define hypothetical profit and loss as the change in the value of the market risk covered positions that would have occurred due to changes in the market data at end of current day if the end-of-previous-day market risk covered positions remained unchanged. Valuation adjustments that are updated daily would have to be included, unless the banking organization receives approval from its primary Federal supervisor to exclude them. Valuation adjustments for which separate regulatory capital requirements have been otherwise specified, commissions, fees, reserves, net interest income, intraday trading, and time effects would have to be excluded. *See* §__.202 of the proposed rule.

[420] In its first year of backtesting, a banking organization would count the number of exceptions that have occurred since it began backtesting.

[421] As described in section V.A.6.d.i. of this **SUPPLEMENTARY INFORMATION**, the proposal would allow, subject to approval by the primary Federal supervisor, a banking organization, for a model-eligible trading desk that holds a limited amount of model-ineligible positions pursuant to its trading or hedging strategy, to include such positions for the purposes of the aggregate trading portfolio backtesting requirement as well as for the desk-level PLA and backtesting requirements.

[422] The mechanics of the backtesting requirements for the aggregate trading portfolio backtesting multiplier would be the same as those at the trading desk level. Consistent with the trading desk level backtesting requirements, the proposal would allow banking organizations to disregard backtesting exceptions related to official holidays and, in certain instances, those related to non-modellable risk factors, model-ineligible positions and technical issues. *See* section V.A.8.f. of this **SUPPLEMENTARY INFORMATION** for a detailed description of the mechanics of the proposed trading desk-level backtesting requirements, including circumstances in which a banking organization may disregard a backtesting exemption.

The proposed backtesting requirements would measure the conservatism of the forecasting assumptions and the valuation methods used in the internal models by comparing the daily VaR-based measure against the actual and hypothetical profits and losses produced by the financial reporting models. Such comparisons are a critical part of a banking organization's ongoing risk management, as they improve a banking organization's ability to make prompt adjustments to the pricing models that impact the expected shortfall calculation used for determining risk-based capital requirements to address factors such as changing market conditions and model deficiencies. A high number of exceptions could indicate modeling issues (for example, insufficiently conservative risk factor shocks) and warrant increased capital requirements.

The backtesting requirements and associated multiplication factor provide appropriate incentives for banking organizations to regularly update the internal models used for calculating expected shortfall-based measure in determining regulatory capital requirements.

Question 161: The agencies request comment on the appropriateness of the proposed calculation for the aggregate trading portfolio backtesting capital multiplier. What, if any, changes should the agencies consider that would appropriately measure the robustness of a banking organization's internal models used in calculating the expected shortfall-based measure but impose less operational burden relative to the proposal?

e. PLA test and add-on

Under the proposal, use of the models-based non-default capital requirement for a model-eligible trading desk fundamentally would depend on the accuracy of the potential future profits or losses estimated by the banking organization's internal risk management models relative to those produced by its financial reporting models. The proposed profit and loss attribution test

metric[423] would help ensure that the theoretical changes in a model-eligible trading desk's revenue produced by the internal risk management models are sufficiently close to the hypothetical changes produced by valuation methods used by the financial reporting models in the banking organization's end-of-day valuation process and adequately capture the risk factors used in such models. Thus, the proposed PLA test metric would measure the materiality of the simplifications of the internal risk management models used by a model-eligible trading desk relative to the financial reporting models and remove the eligibility of any trading desk for which such simplifications are deemed material from using the models-based non-default capital requirement to calculate its regulatory capital requirement for market risk.

The proposed models-based non-default capital requirement would include an additional capital requirement (the PLA add-on) for model-eligible trading desks for which the desk-level PLA test metric demonstrates deficiencies in the ability of the valuation methods used by the banking organization's internal risk management models to appropriately capture the market risk of the model-eligible positions but does not disqualify the eligibility of the models. The PLA add-on would help ensure that banking organizations with model-eligible trading desks with non-disqualifying model deficiencies are subject to more conservative capital requirements relative to banking organizations with model-eligible trading desks without such deficiencies.[424] Additionally, the PLA add-on would provide appropriate incentives for banking organizations with model-eligible trading desks with model deficiencies to address the potential gaps in data and model deficiencies.

[423] The proposed PLA test metric refers to the Kolmogorov-Smirnov metric which assesses the similarity of the distributions of the risk-theoretical profit and loss and the hypothetical profit and loss.

[424] As described in section V.A.6.d.iv. of this **SUPPLEMENTARY INFORMATION**, a model-eligible trading desk that passes the PLA test metric could still be subject to the PLA add-on if the primary Federal supervisor determines that the trading desk no longer complies with all applicable requirements.

The agencies recognize the potential difficulties for banking organizations in implementing the proposed desk-level PLA test metric. To improve the ability of banking organizations to use more risk-sensitive modeled approaches for non-default capital requirement, where appropriate, the proposal would provide a three-year transition period during which there would be no automatic consequences for PLA test results. During this period, a banking organization would be required to submit quarterly PLA test results to its primary Federal supervisor. The test results would not have any automatic regulatory consequences during the transition period. This extended transition period for implementation of the PLA test would allow banking organizations to gain experience with the test and provide time to improve their systems and processes and address potential gaps in data and model performance. Furthermore, the delayed implementation would allow more time to develop and refine the valuation methods used in the expected shortfall models without the potential cliff effects that could arise when one or more model-eligible trading desks having PLA test results in the amber or red zone. The delayed transition of PLA test automatic consequences would also provide the agencies an additional opportunity to monitor the effectiveness of the PLA test metric and identify the root causes leading to poor testing performances while allowing banking organizations to gain experience with the tests and improve their systems and models.

Question 162: The agencies seek comment on the proposed three-year transition period for the PLA test. What are the benefits and drawbacks of delaying for three years the automatic consequences of having PLA test results in the amber or red zones? To what extent does the proposed time period facilitate banking organizations' ability to gain experience with the tests and address any potential gaps in data and model performance? Please provide any rationale that would be useful to consider for this purpose.

i. *PLA test*

To measure the materiality of the simplifications (for example, missing risk factors and differences in the way positions are valued) within the expected shortfall models used by each model-eligible trading desk, the PLA test would require a banking organization, for each model-eligible trading desk, to compare the daily profit and loss values produced by its internal risk management models (risk-theoretical profit and loss)[425] against the hypothetical profit and loss produced by the financial reporting models.

I. Data input requirements

For the sole purpose of the PLA test, the proposal would permit a banking organization to align the risk factor input data used in the valuations calculated by the internal risk management models with that used in the financial reporting models, if the banking organization demonstrates that such an alignment would be appropriate. If the input data for a given risk factor that is common to both the financial reporting models and the internal risk management models differs due to data acquisition complications (specifically, different market data sources, time fixing of market data sources, or transformations of market data into input data suitable for the risk factors of the underlying valuation engines), a banking organization may adjust the input data used by the financial reporting models into a format that can be used by the internal risk management models. When transforming the input data of the financial reporting models into a format that can be applied to the risk factors used in internal risk management models, the banking organization would be required to demonstrate that no differences in the risk factors or in the

[425] The proposal would define risk-theoretical profit and loss as the daily trading desk-level profit and loss on the end-of-previous-day market risk covered positions generated by the banking organization's internal risk management models. The risk-theoretical profit and loss would have to take into account all risk factors and positions, including non-modellable risk factors and model-ineligible positions, in the banking organization's internal risk management models.

valuation models have been omitted. The proposal would require a banking organization to assess the effect of these input data alignments on both the valuations produced by the internal risk management models and the PLA test when designing or changing the input data alignment process, or at the request of the primary Federal supervisor. Additionally, the proposal would require a banking organization to treat time effects[426] in a consistent manner in the hypothetical profit and loss and the risk-theoretical profit and loss.[427] The proposed flexibility would allow the results of the PLA test metric to more accurately assess the consistency of the risk-theoretical and hypothetical profit and loss for a particular model-eligible trading desk, by focusing on differences due to the pricing function and risk factor coverage rather than those arising from use of different data inputs.

Furthermore, the proposal would allow, subject to approval by the primary Federal supervisor, a banking organization, for a model-eligible trading desk that holds a limited amount of model-ineligible positions pursuant to its trading or hedging strategy,[428] to include such positions for the purposes of the PLA tests. Allowing such positions to be included would enable model-ineligible positions held as hedges to be recognized with the underlying positions they are intended to hedge and thus minimize the potential for the PLA test to incorrectly identify model deficiencies for model-eligible trading desks due solely to the bi-furcation of such hedges. For model-eligible trading desks with approval of the primary Federal supervisor to incorporate

[426] Time effects can include various elements such as the sensitivity to time, or theta effect, and carry or costs of funding.

[427] In particular, when time effects are excluded from the hypothetical profit and loss, they must also be excluded from the risk-theoretical profit and loss. A banking organization that excludes time effects must do so consistently for purposes of backtesting and the PLA test.

[428] Model-ineligible positions include equity positions in an investment fund where the banking organization is not able to identify the underlying positions held by an investment fund on a quarterly basis, securitization positions, and correlation trading positions.

model-ineligible positions in their PLA test metric, the proposal would require the banking organization to calculate the market risk capital requirements for such positions using the more conservative capital treatment under the standardized non-default capital requirement or the fallback capital requirement, as described in sections V.A.7. and V.A.3.d. of this **SUPPLEMENTARY INFORMATION**, respectively.

II. PLA test metric

For the PLA test, the banking organization would be required to compare, for each model-eligible trading desk, the risk-theoretical profit and loss and the hypothetical profit and loss for the most recent 250 business days using the Kolmogorov-Smirnov metric.

To calculate the Kolmogorov-Smirnov metric, the banking organization, for each model-eligible trading desk, would identify the number of daily observations over the most recent 250 business days where the risk-theoretical profit and loss or separately the hypothetical profit and loss is less than or equal to the specified value. To appropriately weight the probability of each daily observation,[429] the proposal would define the empirical cumulative distribution function as the number of daily observations multiplied by 0.004 (1/250). Under the proposal, the Kolmogorov-Smirnov metric would be the largest absolute difference observed between these two empirical cumulative distributions of profit and loss at any value, which could be expressed as:

$$KS = max\big(abs(D_{HPL} - D_{RTPL})\big)$$

[429] For example, if the internal risk management model generates the same value for the model-eligible trading desk's portfolio on two separate days, the proposal would require the banking organization to assign a larger probability by requiring each daily observation to be weighted at 0.004.

where D_{HPL} is the empirical cumulative distribution of hypothetical profit and loss produced by the financial reporting models and D_{RTPL} the empirical cumulative distribution of risk-theoretical profit and loss produced by the internal risk management models.

As a testing metric, the Kolmogorov-Smirnov metric is intended to support good risk management by requiring banking organizations to assess the similarity of the distribution of the daily portfolio values for a model-eligible trading desk generated by the internal risk management models and the financial reporting models. The closeness of the distributions would indicate how accurately the internal risk management models capture the range of losses experienced by the model-eligible trading desk across different market conditions with closer distributions indicating greater accuracy with respect to pricing and risk factor coverage. Applying this process over a given period would provide information about the accuracy of the internal risk management model's ability to appropriately reflect the shape of the whole distribution of values for the model-eligible trading desk's portfolio compared to the distribution of values generated by the financial reporting models, including information on the size and number of valuation differences.

Based on the PLA test results for the Kolmogorov-Smirnov metric, a banking organization would be required to allocate each model-eligible trading desk to a PLA test zone as set out in Table 1 to §__.213 of the proposed rule. Additionally, under the proposal, the primary Federal supervisor could require a banking organization to assign a different PLA test zone to a

model-eligible trading desk than that based on PLA test metric of the model-eligible trading desk.[430]

Question 163: What, if any, modifications should the agencies consider with respect to the PLA test? Commenters are encouraged to provide specific details on the mechanics, empirical support, capital implications, and rationale for any suggested modifications.

Question 164: The agencies seek comment on the appropriateness of allowing banking organizations to align the risk input data between the internal risk management models and the financial reporting models. What other instances, if any, should the agencies consider to ensure accurate and consistent assessment of the profit and losses produced by the internal risk management models with those produced by the financial reporting models for a particular model-eligible trading desk?

Question 165: The agencies request comment on the benefits and drawbacks of allowing banking organizations, with regulatory approval, to include non-modellable risk factors for purposes of the PLA tests. Should non-modellable risk factors be excluded from the PLA tests? Why or why not? What, if any, further conditions should the agencies consider including to appropriately limit the inclusion of non-modellable risk factors for purposes of the PLA tests? Commenters are encouraged to provide data to support their responses.

ii. *Calculation of the PLA add-on*

[430] As discussed in more detail in section V.A.6.d.iv. of this **SUPPLEMENTARY INFORMATION**, if, after the three-year transition period, the primary Federal supervisor subjects a model-eligible trading desk to the PLA add-on as part of the initial approval or for on-going model eligibility, the model-eligible trading desk would remain subject to the PLA add-on until either the model-eligible trading desk (1) provides at least 250 business days of backtesting and PLA test results that pass the trading-desk level backtesting requirements and produce PLA metric in the green zone, or (2) receives approval from the primary Federal supervisor that the PLA add-on no longer applies.

Under the proposal, a banking organization would consider model-eligible trading desks in the green zone or amber zone as passing the PLA test for model eligibility purposes. If a banking organization has one or more model-eligible trading desks within the amber zone, the proposal would require the banking organization to reflect the PLA add-on in the models-based non-default risk capital requirement, as described above in section V.A.8. of this **SUPPLEMENTARY INFORMATION**.[431] Under the proposal, a banking organization would calculate the PLA add-on as the greater of zero and the aggregate capital benefit to the banking organization from the models-based non-default capital requirement (the difference between the capital requirements for all model-eligible trading desks[432] in the green or amber zone under the standardized non-default capital requirement ($SA_{G,A}$) and those under the models-based non-default capital requirement $((IMCC_{t-1} + SES_{t-1}), \left(\left(m_c \times IMCC_{average}\right) + SES_{average}\right))$, multiplied by a multiplication factor of k, as defined according to the following formula under §__.213(c)(4) of the proposed rule:

$$PLA\ add\text{-}on = k \times max\left(\left(SA_{G,A} - max\left((IMCC_{t-1} + SES_{t-1}), \left(\left(m_c \times IMCC_{average}\right) + SES_{average}\right)\right)\right), 0\right)$$

Under the proposal, the value of k would equal half of the ratio of the sum of the standardized non-default capital requirement for each model-eligible trading desk within the amber zone and those for each of the model-eligible trading desks within either the green or

[431] As described in section V.A.1.b. of this **SUPPLEMENTARY INFORMATION**, the proposal would provide a three-year transition period during which there would be no automatic consequences for PLA test results. While banking organizations would be required to report PLA test results during the transition period, the PLA add-on would not apply until after the expiration of the three-year transition period.

[432] In calculating the PLA add-on, the proposal would require a banking organization to exclude any model-ineligible positions held by a model-eligible desk, as such positions must be subject to either the standardized non-default capital requirement or the fallback capital requirement.

amber zone as defined according to the following formula under §__.213(c)(4)(i) of the proposed rule:

$$k = 0.5 \times \frac{\sum_{i \in A} SA_i}{\sum_{i \in G,A} SA_i}$$

Thus, the value of *k* would gradually increase from 0 to 0.5 as the number of model-eligible trading desks within the amber zone increases, which is intended to mitigate the potential cliff effect of significantly increasing market risk capital requirements as a model-eligible trading desk transitions from using the models-based non-default capital requirement to the standardized non-default capital requirement.

iii. *Application of the PLA add-on*

After the three-year transition period, if, in the most recent 250 business day period, a trading desk that the primary Federal supervisory previously approved to use the models-based non-default capital requirement produces results in the PLA test red zone, the proposal would require the banking organization to use the standardized non-default capital requirement and calculate market risk capital requirements for the positions held by the trading desk together with all other trading desks subject to the standardized non-default capital requirement.[433] The proposal would not permit the banking organization to use the models-based non-default capital requirement to calculate market risk capital requirements for the trading desk until the trading desk (i) produces PLA test results in either the green or amber zone and passes specific trading

[433] As discussed in section V.A.6.d.i. of this **SUPPLEMENTARY INFORMATION**, model-eligible trading desks that hold limited amounts of model-ineligible positions must calculate regulatory capital requirements for such positions under the standardized non-default capital requirement or fallback capital requirement, as applicable. With regulatory approval, a banking organization may include such positions within its internal models for the purposes of the desk-level PLA and backtesting requirements as well as the aggregate trading portfolio backtesting requirement.

desk level backtesting requirements over the most recent 250 business days, or (ii) receives approval from the primary Federal supervisor.[434]

f. Backtesting requirements for model-eligible trading desks

Under the proposal, a banking organization may treat a trading desk that conducts and successfully passes both backtesting and the PLA test at the trading desk level on an ongoing quarterly basis as a model-eligible trading desk.[435] For determining the model eligibility of a trading desk, the proposal would require the banking organization to perform backtesting at the trading desk level. For the purpose of desk-level backtesting, for each trading desk, a banking organization would be required to compare each of its most recent 250 business days' actual profit and loss and hypothetical profit and loss produced by the financial reporting models with the corresponding daily VaR-based measure calculated by the banking organization's internal models. The proposal would require the banking organization, for each trading desk, to calibrate the VaR-based measure to a one-day holding period and at both the 97.5th percentile and the 99.0th percentile one-tail confidence levels. Time effects must be treated in a consistent manner in the hypothetical profit and loss metric used for purposes the backtesting and PLA tests.

Under the proposal, a backtesting exception would occur when the daily actual profit and loss or the daily hypothetical profit and loss produced by the financial reporting model for the trading desk exceeds the corresponding daily VaR-based measure. A banking organization must count separately the number of backtesting exceptions that occurred in the most recent 250

[434] During the three-year transition period, a banking organization may use the models-based non-default capital requirement to calculate market risk capital requirements for the trading desk once the desk produces satisfactory desk-level backtesting results for the most recent 250 business days.

[435] During the three-year transition period, a banking organization may treat a trading desk that conducts and successfully passes backtesting at the trading desk level on an ongoing quarterly basis as a model-eligible trading desk.

business days for actual profit and loss at each confidence level and those that occurred for hypothetical profit and loss at each confidence level. A trading desk would become model-ineligible if, in the most recent 250 business day period, the desk experiences any of the following: (1) 12 or more exceptions for actual profit and loss at the 99.0^{th} percentile; (2) 12 or more exceptions for hypothetical profit and loss at the 99.0^{th} percentile; (3) 30 or more exceptions for actual profit and loss at the 97.5^{th} percentile; or (4) 30 or more exceptions for hypothetical profit and loss at the 97.5^{th} percentile. In the event that either the daily actual or hypothetical profit and loss is unavailable or impossible to compute, the proposal would require the banking organization to treat such an occurrence as a backtesting exception for the actual profit and loss or hypothetical profit and loss, respectively. If the VaR-based measure for a particular business day is unavailable or impossible to compute, an exception for actual and hypothetical profit and loss is deemed to have occurred. No exception is deemed to have occurred if the unavailability or the impossibility is related to an official holiday; in such cases the banking organization may disregard the backtesting exception. In addition, with approval of the primary Federal supervisor, the banking organization may disregard the backtesting exception if the banking organization could demonstrate that the backtesting exception is due to technical issues that are unrelated to the banking organization's financial reporting or internal models; or to one or more model-ineligible positions; or if the banking organization could demonstrate that a backtesting exception relates to one or more non-modellable risk factors or to one more model-ineligible positions and the portion of the stressed expected shortfall or standardized non-default capital requirement attributed to these non-modellable risk factors or model-ineligible positions, respectively, for that business day exceeds the difference between the

banking organization's VaR-based measure and the actual or hypothetical loss for that business day.[436]

If in the most recent 250 business day period a trading desk experiences either 12 or more backtesting exceptions at the 99.0th percentile, or 30 or more backtesting exceptions at the 97.5th percentile, the proposal would require the banking organization to use the standardized non-default capital requirement to determine the market risk capital requirements for the market risk covered positions held by the trading desk. If a model-eligible trading desk is approved with less than 250 business days of trading desk level backtesting and PLA test results, the proposal would require a banking organization to use all backtesting data for the model-eligible trading desk and to prorate the number of allowable exceptions by the number of business days for which backtesting data are available for the model-eligible trading desk.[437] The proposal would allow the banking organization to return to using the models-based non-default capital requirement to calculate market risk capital requirements for the trading desk if the banking organization (1) remediates the internal model deficiencies such that the trading desk successfully passes trading

[436] It is not sufficient to compare the size of backtesting exceptions to standalone SES for individual non-modellable risk factors or standalone standardized non-default capital requirements for model-ineligible positions because the sum of standalone capital requirements for individual non-modellable risk factors or model-ineligible positions would almost always be smaller than the relevant aggregate capital requirement. Instead, the size of backtesting exceptions needs to be compared to the portion of the aggregate SES or standardized non-default capital requirement that can be attributed to those non-modellable risk factors or model in-eligible positions, accounting for recognition of diversification within each formula. For example, one approach for determining the portion of the aggregate SES attributable to a particular non-modellable risk factor is to multiply the risk factor's standalone SES by its marginal contribution to the aggregate SES (i.e., for non-modellable risk factor i, attribute $(\partial SES/\partial SES_{NM,i}) \cdot SES_{NM,i})$, which is a valid method for apportioning the aggregate SES because the SES formula is homogenous of degree one.

[437] To receive approval as a model-eligible desk during the three-year transition period, the proposal would require the banking organization to provide backtesting results for the trading desk and demonstrate to the satisfaction of the primary Federal supervisor that the expected shortfall models would be able to satisfy the backtesting requirements on an on-going basis. *See* section V.A.6.d.iv.I. of this **SUPPLEMENTARY INFORMATION** for the criteria for a trading desk to receive approval as a model-eligible trading desk.

desk-level backtesting and reports PLA test metric in the green or amber zone or (2) receives approval of the primary Federal supervisor.[438]

Question 166: Should non-modellable risk factors be excluded from the proposed backtesting requirements? Why or why not? What, if any, further conditions should the agencies consider including to limit appropriately the inclusion of non-modellable risk factors for purposes of the backtesting requirements? Commenters are encouraged to provide data to support their responses.

Question 167: The agencies invite comment on what, if any, challenges requiring banking organizations to directly calculate the internally modelled capital requirement for modellable risk factors using a 10-day liquidity horizon for the purposes of the daily expected shortfall-based measure for modellable risk factors could pose and a 1-day VaR for the purposes of backtesting could pose. What, if any, alternative methodologies should the agencies consider?

Question 168: The agencies invite comment on whether notional desks that are model-eligible desks and primarily hold foreign exchange and commodity positions to hedge banking book exposures should be excluded from PLA testing and backtesting requirements. What would be the potential benefits and drawbacks of providing such an exclusion for these specific desk types? Would alternative treatment or modified requirements for these desks be more appropriate and if so, why?

9. Default risk capital requirement

[438] Under the proposal, there would be no automatic consequences for the PLA test results during the three-year transition period. Accordingly, during the transition period, a banking organization's model-eligible trading desk would only be required to successfully pass quarterly trading desk-level backtesting requirements to return to using the models-based non-default capital requirement.

The default risk capital requirement is intended to capture the incremental loss if the issuer of an equity or credit position were to immediately default (the additional losses from jump-to-default risk), which are not captured by the credit spread or equity shocks under the sensitivities-based method or the models-based non-default capital requirement. Thus, the proposed default risk capital requirement would apply only to non-securitization debt or equity positions (except for U.S. sovereigns, specified supranational entities, and multilateral development banks), securitization positions non-CTP, and correlation trading positions. To recognize offsetting of long and short positions across model-eligible and model-ineligible desks, the proposal would allow a banking organizations that has one or more model-eligible trading desks to perform a single calculation of the default risk capital requirement across model-eligible and model-ineligible trading desks.

Under the proposal, a banking organization would be required to separately calculate the default risk capital requirement for each of the three default risk categories (three position types that could incur default risk) using the following five steps.

First, for each of the three default risk categories, the banking organization would be required to group instruments with similar risk characteristics throughout an economic cycle into the defined default buckets as described in more detail below.

Second, to estimate the position-level losses from an immediate issuer default, the banking organization would be required to calculate the gross default exposure separately for each default risk position. Additionally, the banking organization would be required to determine the long and short direction of the gross default exposure based on whether it would experience a loss (long) or gain (short) in the event of a default.

Third, to estimate the portfolio-level losses of a trading desk from an immediate issuer default, the banking organization would be required to calculate the net default exposure for each obligor by offsetting the gross long and short default exposures to the same obligor, where permitted.

Fourth, to estimate and recognize hedging benefit between net long and net short position of different issuers within the same default bucket, the banking organization would be required to calculate the hedge benefit ratio and apply the prescribed risk weights[439] to the net default exposures within the same default bucket for the class of instruments.[440] In general, the proposed buckets and associated risk weights closely follow those in the Basel standards, which are calibrated to reflect a through-the-cycle probability of default. The hedge benefit ratio is calculated based on the aggregate net long default positions and the aggregate net short default positions. It is intended to recognize the partial hedging of net long and net short default positions in distinct obligors due to systematic risk. The bucket-level default risk capital requirement would equal (1) the sum of the risk-weighted net long default positions minus (2) the product of the hedge benefit ratio and the sum of the risk-weighted absolute value of the net short default positions. For non-securitization debt and equity positions and securitization positions non-CTP, the results of this calculation would be floored at zero.

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[439] The proposal would require a banking organization that applies a hypothetical portfolio approach to apply the highest risk weight that is applicable under the investment limits of an equity position in an investment fund that may invest in primarily high-yield or distressed names under the fund's mandate by first applying the highest risk weight that is applicable under the fund's investment limits to defaulted instruments, followed by sub-speculative grade, then speculative grade, then investment grade securities. A banking organization may not recognize any offsetting or diversification benefit when calculating the average risk weight of the fund. *See* §_.205(e)(3)(ii) of the proposed rule.

[440] Specifically, a banking organization would first calculate the hedge benefit ratio (the total net long jump-to-default risk positions (numerator) divided by the sum of the total net long jump-to-default risk positions and the sum of the absolute value of the total net short positions (denominator), and then calculate the risk-weighted exposure for each risk bucket by multiplying the aggregate total net jump-to-default exposure by the risk weight prescribed for the applicable risk bucket.

Fifth, to calculate the default risk capital requirement for each default risk category, the banking organization would sum the bucket-level capital requirements (except for correlation trading positions). The aggregation for correlation trading positions is not the simple sum but is the sum of the risk-bucket level capital requirements for the net long default exposures plus half of the sum of the risk-weighted exposures for the net short default exposures as further described in section V.A.9.c.iii. of this **SUPPLEMENTARY INFORMATION**. For conservatism, the proposal would require a banking organization to calculate the total default risk capital requirement as the sum of each of the default risk category level capital requirements without recognizing any diversification benefits across different types of default risk categories.

a. Non-securitization debt or equity positions

i. *Gross default exposure*

Under the proposal, the default risk capital requirement for non-securitization debt or equity positions would generally follow the calculation steps described above. To calculate the gross default exposure for each non-securitization debt or equity position, the proposal would require a banking organization to multiply the notional amount (face value) of the instrument and the prescribed loss given default (LGD) rate[441] to determine the total potential loss of principal at default and then add the cumulative profits (losses) already realized on the position to avoid double-counting realized losses, with one exception.[442] The proposed calculation methodology is intended to appropriately quantify the gross default risk for most securities, including those that are less common.

[441] The loss rate from default is one minus the recovery rate.

[442] As losses are recorded as a negative value, effectively they would be subtracted from the overall exposure amount.

For the purpose of calculating the gross default exposure for each non-securitization debt or equity position, the proposal would require banking organizations to use the following LGD rates, which are generally consistent with those in the Basel standards: 100 percent for equity and non-senior debt instruments, and defaulted positions,[443] 75 percent for senior debt instruments, unless a lower LGD is assigned, 75 percent for GSE debt issued but not guaranteed by the GSEs, 50 percent for U.S. PSEs,[444] 25 percent for GSE debt guaranteed by the GSEs, 25 percent for covered bonds, and zero percent for instruments whose value is not linked to the recovery rate of the issuer.[445] GSE debt issued and guaranteed by the GSEs is secured generally by residential properties that satisfy the specific underwriting standards of the GSEs (for example, loan-to-value ratios of less than 80 percent), and include a guarantee on the repayment of principal by the GSE. As these characteristics are economically similar to the requirements for covered bonds, the proposal would extend the LGD rate applied to covered bonds to GSE debt issued and guaranteed by the GSEs to appropriately capture the expected losses of such positions in the event of default. As GSE debt instruments issued but not guaranteed by the GSEs are similarly secured by high-quality residential mortgages, the proposal would allow banking organizations

[443] The proposal would allow a banking organization to treat a distressed position as a defaulted position for the purpose of calculating market risk capital requirements. Furthermore, to prevent situations when the default capital requirement would increase the capital requirements for defaulted positions beyond the maximum potential loss, a banking organization would be able to calculate the gross default exposure for defaulted positions by multiplying the current market value and the prescribed LGD rate.

[444] The proposed LGD rate for U.S. PSEs is consistent with the debt-size weighted average LGD rate using Moody's municipal bonds data between 1970 and 2022. The debt-size weighted average LGD rate is derived as one minus the ultimate recovery rate, which is based on the recovery value creditors actually received at the resolution of the default relative to what the creditors should have contractually received inclusive of any accrued interest. For issuers with a range of estimated recovery rates, the proposed LGD rate is consistent with both the worst LGD and the mid-point LGD, for municipal bonds over this period. The data used in the analysis is from Moody's data on U.S. municipal bond defaults and recoveries 1970-2022 published by Moody's Investors Service Data Report. *See* Moody's Investors Service Data Report, U.S. Municipal Bond Defaults and Recoveries, 1970-2022 (July 19, 2023).

[445] For example, in the case of a call option on a bond, the notional amount to be used in the jump-to-default calculation would be zero given that in the event of default the call option would not be exercised (the default would extinguish the call option's value, with the loss captured through the reduced fair value of the position).

to treat such exposures as senior debt (subject to a 75 percent LGD rate) rather than apply the higher proposed risk weight for equity and non-senior debt instruments. For debt positions in U.S. PSEs, the proposal would allow a banking organization to apply an LGD rate aligned with the average loss given default for such entities, rather than applying the higher LGD rate for senior debt. For credit derivatives, a banking organization would be required to use the LGD rate of the reference exposure.

For consistency across banking organizations, the proposal specifies that a banking organization would be required to reflect the notional amount[446] of a non-securitization debt or equity position that gives rise to a long gross default exposure as a positive value and the corresponding loss as a negative value, and those that produce a short exposure as a negative value and the corresponding gain as a positive value. If the contractual or legal terms of a derivative contract allow for the unwinding of the instrument, with no exposure to default risk, the gross default exposure would equal zero.

Question 169: The agencies request comment on whether the proposed formula for calculating gross default exposure appropriately captures the gross default risk for all types of non-securitization debt and equity instruments. What, if any, positions exist for which the formula cannot be applied? What is the nature of such difficulties and how could such concerns be mitigated? In particular, the agencies seek comment on whether the proposed formula appropriately captures the gross default risk of convertible instruments.

[446] For all non-securitization debt or equity positions, the notional amount would equal the amount of the non-securitization debt or equity position relative to which the loss of principal is calculated. For a call option on a non-securitization position, the notional amount to be used in the gross default exposure calculation would be zero.

Question 170: The agencies request comment on the appropriateness of the proposed LGD rates for non-securitization debt or equity positions. What, if any, changes should the agencies consider making to the categories to appropriately differentiate the LGD rates for various instruments or for instruments with different seniority (for example, senior versus non-senior)?

ii. *Net default exposure*

To calculate the net default exposure for non-securitization debt or equity positions, the proposal would permit a banking organization to recognize either full or partial offsetting of the gross default exposures for long and short positions if both reference the same obligor and the short positions have the same or lower seniority as the long positions.[447] To appropriately reflect the net default risk, the proposed calculation would not allow a banking organization to recognize any offsetting of the gross default exposure for market risk covered positions where the obligor is not identified, such as equity positions in an investment fund, index instruments, and multi-underlying options for which a banking organization elects to calculate a single risk factor sensitivity (not to apply the look-through approach).

As the GSEs can default independently of one another, the agencies are clarifying that banking organizations should treat Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac), the Federal Agricultural Mortgage Corporation (Farmer Mac) and a Federal Home Loan Bank as separate obligors. As the single security initiative led by Fannie Mae and Freddie Mac has homogenized the mortgage pool and

[447] For a market risk covered position that has an eligible guarantee, to determine if the exposure is to the underlying obligor or an exposure to the eligible guarantor, the credit risk mitigation requirements set out in the §__.36 of the current capital rule and §__.120 of the proposed rule would apply. *See* 12 CFR 3.36 (OCC); 12 CFR 217.36 (Board); 12 CFR 324.36 (FDIC).

security characteristics for Uniform Mortgage-Backed Securities (UMBS), the proposal would allow the banking organization to fully offset UMBS that are issued by two different obligors.

Full offsetting would be permitted for short and long market risk covered positions with maturities greater than one year or positions with perfectly matching maturities provided other criteria are met such as if both long and short positions reference the same obligor and the short positions have the same or lower seniority as the long positions. To determine the offsetting treatment for market risk covered positions with maturities of one year or less, a banking organization would be required to scale the gross default exposure by the fraction of a year corresponding to the maturity of the instrument, subject to a three-month floor. In the case where long and short gross default exposures both have maturities of one year or less, scaling would apply to both the long and short gross default exposure. By allowing only partial offsetting, the proposed scaling approach is intended to appropriately reflect the risk posed by maturity mismatch between exposures and their hedges within the one-year capital horizon. For example, under the proposal, the gross default exposure for an instrument with a six-month maturity would be weighted by one-half, whereas that for a one-week repurchase agreement would be prescribed a three-month maturity and weighted by one-fourth.

The proposal would permit a banking organization to assign a maturity of either three months or one year to cash equity positions that do not have a stated maturity. For derivative transactions, the proposal would require a banking organization to use the maturity of the derivative contract, rather than that of the underlying, to determine the applicable scaling factor. To prevent broken hedges for equity and derivative positions, the proposal would allow banking organizations to assign the same maturity to a cash equity position as the maturity of the derivative contract it hedges (permit full offsetting). Similarly, the proposal would allow a

banking organization to align the maturity of an instrument with that of a derivative contract for which that instrument could be delivered to satisfy the derivative contract, and thus permit full offsetting between the instrument and the derivative. For example, a banking organization may assign the maturity of a derivative contract in the to-be-announced (TBA) market that is hedging a security interest in a pool of mortgages to that security interest provided that the delivery of the security interest would satisfy the delivery terms of the TBA derivative contract.

The net default exposure to an issuer would be the sum of the maturity-weighted default exposures to the issuer.

Question 171: The agencies request comment on the appropriateness of allowing banking organizations to net the gross default exposures of derivative contracts and the underlying positions that are deliverable to satisfy the derivative contract. What, if any, additional criteria should the agencies consider to further clarify the netting of gross default exposures and why? What, if any, positions should the agencies consider allowing to net that would not exhibit default risk? What would be the advantages and disadvantages of allowing a banking organization to offset short dated futures with longer-dated derivatives when the underlying exposures match, and why?

iii. *Buckets and corresponding risk weights*

Table 1 to §_.210 of the proposed rule provides the proposed default buckets and corresponding risk weights for non-securitization debt or equity positions, which reflect counterparty type and credit quality, respectively. Under the proposal, the buckets and applicable risk weights would distinguish between the type of obligor based on whether the exposure is to a non-U.S. sovereign, a public sector entity or GSE, or a corporate and include a single bucket for defaulted positions.

To capture the credit quality of the obligor, the proposal would define the default buckets in a manner that is generally consistent with those provided in the Basel standards but uses alternative criteria. The default buckets for non-securitization positions in the Basel standards are defined based on the applicable credit ratings of the reference entity. As discussed previously in section V.A.7.a.iii.II. of this **SUPPLEMENTARY INFORMATION**, the proposed approach does not rely on external credit ratings but allows for a level of granularity in the default buckets (and corresponding risk weights) applicable to non-securitization positions that is generally consistent with the Basel standards. Specifically, the proposal would define the default buckets and corresponding risk weights for non-securitization positions based on the definition for investment grade in the agencies' existing capital rule and the proposed definitions of speculative grade and sub-speculative grade.[448]

[448] The agencies propose to modify the Basel standards' ratings-based risk weights, as in previous rules, to instead use grade-based risk weights, calculated as a weighted average of the ratings-based risk weights. The weighting scheme for this calculation would be derived from the notional amount of bond issuances in each grade category from 2007 through 2019. For this analysis, the agencies used the Mergent Fixed Income Securities Database to identify bond notional issuance amounts for the period from January 1, 2007 through December 31, 2019. *See* LSEG Mergent, *https://wrds-www.wharton.upenn.edu/pages/about/data-vendors/lseg-mergent/*. This look back period (from January 1, 2007 to December 31, 2019) was selected to: (i) capture issuance activity across varying market conditions, including pre-crisis, crisis, and initial recovery phases; (ii) ensure sufficient data availability, reliability, and through the cycle stability. The methodology employed by the agencies proceeded in two distinct analytical stages. First, the original Basel III standardized approach risk weights based on external credit ratings, as set forth in the Basel Committee on Banking Supervision's finalized standards published in December 2017 and revised in 2019, were adjusted by the proportionate share of bond issuances in each corresponding Basel rating category during the look back period (January 1, 2007-December 31, 2019). This adjustment reflects the actual distribution of market issuance activity across rating grades and serves to calibrate the risk weights to observed market behavior rather than theoretical rating-based classifications. Second, following this proportionate adjustment, the ratings-based risk weights were collapsed and consolidated to form three simplified creditworthiness categories: (a) "Investment Grade," (b) "Non-Investment Grade," and (c) "Sub-Investment Grade." This categorical consolidation was applied uniformly across three principal exposure types: corporate exposures, public sector entity (PSE) exposures, and sovereign exposures. The agencies determined that this two-stage methodology—consisting of proportionate adjustment followed by categorical consolidation—achieves an appropriate balance among the following regulatory objectives: (i) alignment with the fundamental risk-sensitivity principles underlying the Basel framework; (ii) consistency with Section 939A of the Dodd-Frank Wall Street Reform and Consumer Protection Act (codified at 15 U.S.C. 78o-7 note); (iii) operational simplicity and administrability for banking organizations of varying sizes and complexity; (iv) consistency with observed market issuance patterns during the relevant look back period (January 1, 2007-December 31, 2019); and (v) stability of risk weights across credit cycles.

Question 172: The agencies solicit comment on the appropriateness of the proposed risk weights and granularity in Table 1 to §__.210. What, if any, alternative approaches should the agencies consider for assigning risk weights that would be consistent with the prohibition on the use of credit ratings? Commenters are encouraged to provide specific details on the mechanics of and rationale for any suggested methodology.

b. Securitization positions non-CTP

For securitization positions non-CTP, the process to calculate the default risk capital requirement would be identical to that for non-securitization positions, except for the gross default exposure calculation, the offsetting of long and short exposures in the net default exposure calculation, and the proposed buckets and corresponding risk weights.

i. *Gross default exposure*

Under the proposal, the gross default exposure for a securitization position non-CTP equals the position's market value. As the proposed bucket-level risk weights described in section V.A.7.a.iii.II. of this **SUPPLEMENTARY INFORMATION** would already reflect the LGD rates for such positions, a banking organization would not apply an LGD rate to calculate the gross default exposure.

ii. *Net default exposure*

First, the proposal would allow offsetting between securitization exposures with the same underlying asset pool and belonging to the same tranche. No offsetting would be permitted between securitization exposures with different underlying asset pools, even where the attachment and detachment points are the same.

Second, the proposal would permit a banking organization to offset the gross default exposure of a securitization position non-CTP with one or more non-securitization positions by decomposing the exposure of non-tranched index instruments and replicating the exposures that make up the entire capital structure of the securitized position. Additionally, a banking organization would be required to exclude non-securitization positions that are recognized as offsetting the gross default exposure of a securitization position non-CTP from the calculation of the default risk capital requirement for non-securitization debt and equity positions.

Third, the proposal would allow a banking organization to offset the gross default exposure of a securitization position non-CTP through decomposition if a collection of short securitization positions non-CTP replicates a collection of long securitization positions non-CTP. For example, if a banking organization holds a long position in the securitization, and a short position in a mezzanine tranche that attaches at 3 percent and detaches at 10 percent, the proposal would permit the banking organization to decompose the securitization into three tranches and offset the gross default exposures for the common portion of the securitization (3 - 10 percent). In this case, the net default exposure would reflect the long positions in the 0 - 3 percent tranche and in the 10 - 100 percent tranche.

Question 173: The agencies seek comment on the proposed netting and decomposition criteria for calculating the net default exposure for securitization positions non-CTP. What, if any, alternative non-model-based methodologies should the agencies consider that would conservatively recognize some hedging benefits but still capture the basis risk between non-identical positions?

iii. *Buckets and corresponding risk weights*

To promote consistency and comparability in risk-based capital requirements across banking organizations, the proposal would define the bucket structure that a banking organization would be required to use to group securitization positions non-CTP. Specifically, the proposal would require a banking organization to classify securitization positions non-CTP as corporate positions or based on the asset class and the region of the underlying assets, following market convention.[449] Under the proposal, a banking organization would assign each position to one bucket, and those with underlying exposures in the same asset class and region to the same bucket. Additionally, the proposal would require a banking organization to assign any position that is not a corporate position and that it cannot assign to a specific asset class or region to one of the "other" buckets.[450]

For consistency in the capital requirements for securitizations under either the standardized approach or the expanded risk-based approach, as applicable, and to recognize credit subordination,[451] the proposed risk weights for securitization positions non-CTP are based on the proposed risk weights calculated for securitization exposures under either the proposed standardized approach or expanded risk-based approach of the capital rule.

To calculate the default risk capital requirement for securitization positions non-CTP, a banking organization would sum the bucket-level capital requirements, except that a banking

[449] The proposal would define the asset class buckets along two dimensions: asset class and region. The region risk buckets would include Asia, Europe, North America, and other. The asset class risk buckets would include asset-backed commercial paper, auto loans/leases, residential mortgage-backed securities, credit cards, commercial mortgage-backed securities, collateralized loan obligations, collateralized debt obligations squared, small and medium enterprises, student loans, other retail, and other wholesale. *See* §__.210(c)(3)(B) of the proposed rule.

[450] Under the proposal, the other buckets would include other retail and other wholesale (for asset class) and other (for region). *See* §__.210(c)(3)(B) of the proposed rule.

[451] For example, consistent with the existing SSFA, the proposed SEC-SA would use the risk weights applicable to the underlying exposures within the general credit risk framework to calculate the risk weight for the securitization exposure. The SEC-SA calculates the risk weight for a securitization exposure based on characteristics of the tranche, such as the attachment and detachment points and quality of the underlying collateral.

organization could cap the default risk capital requirement for an individual cash securitization position non-CTP at its fair value. For cash positions, the maximum loss on the exposure would not exceed the fair value of the position even if each of the underlying assets of the securitization were to immediately default. Furthermore, the proposed treatment would align with the maximum potential capital requirement for securitizations under either the standardized approach or the expanded risk-based approach, as applicable, of the capital rule.[452]

Question 174: The agencies request comment on the proposed buckets. What are the potential benefits and drawbacks of aligning the default bucketing structure with the proposed delta buckets for securitization positions non-CTP in the sensitivities-based method? Commenters are encouraged to provide information regarding any associated burden, complexity, and capital impact of such an alignment.

c. Correlation trading positions

The process to calculate the default risk capital requirement for correlation trading positions would be the same as that for non-securitization debt and equity positions, except for the metrics used to measure gross default exposure, the offsetting of long and short exposures in the net default exposure calculation, the buckets, and the aggregation of the bucket level exposures across buckets.

i. *Gross default exposure*

Under the proposal, the gross default exposure for a correlation trading position equals the position's market value. To calculate the gross default exposure for correlation trading positions that are nth-to-default positions, the proposal would require a banking organization to

[452] *See* §__.44(a) of the current capital rule and §__.132(a)(3) of the proposed rule.

treat such positions as tranched positions and to calculate the attachment point as (N-1) divided by the total number of single names in the underlying basket or pool and the detachment point as N divided by the total number of single names in the underlying basket or pool. The proposed calculation is intended to appropriately reflect the credit subordination of such positions.

ii. *Net default exposure*

Similar to securitization positions non-CTP, to increase risk sensitivity and permit greater offsetting of substantially similar exposures, the proposal would permit banking organizations to offset gross long and short default exposures in specific cases.

First, the proposal would allow a banking organization to offset the gross default exposure of correlation trading positions that are otherwise identical except for maturity, including index tranches of the same series. This means the offsetting positions would need to have the same underlying index family of the same series, and the same attachment and detachment points.

Second, the proposal would allow a banking organization to offset the gross default exposure of long and short exposures of tranches that are perfect replications of non-tranched correlation trading positions. For example, the proposal would allow a banking organization to offset the gross default exposure of a long position in the CDX.NA.IG.24 index with short positions that together comprise the entire index position (for example, three distinct tranches that attach and detach at 0 - 3 percent, 3 - 10 percent, and 10 - 100 percent, respectively).

Third, the proposal would allow a banking organization to offset the gross default exposure of indices and single-name constituents in the indices through decomposition when the long and the short gross default exposures are otherwise equivalent except for a residual

component. Under the proposal, a banking organization would account for the residual exposure in the calculation of the net default exposure. In such cases, the proposal would require that the decomposition into single-name equivalent exposures account for the effect of marginal defaults of the single names in the tranched correlation trading position. Such decomposition generally would be permissible for correlation trading positions (for example, vanilla CDOs, index tranches or bespoke indices), but would be prohibited for exotic securitizations (for example, CDO squared).

Fourth, the proposal would allow a banking organization to offset the gross default exposure of different series (non-tranched) of the same index through decomposition when the long and the short gross default exposures are otherwise equivalent except for a residual component. Under the proposal, a banking organization would account for the residual exposure in the calculation of the net default exposure. For example, assume that a banking organization holds a long position in a CDS index that references 125 underlying credits and a short position in the next series of the index that also references 125 credits. The two indices share the same 123 reference credits, such that there are two unique credits in each index. Under the proposal, a banking organization could offset the 123 names through decomposition, in which case the net default exposure would reflect only the two unique single-name credits for the long index position and the two unique single-name credits for the short index position. Similarly, a banking organization could offset the long exposure in 125 credits by selling short an index that contains 123 of those same credits. In this case, only the two residual names would be reflected in the net default exposure.

Fifth, the proposal would allow a banking organization to offset different tranches of the same index and series through replication and decomposition and calculate a net default

exposure on the unique component only, if the residual component has the attachment and detachment point nested with the original tranche or the combination of tranches. In such cases, the banking organization would be required to account for the residual component of the unhedged tranche within the default risk capital requirement. For example, assume that a banking organization holds long positions in two tranches, one that attaches at 5 percent and detaches at 10 percent and another that attaches at 10 percent and detaches at 15 percent. To hedge this position, the banking organization holds a short position in a tranche on the same index that attaches at 5 percent and detaches at 20 percent. In this case, the banking organization's net default exposure would only be for the residual portion of the tranche that attaches at 15 percent and detaches at 20 percent.

iii. *Buckets and corresponding risk weights*

For correlation trading positions, the proposal would define buckets by index, each index would comprise its own bucket.[453] Under the proposal, a bespoke correlation trading position would be assigned to its own unique bucket, unless it is substantially similar to an index instrument, in which case the bespoke position would be assigned to the bucket corresponding to the index. For a non-securitization position that hedges a correlation trading position, a banking organization would be required to assign such position and the correlation trading position to the same bucket.

For consistency in the proposed capital requirements for securitizations under either the standardized approach or the expanded risk-based approach of the capital rule and to recognize

[453] A non-exhaustive list of indices include: the CDX North America IG, iTraxx Europe IG, CDX HY, iTraxx XO, LCDX (loan index), iTraxx LevX (loan index), Asia Corp, Latin America Corp, Other Regions Corp, Major Sovereign (G7 and Western Europe) and Other Sovereign.

credit subordination,[454] the proposed risk weights corresponding to the proposed buckets for correlation trading positions are based on the proposed treatment under either the standardized approach or the expanded risk-based approach of the capital rule.[455] For non-tranched hedges of correlation trading positions or decomposed single-name exposures, the proposal would allow a banking organization to apply the same risk weights and loss given default rates as for non-securitization debt or equity positions, provided that such hedges or decomposed single-name exposures are excluded from the default risk capital requirement for non-securitization debt or equity positions.

The agencies recognize that the granularity of the proposed bucket structure could result in several individual buckets containing only net short exposures and thus overstate the offsetting benefits of non-identical exposures if the total default risk capital requirement for correlation trading positions was calculated as a sum of the bucket-level capital requirements. To appropriately limit the benefit of buckets with short default exposures offsetting those with long exposures, the total default risk capital requirement for correlation trading positions would be calculated as the sum of the risk-bucket level capital requirements for the net long default exposures plus half of the sum of the risk-weighted exposures for the net short default exposures.

10. Treatment of certain market risk covered positions

To promote consistency and comparability in the risk-based capital requirements across banking organizations and to help ensure appropriate capitalization of positions subject to the

[454] For example, consistent with the existing SSFA, the proposed SEC-SA would use the risk weights applicable to the underlying exposures within the general credit risk framework to calculate the risk weight for the securitization exposure. The SEC-SA calculates the risk weight for a securitization exposure based on characteristics of the tranche, such as the attachment and detachment points and quality of the underlying collateral.

[455] *See* §__.42 of the current capital rule and §__.132 of the proposed rule.

proposed market risk framework, the proposal would clarify the treatment of certain market risk covered positions under the standardized and models-based measures for market risk.

a. Net short risk positions

The proposal would require a banking organization to calculate on a quarterly basis its exposure arising from any net short credit or equity position.[456] A banking organization would be required to include any net short risk position of at least $20 million, adjusted to reflect CPI-W, in its total market risk capital requirement for the entire quarter, under both the standardized measure for market risk and the models-based measure for market risk, as applicable.

The proposed quarterly approach is intended to reduce operational burden of requiring a banking organization to capture temporary or small differences arising from fluctuations in the value of positions subject to the credit risk framework. Further, the proposed quarterly calculation requirement should help ensure that banking organizations are appropriately managing and monitoring net short risk positions arising from exposures subject to the standardized approach or the expanded risk-based approach of the capital rule at intervals of sufficient frequency to prevent the formation of non-negligible net short risk positions.

As proposed it may be difficult for a banking organization to apply the standardized non-default capital requirement or models-based non-default capital requirement to net short risk positions given that the composition of any particular net short position could contain a different combination of various underlying instruments. Therefore, if unable to calculate a risk factor sensitivity for a net short risk position, the proposal would require the banking organization to

[456] *See* section V.A.4.b. of this **SUPPLEMENTARY INFORMATION** for a more detailed discussion on net short risk positions.

calculate market risk capital requirements using the fallback capital requirement as described in section V.A.3.d. of this **SUPPLEMENTARY INFORMATION**.

b. Securitization positions and defaulted and distressed market risk covered positions

The proposal would require a banking organization to calculate market risk capital requirements for securitization positions using the standardized non-default capital requirement or the fallback capital requirement, as applicable. The proposed treatment would address regulatory arbitrage concerns as well as deficiencies in the modelling of securitization positions that became more evident during the course of the financial crisis that began in mid-2007.[457]

The proposal would require a banking organization to include defaulted market risk covered positions in the default risk capital requirement. The proposal would allow a banking organization to extend the treatment of defaulted market risk covered positions to distressed market positions. Such positions are not required to be included in the standardized non-default capital requirement or in the models-based non-default capital requirement. Generally, distressed and defaulted positions trade based on recovery, which is not driven by or reflective of the credit spread of the issuer. Therefore, in addition to being operationally difficult, requiring a banking organization to calculate the sensitivity of such positions to changes in credit spreads may not be appropriate for the purposes of quantifying the risk posed by such positions. Additionally, subjecting defaulted and distressed positions to capital requirements under the standardized or models-based non-default capital requirement would increase the capital requirements for such

[457] As discussed further in section V.A.6.d.i. of this **SUPPLEMENTARY INFORMATION**, model-eligible trading desk would be allowed to hold insignificant amounts of model-ineligible positions, including securitization positions. For model-eligible trading desks that hold insignificant amounts of such positions, the proposal would require a banking organization to exclude any model-ineligible positions held by the model-eligible trading desk from (1) the aggregate trading portfolio backtesting; and (2) the relevant desk-level backtesting and profit and loss attribution metric, unless the banking organization receives approval from its primary Federal supervisor to include such positions.

positions beyond the maximum potential loss of such holdings, as the default risk capital requirement already assigns a 100 percent risk weight and 100 percent LGD to such exposures. If a banking organization is unable to calculate the default risk capital requirement for such positions, the proposal would require the banking organization to calculate market risk capital requirements using the fallback capital requirement.[458]

As the amount of regulatory capital required under the fallback capital requirement would equal the absolute fair value of the position, the proposal would cap the overall market risk capital requirement for defaulted, distressed, and securitization positions at the maximum loss of the position. By capping the regulatory capital requirement for such positions at the total potential loss that a banking organization could incur from holding such positions, the proposal would align the risk-based requirements under the standardized and models-based non-default capital requirements, as applicable, with those under the fallback capital requirement.

c. Hybrid instruments

i. *Standardized non-default capital requirement*

Hybrid instruments are instruments that have characteristics in common with both debt and equity instruments, including traditional convertible bonds. As hybrid instruments primarily react to changes in interest rates, issuer credit spreads, and equity prices, the proposal would require a banking organization to assign risk sensitivities for these instruments into the interest rate risk class, credit spread risk class for non-securitization positions, and equity risk class, as

[458] As described in more detail in section V.A.3.d. of this **SUPPLEMENTARY INFORMATION**, the fallback capital requirement would apply in instances where a banking organization is unable to calculate market risk capital requirements for one or more of its market risk covered positions under either the standardized non-default capital requirement, the models-based non-default capital requirement, if eligible, or the default risk capital requirement.

applicable, when calculating the delta, curvature, and vega capital requirements under the sensitivities-based method.

ii. *Default risk capital requirement*

For the default risk capital requirement, the proposal would require a banking organization to decompose a hybrid instrument into a non-securitization position and an equity position and calculate the default risk capital requirement for each position respectively. For example, a convertible bond can be decomposed into a vanilla bond and an equity call option. The notional amount to be used in the calculation of the default risk capital requirement for the vanilla bond is the notional amount of the convertible bond. The notional amount to be used in the calculation of the default risk capital requirement for the call option is zero (because, in the event of default, the call option will not be exercised). In this case, a default of an issuer of the convertible bond would extinguish the call option's value and this loss would be captured through the profit and loss component of the gross default exposure amount calculation. The default risk capital requirement for the convertible bond would be the sum of the default risk capital of the vanilla bond and the default risk capital requirement for the equity option.

d. Index instruments and multi-underlying options

i. *Standardized non-default capital requirement*

When calculating the delta and curvature capital requirements under the sensitivities-based method for index instruments and multi-underlying options, the proposal would allow a banking organization to apply the look-through approach or the single sensitivity approach.

The look-through approach would require a banking organization to identify the underlying positions of the index instrument or multi-underlying option and calculate market risk

capital requirements as if the banking organization directly held the underlying exposures. Under the proposal, a banking organization would be required to apply the look-through approach consistently through time and for all positions that reference the same index. The proposed look-through approach would align the treatment of such instruments with that of single-name positions and thus provide greater hedging recognition by allowing such instruments to net with single-name positions issued by the same company. Specifically, a banking organization would be able to net risk factor sensitivities of such positions of the index instrument or multi-underlying option and other single-name positions without restriction when calculating delta and curvature capital requirements under the sensitivities-based method.

The single sensitivity approach would require a banking organization to calculate a single sensitivity to the index and then assign the index instrument or multi-underlying option to a relevant bucket to calculate the delta and curvature capital requirements. To assign the sensitivity of the index to the relevant sector or index bucket, the proposal includes a waterfall approach as a simple and risk-sensitive method to appropriately reflect the risk of such positions based on the risk and diversification of the underlying assets. For indices where at least 75 percent of the notional value of the underlying constituents relate to the same sector (sector-specific indices), taking into account the weightings of the index, the sensitivity would be assigned to the corresponding sector bucket; otherwise, the proposal would require a banking organization to assign the sensitivity to an appropriate index bucket. For equity indices that are not sector specific, the proposal would require a banking organization to assign the sensitivity to the large market cap and liquid market economy (non-sector specific) equity indices bucket if least 75 percent of the market value of the index constituents met both the large market cap and liquid market economy criteria, and to the other equity indices (non-sector specific) bucket otherwise.

For credit indices that are not sector specific, the sensitivity would be assigned to the investment grade indices bucket if the credit quality of at least 75 percent of the notional value of the underlying constituents is investment grade, and to the speculative grade and sub-speculative grade indices bucket otherwise.[459] To the extent a credit or an equity index spans multiple risk classes, the proposal would require the banking organization to allocate the index proportionately to the relevant risk classes following the above methodology. For credit indices the proposal would allow a banking organization to use delta sensitivity for equity risk of the index adjusted by the index's effective duration as a proxy to calculate delta sensitivity for interest rate risk and credit spread risk for non-securitizations in the sensitivities-based method. This approach would help ensure a more risk sensitive treatment of credit indices when the look-through approach is not possible or practical. Furthermore, a banking organization would need to assign credit spread risk and interest rate risk delta sensitivities to the closest tenors using interpolation. The delta sensitivity for interest rate risk should be assigned based on currency. To calculate the vega capital requirement for options on credit indices under the single sensitivity approach, the proposal would require a banking organization to follow the steps outlined in section V.A.7.a.ii.I. of this **SUPPLEMENTARY INFORMATION** and use the same buckets as applied in the delta capital calculation. When calculating curvature for options on credit indices, the proposal would allow a banking organization to use a single shock measured as the delta risk weight multiplied by the index's effective duration.

When calculating vega capital requirements for index instruments and multi-underlying options (including index options), the proposal would permit, but not require, a banking

[459] *See* section V.A.7.a.iii. of this **SUPPLEMENTARY INFORMATION** for a more detailed description on the assignment of delta sensitivities to the prescribed buckets under the proposed sensitivities-based method.

organization to apply the look-through approach and calculate the vega capital requirements based on the implied volatility of options on the underlying constituents. Alternatively, under the proposal, a banking organization could calculate the vega capital requirement for multi-underlying options based on the implied volatility of the option, which typically is the method used by banking organizations' financial reporting models for multi-underlying options. For indices, the proposal would require a banking organization to calculate vega capital requirements with respect to the implied volatility based on the same sector specific bucket or index bucket used to calculate the delta capital requirement and the curvature capital requirement, or an appropriate sector specific or index bucket otherwise.

ii. *Models-based non-default capital requirement*

When calculating the models-based non-default capital requirement for indices and multi-underlying options the proposal would allow, but not require, a banking organization to calculate the market risk capital requirement for such positions held by a model-eligible desk by applying the look-through approach or the hypothetical portfolio approach based on the most recent quarterly disclosure of the index's historical holdings of underlying positions. In addition, a banking organization may use any other modelling approach to calculate the models-based non-default capital requirement after receiving a prior approval from its primary Federal supervisor.

iii. *Default risk capital requirement*

The default risk of credit and equity indices as well as multi-underlying options that are non-securitization debt or equity positions is primarily a function of the idiosyncratic default risk of the underlying constituents. Accordingly, to capture appropriately the default risk of such positions, the proposal would allow a banking organization to apply the look-through approach when calculating the default risk capital requirement for indices and multi-underlying options

that are non-securitization debt or equity positions. When decomposing multi-underlying exposures or indices, a banking organization would be required to set the gross default exposure assigned to a single name, referenced by the instrument, equal to the difference between the value of the instrument assuming only the single name defaults and the value of the instrument assuming none of the single names referenced by the instrument default. By aligning the treatment of positions in credit and equity indices with that of single-name positions, the proposal would provide greater hedging recognition as the banking organization would be able to offset the gross default exposure of long and short positions in indices with that of single-name positions included in the index.

Alternatively, as the underlying constituents of credit and equity indices and multi-underlying options could react differently to the same market or economic event, the proposal would also allow a banking organization to treat such positions as a single position for purposes of calculating the default risk capital requirement, provided the index or multi-underlying option substantially meets the criteria for the applicable bucket. Also, the proposal would allow a banking organization to treat the index or multi-underlying option as a single sub-speculative exposure. For example, a banking organization may choose to apply a single sub-speculative exposure approach when it would be operationally challenging for a banking organization to apply the look-through approach or perform the analysis to identify an appropriate bucket for a single exposure.

Question 175: The agencies seek comment on the proposed threshold of 75 percent for assigning a credit or equity index to the corresponding sector or the investment grade indices bucket. What would be the benefits and drawbacks of the proposed threshold? What, if any,

alternative thresholds should the agencies consider that would more appropriately measure the majority of constituents in listed and well-diversified credit and equity indices?

Question 176: The agencies seek comment on the calculation of vega capital requirement for credit indices for which a banking organization chooses to apply a single sensitivity approach. To mitigate any operational burden that could arise from using the single sensitivity approach in order to calculate the vega capital requirement, what would be the advantages and disadvantages of allowing a banking organization to calculate the vega capital requirement according to the backstop fund method? Please specify how a banking organization would perform such calculation.

e. Equity positions in an investment fund

i. *Standardized non-default capital requirement*

For equity positions in an investment fund or portions of such positions for which the banking organization is able to use the look-through approach to calculate a market risk capital requirement for its proportional ownership share of each exposure held by the investment fund, the proposal would allow a banking organization to apply the look-through approach under the standardized measure for market risk. If a banking organization is able to use the look-through approach to calculate market risk capital requirements for only a portion of the underlying positions in the fund, the proposal would require a banking organization to treat the equity position in the investment fund as two separate market risk covered positions: one as a market risk covered position for which the banking organization is able to apply the look-through approach and the rest as a market risk covered position for which the banking organization is not able to apply the look-through approach. In this circumstance, each position would represent the proportional amount of original position corresponding to the portion of the investment fund that

the banking organization is able to use the look-through approach or not able to use the look-through approach, respectively.

Alternatively, a banking organization could elect not to apply the look-through approach for such positions and, instead, apply the single sensitivity approach if the investment fund meets the criteria to be assigned to the relevant bucket as described in further detail in section V.A.10.d.i. of this **SUPPLEMENTARY INFORMATION**. For equity or debt positions in publicly traded real estate investment trusts, the proposal would allow a banking organization to treat such exposures as a single exposure and apply the risk weight applicable to exposures allocated to the financial sector bucket when calculating the delta, vega, and curvature capital requirements under the sensitivities-based method.[460] While equity positions in publicly traded real estate investment trusts are traded on the market, the underlying assets of such trusts generally are not. Thus, a banking organization will generally not be able to calculate the risk factor sensitivity for each of the underlying assets of the real estate investment trust and perform a full look through. Allowing a banking organization to treat equity positions in real estate investment trusts as a single position would help ensure that market risk capital requirements appropriately capture a banking organization's market risk exposure arising from such positions in a manner that minimizes compliance burden and enhances risk-capture. As each of the proposed alternative approaches would reflect a conservative capital requirement, the agencies consider that the proposed alternatives would help ensure a banking organization maintains

[460] Under the proposal, such exposures would receive the 55 percent or 50 percent risk weight applicable to equity risk factors allocated to buckets 4 or 8, respectively, in Table 8 to §__.209 of the proposed rule. Similarly, such exposures would receive the five percent or 12 percent risk weight applicable to counterparty credit spread risk for non-securitization risk factors allocated to buckets 3 and 11, respective, in Table 3 to §__.209 of the proposed rule.

sufficient capital against potential losses arising from equity positions in an investment fund for which the banking organization is unable to identify the underlying positions held by the fund.

Additionally, for equity positions in an investment fund or portions of such positions where a banking organization is not able to apply the look-through approach, the proposal would allow the banking organization to either apply the tracked index method, the hypothetical portfolio approach or the backstop fund method, as applicable. A banking organization could apply the tracked index method if the investment fund closely tracks an index benchmark or the investment fund's mandate or prospectus requires that it tracks an index with tracking performance published quarterly. Generally, the agencies would consider an equity position in an investment fund to closely track the index if the returns of the investment fund (ignoring fees and commissions) over the prior year differs from those of the index by only a small percentage. For an equity position in an investment fund that closely tracks an index benchmark or if its mandate or prospectus requires that it tracks an index and publishes its tracking performance on a quarterly basis, the proposal would allow a banking organization to treat the equity position in the investment fund as if it was the tracked index in calculating the delta, vega, and curvature capital requirements, given the high correlation of the equity position with that of the index.[461] Further, for equity positions in an investment fund that holds an index, the proposal would allow a banking organization to calculate the delta, vega, and curvature capital requirements for the underlying index position using the treatment for indices[462] and apply the look-through approach or the single sensitivity approach to the other underlying exposures of the investment fund.

[461] In this situation, the banking organization would apply the treatment for index instruments described in section V.A.10.d.i. of this **SUPPLEMENTARY INFORMATION**.

[462] In this situation, the banking organization would apply the treatment for index instruments described in section V.A.10.d.i. of this **SUPPLEMENTARY INFORMATION**.

Under the proposed hypothetical portfolio approach, the banking organization would need to assume that the investment fund invests to the maximum extent permitted under its mandate in those exposures with the highest applicable risk weight and continues to make investments in the order of the exposure type with the next highest applicable risk weight until the maximum total investment level is reached. If more than one risk weight can be applied to a given exposure, the proposal would require the banking organization to use the maximum applicable risk weight in calculating the sensitivities-based method requirement. Alternatively, the banking organization may assume that the investment fund invests based on the most recent quarterly disclosure of the fund's historical holdings of underlying positions. The proposal would require a banking organization to weigh the constituents of the investment fund based on the hypothetical portfolio.

To address any potential operational burden that can arise from the above discussed approaches for equity positions in an investment fund, the proposal would permit a banking organization to use an effective risk weight calculated by third parties in the calculation of market risk capital requirements for the look-through approach,[463] hypothetical portfolio approach, and tracked index method. Under this approach, the fund's exposure would be assigned to one or more appropriate buckets without the requirement to look-through the fund, and with diversification allowed with other exposures.

Alternatively, the proposal's backstop fund method would allow a banking organization to allocate equity positions in an investment fund to the applicable other sector bucket.[464] This

[463] If a banking organization relies on a third party to calculate the effective risk weight, the banking organization should be able to have understanding of how the third party calculates the risk weight and be able to verify that the calculation was conducted in a manner consistent with the requirements of the capital rule.

[464] Table 8 to §__.209 of the proposed rule provides the proposed delta risk buckets and corresponding risk weights for positions within the equity risk class.

approach would be a simple conservative measure in situations when, due to computational or operational challenges, a banking organization is unable to apply other allowed approaches to calculate the standardized non-default capital requirement. In situations when the mandate of the investment fund allows investments in positions subject to the residual risk add-on, such as positions with exposures to exotic risks or residual risks, the banking organization would need to calculate residual risk add on requirement for the equity position in the investment fund assuming that the investment fund has invested in such exposures to the maximum extent permitted under its mandate.

ii. *Models-based non-default capital requirement*

The proposal would only allow a banking organization to use the models-based non-default capital requirement for equity positions in an investment fund for which the banking organization is able to identify the underlying positions held by the fund on a quarterly basis.[465] Otherwise, these positions would be calculated using the standardized non-default capital requirement or the fallback capital requirement. Under the proposal, a banking organization would be required to calculate the market risk capital requirement for such positions held by a model-eligible desk by applying the look-through approach or the hypothetical portfolio approach based on the most recent quarterly disclosure of the investment fund's historical holdings of underlying positions. In addition, a banking organization also may use any other

[465] The proposal would allow a banking organization to use the models-based non-default capital requirement for portions of equity positions in an investment fund for which the banking organization is able to use the look-through approach to calculate a market risk capital requirement for its proportional ownership share of such exposures held by the investment fund. For portions of equity positions in an investment fund for which the banking organization is unable to use the look-through approach, the banking organization would use one of the approaches discussed in section V.A.10.e.i. of this **SUPPLEMENTARY INFORMATION**.

modelling approach to calculate the models-based non-default capital requirement after receiving a prior approval from its primary Federal supervisor.

Question 177: What would be the advantages and disadvantages of allowing banking organizations to decompose equity positions in investment funds into the underlying holdings of the fund or based on the hypothetical portfolio, for purposes of calculating capital requirements under the models-based non-default capital requirement? Please provide specific details on the mechanics, capital implications and rationale for any suggested methodology, in particular the extent to which the proposed backtesting and PLA requirements would help ensure appropriate risk capture for positions in which the banking organization is only able to perform a look-through on a quarterly basis.

iii. *Default risk capital requirement*

Similar to index instruments and multi-underlying options that are non-securitization debt or equity positions, the default risk of equity positions in an investment fund is primarily a function of the idiosyncratic default risk of the underlying constituents. Accordingly, to capture appropriately the default risk of such positions, the proposal would allow a banking organization to apply the look-through approach when calculating the default risk capital requirement for equity positions in an investment fund that are non-securitization debt or equity positions. Alternatively, for positions in an investment fund that closely tracks an index benchmark or for which a banking organization can identify the main investment strategy specified in the fund's mandate or prospectus, a banking organization would be allowed to treat an exposure to the fund as a single-name exposure assigned to an appropriate default bucket for non-securitization debt

and equity positions.[466] In situations when a banking organization is unable to use either the look-through approach or apply the single exposure treatment to calculate the default risk capital requirement for such positions due to some potential operational limitations, the proposal would allow a banking organization to treat a fund as a single-name sub-speculative exposure with the highest risk weight applicable to the fund (for example, 50 percent risk weight as specified in Table 1 to § __.210 of the proposed rule).

For equity positions in an investment fund for which the banking organization applies the hypothetical portfolio approach under the standardized non-default capital requirement described above, the proposal would require a banking organization to apply the same hypothetical portfolio approach for purposes of calculating the default risk capital requirement for such positions.

For equity positions in an investment fund for which the banking organization applies the backstop fund method under the standardized non-default capital requirement, the proposal would allow a banking organization to use either the hypothetical portfolio approach for purposes of calculating the default risk capital requirement for such positions or treat the fund as a single sub-speculative exposure. The proposed treatment would help ensure the risk-based requirements appropriately capture the default risk of such positions in a manner that is consistent across banking organizations and minimizes operational burden.

Question 178: The agencies seek comment on whether a banking organization's ability under the proposal to treat an equity position in an investment fund as an index position when

[466] *See* Table 1 to § _210 of the proposed rule provides the proposed default risk buckets and corresponding risk weights for the non-securitization debt and equity risk positions.

the investment fund closely tracks an index benchmark provides sufficient specificity to help ensure consistent application across banking organizations. To what extent would a specific quantitative measure more appropriately capture the types of positions that should be treated as index positions? What, if any, alternatives should the agencies consider (such as specifying an absolute value of one percent) to better capture the types of positions whose risks would more appropriately be captured by the proposed market risk capital requirements for index positions and why? Commenters are encouraged to provide specific details on the mechanics, capital implications, and rationale for any suggested methodology.

Question 179: The agencies seek comment on requiring banking organizations to calculate the default risk capital requirement for equity positions in investment funds, if, based on its mandate, the fund would invest in the types of exposures that would be subject to the residual risk add-on to the maximum extent permitted under the mandate. What, if any, alternatives—such as allowing banking organizations to use the historical risk characteristics of the fund—should the agencies consider to better capture the residual risks of such positions? Commenters are encouraged to provide specific details on the mechanics, capital implications and rationale for any suggested methodology.

f. Treatment of term repo-style transactions

The current capital rule permits a banking organization to calculate a market risk capital requirement for securities subject to repurchase and lending agreements with an original maturity of more than one business day (term repo-style transactions), regardless of whether such transactions meet the short-term trading intent criterion of the definition of a market risk covered

position.[467] Under the current capital rule, this optionality is only available for term repo-style transactions for which the banking organization separately calculates risk-based requirements for counterparty credit risk using the collateral haircut approach under the standardized approach or the advanced approaches of the capital rule.[468] The standardized approach and the advanced approaches of the capital rule permit a banking organization to recognize the credit risk mitigation benefits of non-financial collateral under the collateral haircut approach for these term repo-style transactions.

The proposal would retain the treatment of term repo-style transactions in the current capital rule. The proposal similarly would permit a banking organization to include term repo-style transactions in market risk covered positions, where the transactions are marked to market and provided that it includes all of such term repo-style transactions in market risk covered positions consistently over time. In such cases, the proposal would permit a banking organization to include term repo-style transactions in the sensitivities-based method or models-based non-default capital requirement if held by a model-eligible trading desk. For purposes of calculating market risk capital requirements under the sensitivities-based method or the models-based non-default capital requirement, the proposal would require a banking organization to capture the risk factor sensitivities of the cash leg to general interest rate risk. The proposal would also require a banking organization to separately calculate the default risk capital requirement to capture losses

[467] While such transactions are similar to trading activities, not all such transactions meet the short-term trading intent criterion of the definition of covered position. For example, certain repo-style transactions operate in economic substance as secured loans and do not, in normal practice, represent trading positions.

[468] Under the market risk capital framework in the current capital rule, a banking organization that uses the simple VaR approach for purposes of calculating counterparty credit risk capital requirements may also include term repo-style transactions within the VaR-based measure for market risk. As noted in section IV.A.1. of this **SUPPLEMENTARY INFORMATION**, the proposal would eliminate the simple VaR approach for calculating risk-based requirements for counterparty credit risk – and thus this optionality would only apply in the context of the collateral haircut approach.

on the underlying reference exposure in the event of issuer default as described in section V.A.9.a. of this **SUPPLEMENTARY INFORMATION** and the risk-based capital requirements for counterparty credit risk using the collateral haircut approach as described in section IV.A.4.a. of this **SUPPLEMENTARY INFORMATION**.

Question 180: The proposal would retain the current capital rule's treatment of repurchase and lending agreements with an original maturity of more than one business day (term repo-style transactions). What are the advantages and disadvantages of allowing a banking organization to treat repurchase agreements with no specified maturity date (open repurchase transactions) or those which maturity date automatically renews until canceled by a participating party (evergreen repurchase transactions), and why? To what extent open and evergreen repurchase transactions have different risk profiles from term repo-style transactions?

11. Reporting and disclosure requirements

The reporting and public disclosures required under the proposal are intended to strike a balance between the information necessary for ensuring that a banking organization is conforming to the requirements of the proposed market risk rule, the public policy benefits that result from transparency of information, and a banking organization's compliance burden. The proposal does not change the requirements under the current capital rule regarding public disclosure policy and attestation, the frequency of required disclosures, the location of disclosures, or the treatment of proprietary and confidential information except that each of these aspects of the proposal is discussed not only in regard to a banking organization's public disclosures, but also in regard to its reporting (public regulatory reports and, as applicable, confidential supervisory reports).

a. Scope

The quantitative and qualitative disclosures required by this section would not apply to a banking organization that is a consolidated subsidiary of a bank holding company, savings and loan holding company, or a depository institution that is subject to these requirements, or of a non-U.S. banking organization subject to comparable public disclosure requirements in its home jurisdiction.

The information contained within both public regulatory reports and, as applicable, confidential supervisory reports described in the proposal would be necessary for the primary Federal supervisor to assess whether a banking organization has adequately implemented the proposed market risk capital framework. Therefore, under the proposal, any banking organization that is subject to the proposed market risk capital requirements must provide public regulatory reports in the manner and form prescribed by its primary Federal supervisor, including any additional information and reports that the primary Federal supervisor may require. Any such banking organization that also uses the models-based measure for calculating market risk capital requirements must provide confidential supervisory reports as discussed below to its primary Federal supervisor in a manner and form prescribed by that supervisor.

b. Quantitative and qualitative disclosures

The current capital rule requires a banking organization subject to the market risk capital framework to disclose information related to the composition of portfolios of covered positions as well as the internal models used to calculate the market risk of covered positions. The proposal would eliminate the existing quantitative disclosures related to the calculations of VaR and incremental and comprehensive risk capital requirements, which would no longer be necessary for calculating risk-based capital requirements for market risk under the proposal. The proposal would, however, retain the existing quantitative disclosures related to the aggregate

amount of on-balance sheet and off-balance sheet securitization positions by exposure type, as well as the aggregate amount of correlation trading positions. Together, these disclosures would promote transparency regarding a banking organization's securitizations, which have historically been sources of uncertainty for regulators and market participants during periods of financial stress. Finally, the proposal would add a quantitative disclosure requiring a banking organization that uses the models-based measure for market risk to disclose a comparison of VaR-based estimates to actual gains or losses for each material portfolio of market risk covered positions with an analysis of important outliers. In addition to the requirement to disclose a general description of a banking organization's internal capital adequacy assessment methodology, a banking organization that uses the models-based measure for market risk would also be required to include such assessment for categories of non-modellable risk factors.[469]

The proposal would also retain the existing qualitative disclosures for material portfolios but with certain revisions to reflect the changes to the market risk framework under the proposal. Specifically, the requirement that a banking organization disclose characteristics of internal models would be revised to also require that the banking organization disclose information related to the models used to calculate expected shortfall (ES), the frequency with which data is updated, and a description of the calculation based on current and stress observations. The existing requirement that a banking organization disclose its internal capital adequacy assessment, including a description of the methodologies used to achieve a capital adequacy assessment consistent with the soundness standard, would be subsumed into the quarterly quantitative disclosure requirements described above. Qualitative disclosures that typically do

[469] The agencies would expect a banking organization to have sound internal capital assessment processes which would include, but not be limited to, identification of capital adequacy goals with respect to risks, taking into account the strategic focus and business plan of the banking organization, risk identification, measurement, and documentation, as well as a process of internal controls, reviews, and audits.

not change each quarter may be disclosed annually, provided any significant changes are disclosed in the interim.

The proposal would add new qualitative disclosures related to a banking organization's processes and policies for managing market risk. Specifically, the proposed qualitative disclosures include (i) a description of the structure and organization of the market risk management system, including a description of the market risk governance structure established to implement the strategies and processes described below; (ii) a description of the polices and processes for determining whether a position is designated as a market risk covered position and the risk management policies for monitoring market risk covered positions; (iii) a description of the scope and nature of risk reporting and/or measurement systems and the strategies and processes implemented by the banking organization to identify, measure, monitor, and control the banking organization's market risks, including polices for hedging; and (iv) a description of the trading desk structure and the types of market risk covered positions included on the trading desks or in trading desk categories, including a description of the model-eligible trading desks for which a banking organization calculates the models-based non-default risk capital requirement and any changes in the scope of model-ineligible trading desks and the market risk covered positions on those desks. Together, the additional disclosure requirements in the proposal would increase transparency, encourage sound risk management practices, and assist the regulatory review process of a banking organization subject to the proposed market risk framework by providing clear information on the policies and procedures that each banking organization has adopted to manage and mitigate potential losses arising from market fluctuations.

c. Public reports

In addition to the public disclosure requirements, the proposal would require that a banking organization provide a quarterly public regulatory report of its measure for market risk. This public report, the form of which would be specified by the agencies, would contain information that the agencies deem necessary for assessing the manner in which a banking organization has implemented the proposed market risk rule. This, in turn, would help ensure the safety and soundness of the financial system by facilitating the identification of problems at a banking organization and ensuring that a banking organization has implemented any corrective actions imposed by the agencies.

d. Confidential supervisory reports

Under the proposal, a banking organization using the models-based measure to calculate market risk capital requirements would be required to submit, via confidential regulatory reporting in the manner and form prescribed by the primary Federal supervisor, data pertaining to its backtesting and PLA testing.

To reflect the proposed changes to the market risk framework, the proposal would require a banking organization to submit backtesting information for model-eligible trading desks at both the aggregate level and for each trading desk, as well as PLA testing information for each model-eligible trading desk, on a quarterly basis. This information would cover the previous 500 business days, or all business days if 500 business days are not available, and would have to be reported with no more than a 20-day lag. At the aggregate level, the data would include the daily VaR-based measures calibrated to the 99.0th percentile; the daily ES-based measure calibrated at the 97.5th percentile; the actual profit and loss; the hypothetical profit and loss; and the p-value of the profit or loss for each day. At the trading desk level, the data would include the daily VaR-based measure for the trading desk calibrated at both the 97.5th and 99.0th percentile; the daily

ES-based measure calibrated at the 97.5th percentile; the actual profit and loss; the hypothetical profit and loss; the risk-theoretical profit and loss; and the p-values of the profit or loss for each day.

The information in the proposed report would enable the primary Federal supervisor to identify changes to the risk profiles of reporting banking organizations as well as to monitor the risk inherent in the broader banking system. Specifically, the collection of backtesting and PLA data included in the proposed reports would enable the primary Federal supervisor to determine the validity of a banking organization's internal models, and whether these models accurately account for the risk associated with exposure to price movements, changes in market structure, or market events that affect specific assets. If the primary Federal supervisor finds these models to be flawed, the banking organization must then use the standardized non-default capital requirement for calculating its market risk capital requirements, thereby preventing divergence between a banking organization's risk profile and its capital position. In addition, the proposed report would be a valuable tool for a banking organization subject to the market risk capital requirements under the proposal to verify that the proposed market risk framework has been appropriately implemented.

12. Technical amendments

The proposal would streamline the definitions related to securitizations in the market risk capital framework with those in the standardized approach or the expanded risk-based approach of the capital rule. Specifically, the proposal would eliminate the definition of "securitization" from the market risk capital framework and revise the definitions of "securitization position" and "resecuritization position" to refer to the terms "securitization exposure" and "resecuritization

exposure," which are defined in §__.2 of the capital rule.[470] These modifications would not change the scope of positions that would be considered securitization positions and resecuritization positions under the market risk capital framework. Rather, the proposed revisions would clarify that the same types of positions are captured under the market risk capital framework as under the standardized approach and the proposed expanded risk-based approach, which currently use substantially similar, but separate definitions.

B. Credit valuation adjustment risk

1. Background

In general, OTC derivative contracts are bilateral agreements either to make or receive payments or to buy or sell an underlying asset on a certain date, or dates, in the future. The value of an OTC derivative contract, and thus a party's exposure to its counterparty, changes over the life of the contract based on movements in the value of the reference rates, assets, commodity prices, or indices underlying the contract. In addition to the exposure to changes in the market value of OTC derivative contracts, there is also credit risk associated with such contracts. Specifically, if a counterparty to an OTC derivative contract, or a portfolio of such contracts subject to a qualifying master netting agreement or a qualifying cross-product master netting

[470] Section 2 of the capital rule defines a securitization exposure as an on- or off-balance sheet credit exposure (including credit-enhancing representations and warranties) that arises from a traditional or synthetic securitization (including a resecuritization), or an exposure that directly or indirectly references a securitization exposure. The agencies' capital rule defines a traditional securitization, in part, as a transaction in which all or a portion of the credit risk of one or more underlying exposures is transferred to one or more third parties (other than through the use of credit derivatives or guarantees), where the credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority. The definition includes certain other conditions, such as requiring all or substantially all of the underlying exposures to be financial exposures. *See* 12 CFR 3.2 s.v. securitization exposure, traditional securitization (OCC); 12 CFR 217.2 s.v. securitization exposure, traditional securitization (Board); 12 CFR 324.2 s.v. securitization exposure, traditional securitization (FDIC).

agreement ,[471] defaults prior to the contract's expiration, the non-defaulting party will experience a loss if the market value of the contract, or of the portfolio of contracts under a qualifying master netting agreement, is positive at the time of default. The risk of such a loss, known as counterparty credit risk, exists even if the current market value of the contract, or the portfolio under a qualifying master netting agreement, is negative because the future market value may become positive if market conditions change. Under the current capital rule, a banking organization determines risk-based capital requirements for counterparty credit risk using the credit risk framework, with exposure amounts determined via either SA-CCR, the current exposure methodology, or the internal models methodology, as applicable.[472]

The valuation change of OTC derivative contracts resulting from the risk of the counterparty's defaulting prior to the expiration of the contracts, known as the credit valuation adjustment (CVA), depends on (1) counterparty credit spreads, which reflect the creditworthiness of the counterparty perceived by the market; and (2) credit exposure generated by CVA risk covered positions[473] that the market would expect at various future points in time. Thus, CVA risk has two components: a counterparty credit spread component (CVA increases as a result of the deterioration in the creditworthiness of a counterparty perceived by the market) and an exposure component (CVA increases as a result of an increase in the expected future exposure).

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[471] "Qualifying master netting agreement" is defined in §__.2 of the current capital rule. In order to recognize an agreement as a qualifying master netting agreement, a banking organization must meet the operational requirements in §__.3(d) of the current capital rule. *See* 12 CFR 3.2, and 3.3(d) (OCC); 12 CFR 217.2 and 217.3(d) (Board); 12 CFR 324.2, and 324.3(d) (FDIC). In general, a qualifying master netting agreement means a netting agreement that permits a banking organization to accelerate, terminate, close-out on a net basis and promptly liquidate or set off collateral upon default of the counterparty. The proposal would retain this definition, except as discussed in section IX of this **SUPPLEMENTARY INFORMATION**, whereby the proposal would modify the definition in the Board's and OCC's rule to address a prior error.

[472] *See* §§__.34 and __.132 of the current capital rule.

[473] CVA risk covered positions are described in section V.B.3.a. of this **SUPPLEMENTARY INFORMATION**.

The proposal would revise the criteria for determining whether a banking organization is subject to CVA risk capital requirements. Under the proposal, a Category I or Category II depository institution holding company and its depository institution subsidiaries that are subject to the market risk framework, as well as any banking organization with significant OTC derivatives that is subject to the market risk framework, would be required to reflect in risk-weighted assets the potential losses on OTC derivative contracts resulting from increases in CVA for all OTC derivative contract counterparties, subject to certain exceptions.[474]

The proposal would provide two measures for calculating CVA risk capital requirements: (1) the basic measure for CVA risk that includes the basic CVA approach (BA-CVA) capital requirement, which recognizes only the credit spread component of CVA risk and is similar to the current capital rule's simple CVA approach, and (2) a standardized measure for CVA risk that includes a new standardized CVA approach (SA-CVA) capital requirement and the BA-CVA capital requirement. The SA-CVA would account for both credit spread and exposure components of CVA risk and would allow a banking organization to recognize hedges for the exposure component of CVA risk. Under the proposal, only banking organizations that use SA-CCR for counterparty credit risk would be eligible to use the standardized measure to calculate its CVA risk capital requirements.[475] Additionally, the proposal would require the banking organization to receive a prior approval from the primary Federal supervisor to calculate the CVA risk capital requirements under the SA-CVA approach.

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[474] The proposal would allow a banking organization to exclude certain OTC derivative contracts recognized as a credit risk mitigant and that receive substitution treatment under §__.36 of the current capital rule or §__.120 of the proposed rule from the portfolio of OTC derivative contracts that are subject to the CVA risk capital requirements (under both BA-CVA and SA-CVA).

[475] The proposal would require banking organizations that use the current exposure methodology to calculate exposure amounts for counterparty credit risk to use the BA-CVA measure to calculate CVA risk capital requirements.

2. Scope of application

The proposed capital requirements for CVA risk would apply to a Category I or Category II depository institution holding company, a subsidiary depository institution of a Category I or II banking organization that is subject to the proposed market risk capital requirements, and to any banking organization subject to the proposed market risk capital requirements that has average aggregate OTC derivatives gross notional amounts of $1 trillion or more, adjusted to reflect CPI-W, over the prior four quarters. Under the proposal, these banking organizations would be required to calculate a risk-weighted asset amount for the CVA risk arising from their portfolio of OTC derivative transactions that would be subject to the CVA risk capital requirement, as described in the following section of this **SUPPLEMENTARY INFORMATION**.

Consistent with the current capital rule, the proposed scope would apply CVA risk capital requirements to the largest and complex banking organizations that, due to their significant trading activity, operational scale, and domestic and global presence, are subject to more stringent capital requirements. As Category I or II banking organizations are generally subject to rules based on the standards published by the Basel Committee, the proposed scope would help promote competitive equity among U.S. banking organizations and their foreign peers and competitors, and reduce opportunities for regulatory arbitrage across jurisdictions. At the same time, the proposal would apply CVA risk capital requirements to subsidiary depository institutions of Category I or II banking organizations only if the subsidiary is subject to market risk capital requirements. The proposed criterion is intended to tailor the proposed CVA risk capital requirements to only those subsidiary depository institutions with significant trading

activity and increased exposure to CVA risk, and thus reduce operational burden for those with less exposure to CVA risk.

In addition to applying CVA risk capital requirements to the largest banking organizations, the proposed rule would introduce activity-based thresholds. The proposed CVA risk capital requirement would apply to a banking organization that is subject to the proposed market risk capital requirements and that has average aggregate OTC derivatives gross notional amounts of $1 trillion or more, adjusted to reflect CPI-W,[476] over the prior four consecutive quarters. Due to their substantial derivative portfolios, these banking organizations have meaningful exposure to losses resulting from changes to their credit valuation adjustment accounting reserve.

Under the proposal, the primary Federal supervisor of a banking organization that does not meet the proposed scoping criteria for CVA risk capital requirements could require the banking organization to apply the risk-based capital requirements for CVA risk if the supervisor deems it necessary or appropriate because of the level of CVA risk of the banking organization's portfolio of OTC derivative contracts or to otherwise ensure safe and sound banking practices. The primary Federal supervisor could also exclude from application of the proposed CVA risk capital requirements a banking organization that meets the scoping criteria if the supervisor determines that (1) the exclusion is appropriate based on the level of CVA risk of the banking organization's CVA risk covered positions, and (2) such an exclusion would be consistent with safe and sound banking practices. While the agencies consider that the proposed scoping criteria for application of CVA risk capital requirements would reasonably identify a banking

[476] *See* section II.E. of this **SUPPLEMENTARY INFORMATION** for a more detailed discussion on indexing nominal thresholds in the proposal going forward to reflect CPI-W.

organization with significant CVA risk given the current risk profile of a banking organization, there may be unique instances where a banking organization either should or should not be required to reflect CVA risk in its risk-based capital requirements. As such, the proposal would allow the primary Federal supervisor to exercise its authority to address such instances on a case-by-case basis.

Question 181: The agencies seek comment on the appropriateness of the proposed scope of application of CVA risk capital requirements. What, if any, alternative thresholds should the agencies consider and why?

Question 182: What are the advantages or disadvantages of using an average aggregate OTC derivatives gross notional amount of $1 trillion or more for the scope of application threshold, and why?

3. CVA risk covered positions and CVA hedges

1. Definition of CVA risk covered position

The proposal would define a CVA risk covered position as a derivative contract that is not a client-facing derivative transaction or cleared transaction. In addition, the proposal would allow a banking organization to choose to exclude an eligible credit derivative for which the banking organization recognizes credit risk mitigation benefits from the calculation of its CVA risk capital requirement.[477] This approach would align the scope of the CVA framework with the scope of instruments that present CVA risk. The proposal would also allow a banking

[477] A cleared transaction includes an exposure resulting from a transaction that a CCP has accepted. For purposes of the CVA risk capital requirement, a banking organization that is not a clearing member may treat its exposure as directly facing the CCP (that is, the banking organization would have no exposure to the clearing member) and may exclude that cleared transaction from CVA risk covered positions. Additionally, when a clearing member banking organization is either (1) acting as a financial intermediary and entering into an offsetting transaction with a QCCP or (2) providing a guarantee on the performance of its client to a QCCP, the banking organization may exclude the client-facing derivative transaction from CVA risk covered positions. *See* the definitions of cleared transaction and client-facing derivative transaction in 12 CFR 3.2 (OCC), 12 CFR 217.2 (Board), 12 CFR 324.2 (FDIC).

organization to exclude certain OTC derivative contracts that are credit risk mitigants from the CVA risk covered positions in order not to create a disincentive to hedge against credit default risk in the standardized approach or the expanded risk-based approach of the capital rule, as applicable. For example, a CDS on a loan borrower that is recognized as a credit risk mitigant and receives substitution treatment under §__.120 of the proposed rule would not be included in the portfolio of OTC derivative contracts that are subject to the CVA risk capital requirements.

A banking organization generally does not calculate accounting CVA for cleared transactions, client-facing derivative transactions, or for securities financing transactions (SFTs) for financial reporting purposes. Consistent with industry practice and to align the scope of the CVA framework with the scope of instruments that present CVA risk, the proposed definition of CVA risk covered position would not include a cleared transaction, a client-facing derivative transaction, or an SFT. Therefore, the CVA risk-based capital requirements would not apply to such positions under the proposal.

The proposal would exclude cleared derivative transactions from the CVA risk-based capital requirements because the primary risk of a banking organization facing a CCP lies in the risk that a CCP participant, not the CCP itself, defaults.[478] Clearing members of the CCP would be responsible for covering losses of a defaulted clearing member's portfolio with the CCP; clearing member banking organizations are subject to a capital requirement for such risk in §__.116 of the proposal or §__.35 of the current capital rule, as applicable.

In addition, in light of the systemic risk-reducing benefits of derivatives clearing and to minimize potential unintended consequences for client clearing activities, the proposal would

[478] A CCP could only default if a sufficient number of members default at the same time and the remaining clearing members of this CCP are unable to contribute sufficient funds to make the counterparties to the defaulting members whole.

also exclude from CVA risk capital requirements client-facing derivative transactions which generally present low CVA risk.[479] Client-facing derivative transactions generally are highly collateralized transactions subject to netting, daily or intraday margin requirements, immediate close-out, and significant regulatory oversight, thus resulting in small expected exposure amounts for clearing members to their clients. While this expected exposure does result in CVA in the economic sense, it is usually immaterial and banking organizations do not include it in the CVA they calculate for accounting purposes. Given these considerations, subjecting such transactions to the CVA risk capital requirements would be incommensurate with the risk of such transactions.

2. Recognition of CVA hedges

The proposal would set forth general requirements for the recognition of CVA hedges, as well as specific requirements under BA-CVA and SA-CVA. The proposal would allow a banking organization to include certain CVA hedges as risk-reducing elements in risk-weighted asset calculations for CVA risk (eligible CVA hedges). The proposal would define a CVA hedge as a transaction the banking organization enters into with a counterparty that is a third party (external CVA hedge) or an internal trading desk (internal CVA hedge),[480] as described in section V.B.3.b. of this **SUPPLEMENTARY INFORMATION**, and manages for the purpose of mitigating CVA risk.

[479] *See* 88 FR 64028, at 64150 n. 428 (Sept. 18, 2023). *See also* 12 CFR 3.2 (definitions of cleared transaction and client-facing derivative transaction) (OCC); 12 CFR 217.2 (definitions of cleared transaction and client-facing derivative transaction) (Board); 12 CFR 324.2 (definitions of cleared transaction and client-facing derivative transaction) (FDIC).

[480] Both BA-CVA and SA-CVA would recognize internal CVA hedges that satisfy eligibility requirements of the specific approach and require that a banking organization have a CVA risk management function to manage internal CVA risk transfers as described in section V.A.5.c. of this **SUPPLEMENTARY INFORMATION**.

An internal CVA hedge is an internal derivative transaction that is usually executed between a CVA risk management function, such as a CVA desk (or a functional equivalent thereof), and a trading desk of the banking organization. Every such internal CVA hedge has two offsetting positions: the position of the CVA risk management function (the CVA segment) and the position of the trading desk (the trading desk segment). In addition to its ability to reduce CVA risk, a CVA hedge may also contribute to CVA risk arising from the counterparty of the hedge, in which case the CVA hedge could also be a CVA risk covered position. Whether a CVA hedge is a CVA risk covered position has no impact on its qualification as an eligible CVA hedge. Specifically, a non-CVA risk covered position could be an eligible CVA hedge if it meets the proposed eligibility criteria as described below. For example, a banking organization could hedge its CVA risk using a cleared transaction; in such cases, the CVA hedge would effectively reduce the CVA risk of the banking organization, though the transaction itself would not be a CVA risk covered position. The proposed treatment of CVA hedges intends to provide better alignment between the economic risks posed by such transactions and the risk-based capital requirement for CVA risk. In this manner, the proposal would provide incentives for a banking organization to manage CVA risk prudently.

As described below, the proposal would include two approaches for calculating CVA capital requirements: the basic approach or BA-CVA[481] and the standardized approach or SA-CVA.[482] The BA-CVA is simpler, but less risk sensitive, than the SA-CVA. For this reason,

[481] The basic approach for calculating CVA capital requirements (BA-CVA) is discussed below in section V.B.5.a. of this **SUPPLEMENTARY INFORMATION**.

[482] The standardized approach for calculating CVA capital requirements (SA-CVA) is discussed below in section V.B.5.b. of this **SUPPLEMENTARY INFORMATION**.

these two approaches have different eligibility requirements for recognizing the risk-mitigating benefits of CVA hedges.

Under the BA-CVA, the proposal would allow a banking organization to recognize in the CVA risk capital calculation the risk-mitigating benefit of hedges of the counterparty credit spread component of CVA risk, where the only instruments that could be recognized as eligible hedges are the following instruments: index CDS, single-name CDS, and single-name contingent CDS. The proposal would expand the set of instruments recognized as eligible CVA hedges relative to the simple CVA approach within the current capital rule to include a single-name credit instrument that references an affiliate of the counterparty or that references an entity that belongs to the same sector and region[483] as the counterparty (together, eligible indirect single-name CVA hedges). Although a banking organization generally can hedge the credit spread risk of a counterparty whose credit risk is actively traded (that is, liquid counterparties) by using credit instruments that directly reference that counterparty, instruments referencing illiquid counterparties are thinly traded, if at all. For illiquid counterparties, a banking organization may use credit instruments that reference a sufficiently liquid entity whose credit spread is highly correlated with the credit spread of the illiquid counterparty such as counterparties that belong to the same sector and region. For this reason, the BA-CVA would allow a banking organization to recognize the risk-mitigating benefit of eligible indirect single-name CVA hedges, but, given the potentially significant basis risk between the counterparty and the hedge reference name, the BA-CVA would require a banking organization to use a non-perfect correlation parameter between the counterparty credit spread and the hedge reference name credit spread in order to constrain

[483] Under the proposal, for BA-CVA purposes, a region would refer to a country or territorial entity.

the risk-mitigating benefit of such indirect but eligible CVA hedges.[484] The restrictions on hedging instruments as stated above apply to both external and internal hedging transactions. Additionally, for a banking organization to recognize an internal CVA hedging transaction as an eligible CVA hedge under the BA-CVA, the transaction would have to satisfy the requirements of an eligible internal risk transfer of CVA risk, as described in section V.A.5.c. of this **SUPPLEMENTARY INFORMATION**.

Under the SA-CVA, hedges of the counterparty credit spread component of CVA risk would be recognized without the BA-CVA restriction on eligible instrument types described above. Furthermore, the SA-CVA would recognize as eligible CVA hedges instruments that are used to hedge the exposure component of CVA risk. The SA-CVA would also recognize both external and internal CVA hedging transactions as eligible CVA hedges. Similar to the BA-CVA, a banking organization would be able to recognize an internal CVA hedging transaction as an eligible CVA hedge under the SA-CVA if the transaction satisfies the requirements of an eligible internal risk transfer of CVA risk, as described in section V.A.5.c. of this **SUPPLEMENTARY INFORMATION**.

Under both the BA-CVA and SA-CVA, the proposal would not allow a banking organization to recognize a fraction of an actual transaction as an eligible CVA hedge. Instead, a banking organization would only be permitted to recognize whole transactions as eligible CVA hedges. For example, if a banking organization for internal risk management purposes uses an interest rate swap to hedge interest rate risk for both CVA and margin valuation adjustment, the banking organization would either have to recognize the entire swap when calculating its risk-

[484] The aggregation formula in the BA-CVA calculation would introduce new regulatory correlation parameters that quantify the relationship between the credit spreads of the counterparty and of the entity referenced by the hedge, thus restricting hedging benefits. *See* section V.B.5.a. of this **SUPPLEMENTARY INFORMATION** for a more detailed description of the BA-CVA calculation.

based capital requirements for CVA risk or exclude the entire swap. The proposed treatment intends to prevent a banking organization from choosing a fraction of a hedging transaction to minimize its capital requirement.

Finally, under both the BA-CVA and SA-CVA, the proposal would not allow a banking organization to recognize the risk mitigating benefits of CVA hedges that are securitization positions or correlation trading positions when calculating risk-based capital requirements for CVA risk. As reliably pricing such instruments is difficult, the agencies are concerned with the ability of a banking organization to measure reliably the price sensitivity of such positions to the proposed risk factors under the SA-CVA. The BA-CVA, as a very simplistic approach, is even less suitable than the SA-CVA for adequately capturing the risk of such instruments.

Question 183: The agencies seek comments on the proposed interpretation of region for the purposes of BA-CVA. To what extent would limiting a region to a country or a territorial entity pose challenges for hedge recognition under BA-CVA? What, if any, other criteria or interpretations should the agencies consider and why?

4. General risk management requirements

The proposal would require a banking organization to satisfy certain general risk management requirements related to the identification and management of CVA risk covered positions and eligible CVA hedges and also to comply with additional operational requirements as described in section V.B.4.c. of this **SUPPLEMENTARY INFORMATION**.

a. Identification and management of CVA risk covered positions and CVA hedges

Identification of CVA risk covered positions and CVA hedges is the prerequisite of prudent CVA risk management. The proposal would therefore require a banking organization subject to the proposed CVA framework to identify all CVA risk covered positions and all

transactions that hedge or are intended to hedge CVA risk. For transactions that hedge or are intended to hedge CVA risk, the proposal would require the banking organization to identify which are eligible CVA hedges and which are ineligible CVA hedges.[485] A banking organization that received approval from its primary Federal supervisor to use the standardized measure for CVA risk would be required to identify all eligible CVA hedges for the purposes of calculating the BA-CVA and all eligible CVA hedges for the purpose of calculating the SA-CVA. Furthermore, a banking organization that hedges its CVA risk must have a clearly defined hedging policy for CVA risk that is reviewed and approved by senior management at least annually. The hedging policy would be required to quantify the level of CVA risk that the banking organization is willing to accept and detail the instruments, techniques, and strategies that the banking organization would use to hedge CVA risk.

b. Documentation

The proposal would also require a banking organization to have policies and procedures for determining its CVA risk capital requirement and to document adequately all material aspects of its management and identification of CVA risk covered positions and eligible CVA hedges, and its control, oversight, and review processes. Such general documentation requirements are intended to facilitate regulatory review and a banking organization's internal risk management and oversight processes.

The proposed requirements are intended to appropriately support the active risk management and monitoring of CVA risk under the proposed framework.

[485] The proposal would exclude ineligible CVA hedges from both market risk and CVA risk capital requirements. Accordingly, this proposed requirement is intended to support appropriate risk measurement and monitoring of CVA risk and help ensure that a banking organization appropriately reflects the respective hedges in the calculation of risk-based capital requirements for CVA risk.

c. Additional risk management requirements for use of the standardized measure for CVA risk

In addition to the general risk management requirements, a banking organization that has received approval from its primary Federal supervisor to use the standardized measure for CVA risk would be required to comply with additional operational requirements on documentation, initial approval and ongoing performance of regulatory CVA models as described below.

i. *Documentation*

The proposal would require a banking organization using the SA-CVA to adequately document policies and procedures of the CVA desk, or similar dedicated function, and the independent risk control unit. Furthermore, the banking organization would be required to document the internal auditing process; the internal policies, controls, and procedures concerning the banking organization's CVA calculations for financial reporting purposes; the initial and ongoing validation of models used to calculate regulatory CVA (including exposure models); and the banking organization's process to assess the performance of models used for calculating regulatory CVA (including exposure models) and implement remedies to mitigate model deficiencies. The agencies expect that a banking organization would document any adjustments, if applicable, made to the CVA models to satisfy the operational requirements described in section V.B.4.c. of this **SUPPLEMENTARY INFORMATION** under SA-CVA. These enhanced documentation requirements are designed to help ensure that exposure models under the SA-CVA appropriately capture the CVA risk of CVA risk covered positions and that a banking organization has effective and sound risk management and oversight processes.

ii. *Initial approval*

To receive approval from its primary Federal supervisor to use the SA-CVA for any of its CVA risk covered positions, a banking organization must be capable of calculating, on at least a monthly basis, regulatory CVA (as described in section V.B.5.b.i. of this **SUPPLEMENTARY INFORMATION**), as well as the sensitivities of regulatory CVA to counterparty credit spreads and market risk factors. Due to the computational intensity associated with calculating regulatory CVA and its sensitivities, the proposal would permit a banking organization to choose to recognize in its risk-based capital requirement certain netting sets of CVA risk covered positions under BA-CVA and other netting sets under SA-CVA. Furthermore, the prior approval from the primary Federal supervisor could specify which CVA risk covered positions must be included in the calculation of the BA-CVA, and which could be included in the calculation of the SA-CVA. If a banking organization were to use both SA-CVA and BA-CVA for the calculations of risk-based capital requirements for CVA risk, the proposal would require the banking organization to assign each CVA hedge that the banking organization intends to recognize in these calculations to one of the two approaches (SA-CVA or BA-CVA). This assignment would have to satisfy the eligibility requirements of the SA-CVA or the BA-CVA. For example, a single-name CDS hedging the counterparty credit spread component of CVA risk could be assigned to either the SA-CVA or the BA-CVA, while an interest rate swap hedging the interest rate component of CVA risk could only be assigned to the SA-CVA. With this proposed requirement, the agencies intend to support appropriate risk measurement and monitoring of CVA risk and help ensure that a banking organization appropriately reflects the respective hedges in the calculation of risk-based capital requirements for CVA risk.

To better align regulatory CVA with accounting CVA and to help ensure that CVA capital requirements more accurately reflect CVA risk, the proposal would require a banking

organization to use CVA models that it uses for financial reporting purposes (accounting CVA models) to calculate regulatory CVA under the SA-CVA, adjusted, if necessary, to satisfy the additional requirements as described in section V.B.5.b. of this **SUPPLEMENTARY INFORMATION**.

Furthermore, to support active management of CVA risk, the proposal would require a banking organization that intends to use the SA-CVA to have a CVA desk, or similar dedicated function, responsible for risk management and hedging of CVA risk consistent with the banking organization's CVA risk management and hedging policies and procedures. The agencies view a designated CVA desk or designated function as the best mechanism to support the active management of CVA risk.

The primary Federal supervisor may rescind its approval of the use of the standardized measure for CVA risk in whole or in part, if it determines that the banking organization's models no longer comply with all applicable requirements or fails to reflect accurately the CVA risk. If the primary Federal supervisor determines that a banking organization's implementation of the SA-CVA risk no longer complies with proposed requirements or fails to accurately reflect CVA risk, the primary Federal supervisor could specify one or more types of CVA risk covered positions or eligible CVA hedges must be included in the BA-CVA or prescribe an alternative capital requirement.

iii. *Ongoing eligibility*

For a banking organization approved to use the standardized measure for CVA risk, the proposal would require the exposure models used in the calculation of regulatory CVA to be part of a CVA risk management framework that includes the identification, management, measurement, approval, and internal reporting of CVA risk.

I. Control and oversight

A banking organization that receives prior approval from its primary Federal supervisor to use the standardized measure for CVA risk would be required to maintain an independent risk control unit that is responsible for the effective initial and ongoing validation of the models used for calculating regulatory CVA (including exposure models), reports directly to senior management, and is independent of the banking organization's trading desks and CVA desk, or similar dedicated function, as well as the business unit that evaluates counterparties and sets limits.

Senior management of the banking organization would be required to have oversight of the CVA risk control process. In addition, the banking organization would be required to have a regular independent audit review of the overall CVA risk management process, including both the activities of the CVA desk (or similar dedicated function) and of the independent risk control unit. The agencies intend that, together, the independent risk control unit and internal audit would provide appropriate review and credible challenge of the effectiveness of CVA risk management function.

II. Exposure model eligibility

The proposal would introduce requirements for a banking organization that calculates the CVA risk-based capital requirements under SA-CVA to further strengthen its CVA risk management processes and promote effective CVA risk management pertaining specifically to CVA exposure models. Such requirements would guide the banking organization's internal CVA risk control unit and audit functions in providing appropriate review and challenge of CVA risk management. In particular, the proposal would require the banking organization to (1) include exposure models for the regulatory CVA calculation in its CVA risk management framework

and (2) define criteria on which to assess the exposure models and their inputs and have a written policy in place describing the process for assessing the performance of exposure models and for remedying unacceptable performance.

To help ensure that the CVA capital requirements are commensurate with CVA risk, the proposal would require a banking organization to have the exposure models used in regulatory CVA calculation be part of its ongoing CVA risk management framework, including identification, measurement, management, approval, and internal reporting of CVA risk. Such requirements would subject the regulatory CVA exposure models to ongoing effective measurement and management.

Specifically, the proposal would require a banking organization to document the process for initial and ongoing validation of its models used for calculating regulatory CVA, including exposure models, with sufficient detail to enable a third party to understand the model's operations, limitations, and key assumptions. A banking organization would be required to validate, no less than annually, its CVA models including exposure models, and to account for other circumstances, such as a sudden change in market behavior, under which additional validation would need to be conducted more frequently. In addition, a banking organization would be required to sufficiently document how the validation is conducted with respect to data flows and portfolios, what analyses are used, and how representative counterparty portfolios are constructed. As part of the independent model validation, a banking organization would be required to test the pricing models used to calculate exposure for given paths of market risk factors against appropriate independent benchmarks for a wide range of market states as part of the initial and ongoing model validation process. The proposal would require the pricing models

for CVA risk covered positions that are options to account for the non-linearity of option value with respect to market risk factors.

Additionally, a banking organization would be required to obtain current and historical market data that are either independent of the line of business or validated independently of the line of business, to be used as an input for an exposure model, as well as comply with applicable financial reporting standards. The proposal would require well-developed data integrity processes to handle the data of erroneous and anomalous observations, and that data be input into exposure models in a timely and complete fashion and be maintained in a secure database that is subject to formal periodic audits. Where data used in the exposure model are proxies for actual market data, the proposal would require a banking organization to set internal policies to identify suitable proxies and be able to demonstrate, empirically on an ongoing basis, that the proxy data are a conservative representation of the underlying risk under adverse market conditions.

To accurately calculate simulated paths of a discounted future exposure required for regulatory CVA calculations as discussed below, a banking organization's exposure models would need to capture and accurately reflect transaction-specific information (for example, terms and specifications). A banking organization would be required to verify that transactions are assigned to the appropriate netting set within the model. The terms and specifications would need to reside in a secure database subject to at least annual formal audit. The transmission of the transaction terms and specifications data to the exposure model would also be subject to internal audit. The proposal would require a banking organization to establish formal reconciliation processes between the internal model and source data systems to verify on an ongoing basis that transaction terms and specifications are being reflected correctly or at least conservatively.

5. Measure for CVA risk

To calculate the risk-based capital requirement for CVA risk, the proposal would provide a basic measure for CVA risk and a standardized measure for CVA risk. Under the proposal, the basic measure for CVA risk would include risk-based capital requirements for all CVA risk covered positions and eligible CVA hedges calculated using the BA-CVA, and any other additional capital requirement for CVA risk established by a banking organization's primary Federal supervisor if the primary Federal supervisor determines that the capital requirement for CVA risk as calculated under the BA-CVA is not commensurate with the CVA risk of the banking organization's CVA risk covered positions. The standardized measure for CVA risk would include risk-based capital requirements calculated under (1) the SA-CVA for all standardized CVA risk covered positions[486] and standardized CVA hedges, (2) the BA-CVA for all basic CVA risk covered positions[487] and basic CVA hedges, and (3) any additional capital requirement for CVA risk established by a banking organization's primary Federal supervisor if the primary Federal supervisor determines that the capital requirement for CVA risk as calculated under the SA-CVA and BA-CVA is not commensurate with the CVA risk of the banking organization's CVA risk covered positions. The primary Federal supervisor may require the banking organization to maintain an overall amount of capital that differs from the amount otherwise required under the proposal, if the primary Federal supervisor determines that the banking organization's CVA risk capital requirements under the rule are not commensurate with

[486] The proposal would define standardized CVA risk covered positions as all CVA risk covered positions that are not basic CVA risk covered positions; these terms are used in the standardized measure for CVA risk.

[487] The proposal would define basic CVA risk covered positions as CVA risk covered positions that must be included in the BA-CVA because: (i) the banking organization does not have supervisory approval to use the SA-CVA for these CVA risk covered positions; or (ii) the banking organization chooses to exclude the netting sets with these CVA risk covered positions from the SA-CVA.

the risk of the banking organization's CVA risk covered positions, a specific CVA risk covered position, or portfolios of such positions, as applicable.

Banking organizations that use the current exposure methodology for counterparty credit risk would be required to use the basic measure for CVA risk. A banking organization that uses SA-CCR for counterparty credit risk would only be able to use the standardized measure for CVA risk if it has received prior approval from the primary Federal supervisor. A banking organization that has received prior approval from its primary Federal supervisor to use the standardized measure for CVA risk would be required to include all CVA risk covered positions that are outside of the approval scope of the SA-CVA in the BA-CVA. Furthermore, a banking organization could choose to exclude any number of in-scope netting sets from SA-CVA calculations and recognize them instead in the BA-CVA. Given that the calculation of CVA sensitivities to market risk factors in the SA-CVA is computationally intensive for large netting sets, the proposal would allow a banking organization to restrict application of the SA-CVA only to netting sets with the most material CVA risk. A banking organization may also bifurcate CVA risk covered positions of a single netting set between SA-CVA and BA-CVA. Thus, for a banking organization that has received prior approval from its primary Federal supervisor to use the standardized measure for CVA risk, the CVA capital requirement generally would equal the SA-CVA capital requirement for its CVA risk covered positions and eligible CVA hedges recognized under SA-CVA (these CVA risk covered positions and eligible CVA hedges are referred to as "standardized" in the proposal), plus the BA-CVA capital requirement for its CVA risk covered positions and eligible CVA hedges recognized under BA-CVA (these CVA risk covered positions and eligible CVA hedges are referred to as "basic" in the proposal), if applicable.

After calculating the CVA capital requirement using either the basic measure for CVA risk or the standardized measure for CVA risk, a banking organization's total capital requirements for CVA risk would equal the CVA capital requirement multiplied by 12.5. Additionally, the primary Federal supervisor could require the banking organization to maintain an amount of regulatory capital that differs from the amounts required under the basic measure for CVA risk or the standardized measure for CVA risk.

a. Basic approach for CVA risk

Similar to the simple CVA approach in the current capital rule, the capital requirement for CVA risk under the BA-CVA would be calculated according to a formula, described below, that approximates CVA expected shortfall, which replaces value-at-risk in the simple CVA approach, assuming fixed expected exposure profiles and based on a set of simplifying assumptions. The assumptions provide that: (1) all credit spreads have a flat term structure; (2) all credit spreads at the time horizon have a lognormal distribution; (3) each single name credit spread is driven by the combination of a single systematic risk factor and an idiosyncratic risk factor; (4) the correlation between any single name credit spread and the systematic risk factor is 0.5, and (5) the single systematic risk factor drives all credit indices without any idiosyncratic risk component.

The BA-CVA would improve upon the simple CVA approach in the current capital rule by: (1) providing limited recognition for the risk-mitigating benefit of eligible single-name credit instruments that do not reference a counterparty directly; (2) putting a restriction on hedge effectiveness; (3) relying on risk weights derived from the SA-CVA; and (4) introducing a new method of calculating risk weights for credit indices.

Under the proposal, the risk-based capital requirement under the BA-CVA would be calculated according to the following formula, as provided under §__.222(a) of the proposed rule:

$$K_{basic} = 0.65 \cdot \left(\beta \cdot K_{unhedged} + (1 - \beta) \cdot K_{hedged}\right)$$

where:

K_{basic} is the risk-based capital requirement under the BA-CVA;

$K_{unhedged}$ is the risk-based capital requirement for CVA positions before recognizing the risk mitigating effect of eligible CVA hedges;

K_{hedged} is the risk-based capital requirement after recognizing such hedges; and

β is a regulatory parameter set to 0.25.

The formula sets the capital requirement under the BA-CVA equal to the weighted average of $K_{unhedged}$ and K_{hedged} scaled by a factor of 0.65 in order to ensure that the simpler and less risk-sensitive BA-CVA method is calibrated appropriately relative to the SA-CVA. Applying the weighted average in the BA-CVA capital requirement formula is a conservative measure that implicitly recognizes the presence of the expected exposure component of CVA risk by reducing the effectiveness of eligible CVA hedges to 75 percent (preventing a banking organization's eligible CVA hedges from fully offsetting the CVA risk of its CVA risk covered positions).[488] Thus, even if a banking organization perfectly hedges the counterparty credit spread component of CVA risk, the BA-CVA capital requirement would be equal to $0.65 \cdot (0.25 \cdot K_{unhedged})$. For a banking organization that does not hedge CVA risk, eliminating the recognition

[488] Suppose, for example, that a banking organization perfectly offsets the counterparty credit spread component of CVA risk, so that $K_{hedged} = 0$. Allowing the banking organization to set the BA-CVA to zero in this case would not be prudent because there is also the exposure component of CVA risk, which is not explicitly captured by the BA-CVA.

of eligible CVA hedges would result in $K_{hedged} = K_{unhedged}$, so that the BA-CVA calculation would become:

$$K_{basic} = 0.65 \cdot \left(K_{unhedged}\right)$$

i. *Calculation of $K_{unhedged}$*

Under BA-CVA, the proposal would first require a banking organization to calculate the risk-based capital requirements for CVA risk covered positions without recognizing the risk mitigating effect of eligible CVA hedges, $K_{unhedged}$, for each counterparty on a stand-alone basis ($SCVA_C$) and then aggregate the respective standalone counterparty capital requirements across counterparties, as expressed by the following formula:

$$K_{unhedged} = \sqrt{\left(\rho \cdot \sum_c SCVA_c\right)^2 + \left((1-\rho^2) \cdot \sum_c SCVA_c^2\right)}$$

The first term under the square root in the formula ($(\rho \cdot \sum_C SCVA_C)^2$) aggregates the systematic components of CVA risk, while the second term under the square root in the formula ($(1-\rho^2) \cdot \sum_C (SCVA_C^2)$) aggregates the idiosyncratic components of CVA risk. The purpose of the $K_{unhedged}$ formula is intended to reflect the potential losses arising from unhedged CVA risk.

I. Regulatory correlation parameter

One of the basic assumptions underlying the BA-CVA is that a single risk factor drives systematic credit spread risk. This assumption is important because it simplifies the credit spread correlation structure. The proposed regulatory correlation parameter ρ of 0.5 approximates the correlation between the credit spread of a counterparty and the systematic risk factor. The square of the regulatory correlation parameter (0.25) approximates the correlation between credit spreads of any two counterparties. The proposed value of the regulatory correlation parameter is

generally consistent with historically observed correlations between credit spreads and would appropriately recognize the diversification of CVA risk by ensuring that a banking organization's exposure would be less than the sum of the CVA risks for each counterparty.

II. Standalone CVA capital requirement for each counterparty (*$SCVA_C$*)

$SCVA_C$ represents the capital requirement a banking organization would be subject to under the BA-CVA if a single counterparty were the only counterparty with which the banking organization has CVA risk covered positions (that is ignoring the existence of the other counterparties), and there are no eligible CVA hedges to consider. For purposes of calculating *$SCVA_C$*, the proposal first would require a banking organization to calculate for each netting set the product of the effective maturity M_{NS}, the exposure at default amount EAD_{NS}, and the regulatory discount factor DF_{NS}, and sum the resulting products across all netting sets with the same counterparty. The banking organization would multiply the resulting quantity for each counterparty by the supervisory risk weight of the counterparty RW_C from Table 1 to §__.222 and divide by alpha (α), discussed below, as expressed by the following formula:[489]

$$SCVA_c = \frac{1}{\alpha} \cdot RW_c \cdot \sum_{NS} (M_{NS} \cdot EAD_{NS} \cdot DF_{NS})$$

The proposal would set the exposure at default amount, EAD_{NS}, for the netting set, *NS*, equal to the exposure amount calculated by the banking organization for the same netting set for counterparty credit risk capital requirements according to §__. 34 of the current rule or §__. 113 of the proposal,[490] which captures the potential losses in the event of the counterparty's default.

[489] The above formula for $SCVA_c$ is a simplified representation of how the expected shortfall of the counterparty credit spread component of CVA risk of a single counterparty can be calculated.

[490] Under the proposal, banking organizations that would be subject to the proposed expanded risk-based approach or that have elected to use SA-CCR to calculate counterparty credit risk exposure amounts would be required to use the *Exposure Amount* for the single product netting set or the *Exposure Amount*$_{derivatives}$ for cross-product netting set

The effective maturity of the netting set, M_{NS}, would equal the weighted-average remaining maturity, measured in whole or fractional years, of the individual CVA risk covered positions in the netting set, *NS*, with the weight of each individual position set equal to the ratio of the notional amount of the position to the aggregate notional amount of all CVA risk covered positions in the netting set.[491] As the proposal would define the effective maturity of a netting set as an average of the actual CVA risk covered position maturities, the regulatory discount factor, DF_{NS}, would scale down the potential losses projected over the effective maturity of the netting set to their net present value, using a 5 percent interest rate. The proposed interest rate would be a reasonable discount factor and generally consistent with historical long-term interest rates. The proposal would define components of the $SCVA_c$ calculation at a netting set level, thus clarifying the use of counterparty-level exposure at default and effective maturity calculated in the same way as the banking organization calculates it for minimum capital requirements for counterparty credit risk.

A. *Supervisory Risk Weights* (RW_c)

Table 1 to §__.222 of the proposed rule provides the proposed supervisory risk weights for each counterparty, RW_c, which reflect the potential variability of credit spreads based on a combination of the sector and credit quality of the counterparty or of the eligible hedge reference entity. With the exception of sovereign exposures, specified supranational entities, and MDBs, each sector would have two risk weights, one for counterparties that are investment grade, as

calculated under SA-CCR for purposes of EAD_{NS} within the proposed BA-CVA approach. *See* §__.34 of the current rule or §__.113 through §__.114 of the proposed rule, as applicable. All other banking organizations would be required to use the exposure amount produced by the current exposure methodology for purposes of EAD_{NS} within the proposed BA-CVA approach.

[491] For a netting set consisting of a single transaction (for example, a derivative contract that is not subject to a qualifying master netting agreement, the effective maturity would equal the remaining contractual maturity of the derivative contract.

defined in the current rule,[492] and one for counterparties that are speculative grade or sub-speculative grade, each as defined in the proposal.[493] Sovereign exposures, specified supranational entities, and MDBs would have separate risk weights for counterparties that are speculative grade and counterparties that are sub-speculative grade. The proposed supervisory risk weights match the risk weights set out in the SA-CVA for counterparty credit spread risk class.

The proposal would provide counterparty sectors generally similar to those contained in the Basel standards and a treatment for certain U.S.-specific counterparties (for example, GSEs and public sector entities). Specifically, the proposal would group GSEs and public sector entities (PSEs) with government-backed non-financials, education and public administration to appropriately reflect the potential variability in the credit spreads of such counterparties, as shown in Table 1 to §__.222 below.

[492] *See* the definition of Investment Grade in the capital rule. 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

[493] *See* the definitions of Speculative Grade and Sub-Speculative Grade in §__.2 of the proposed rule.

Table 1 to §__.222 Supervisory Risk Weights, RW_c

Sector of counterparty	Credit quality of counterparty		
	Investment grade	Speculative grade / sub-speculative grade	
Sovereign exposures, MDBs, and specified supranational entities	0.5%	3.0%	7.0%
PSEs,[494] government-backed non-financials, GSEs, education, and public administration	1.0%	4.0%	
Financials including government-backed financials	5.0%	12.0%	
Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	3.0%	7.0%	
Consumer goods and services, transportation and storage, administrative and support service activities	3.0%	8.5%	
Technology and telecommunications	2.0%	5.5%	
Health care, utilities, professional and technical activities	1.5%	5.0%	
Other sector	5.0%	12.0%	

Counterparty credit spread risk for financial entities is a large component of CVA-related capital requirements and the financial sector bucket comprises a broad category of financial entities including financial institutions as defined in the capital rule,[495] mutual funds, pension funds, registered investment companies, hedge funds, and other financial entities. Although regulated financial entities have many similar characteristics to other financial entities, such as hedge funds and private equity funds, they also differ in ways that may significantly affect CVA risk. For example, regulated financial entities typically differ from other financial entities in capital structure, scope and risk of activities, regulatory frameworks, and are also subject to robust disclosure requirements, regulatory oversight, or supervision. Therefore, regulated financial entities may present a different risk profile for purposes of CVA risk compared to other financial entities and the agencies are seeking comments on a potential modification to the proposed supervisory risk weights that would introduce separate supervisory risk weights for counterparty credit spread risk within the financial sector bucket to reflect potential differences

[494] Under §__.2 of the current capital rule, *public sector entity (PSE)* means a state, local authority, or other governmental subdivision below the sovereign level.

[495] *See* 12 CFR 3.2 (OCC); 12 CFR 217.2 (Board); 12 CFR 324.2 (FDIC).

in risk profiles between regulated financial entities and other financial entities. The agencies seek feedback on the appropriateness of assigning lower supervisory risk weights (such as a range between 3 and 5 percent for investment grade and a range between 8.5 and 12 percent for speculative or sub-speculative) to certain regulated financial entities to better differentiate risk profiles of the various types of entities within the financial sector bucket.[496] The agencies seek feedback on whether these additional supervisory risk weights would enhance the risk-sensitivity of the CVA risk capital requirement by better capturing differences in the risk profiles of the various entities within the financials sector bucket.

Question 184: The agencies seek comments on the appropriateness of the proposed risk weights of Table 1 to §__.222 for financials, including government-backed financials. What, if any, alternative risk weights should the agencies consider? What are the advantages and disadvantages of subjecting regulated financial entities (such as banks, insurance companies, broker-dealers, pension funds, and registered investment companies or their foreign equivalents) to lower risk weights? Please provide specific details and supporting evidence on the alternative risk weights.

Question 185: The agencies seek comments on the appropriateness of treating the counterparty credit risks of public-sector entities and the GSEs in the same way as those of government-backed non-financials, education, and public administration entities. What, if any, alternatives should the agencies consider to more appropriately capture the counterparty credit risk for such entities?

[496] For example, banks, insurance companies, broker-dealers, pension funds, and investment companies registered with the SEC under the 1940 Act or foreign equivalents thereof (registered investment companies).

Question 186: The agencies seek comments on the appropriateness of applying a 0.65 calibration factor in the formula setting the capital requirement under the BA-CVA to ensure that CVA risk capital requirements appropriately reflect CVA risk. What other level of calibration should the agencies consider and why? If IMM were retained as a method to calculate the capital requirements for counterparty credit risk, what if any adjustments to the multiplier should the agencies consider to reflect the generally reduced capital requirements for banking organizations that use IMM for purposes of calculating the BA-CVA?

B. *Alpha factor (α)*

As previously discussed, when calculating a standalone CVA counterparty-level capital requirement, the proposal would require a banking organization to use the exposure amount that it uses in the counterparty credit risk framework. The exposure amount determined in the counterparty credit risk framework under SA-CCR would be the sum of replacement cost and potential future exposure multiplied by a multiplication factor (the alpha factor) to capture certain risks (for example, wrong-way risk[497] and risks resulting from non-perfect granularity).[498] CVA calculations are based on expected exposure, which in SA-CCR is proxied by the sum of replacement cost and potential future exposure. Accordingly, the proposal would remove the effect of this multiplication factor from the risk-based capital requirement for CVA risk by dividing the exposure at default amount used in the $SCVA_c$ formula by the alpha factor. Specifically, the proposal would require such banking organization to use the same alpha factor in calculating the risk-based capital required under the BA-CVA as required in exposure amount

[497] Wrong-way risk reflects the situation where exposure is positively correlated with the counterparty's probability of default – that is, the exposure amount of the derivative contract increases as the counterparty's probability of default increases.

[498] *See* 85 FR 4362 (Jan. 24, 2020). Under SA-CCR, the alpha factor generally is set at 1.4. However, for a derivative contract with a commercial end-user counterparty, the alpha factor is removed from the exposure amount formula. This is equivalent to applying an alpha factor of 1 to these contracts.

calculations under SA-CCR by setting the alpha factor at 1.4 for derivative contracts with counterparties that are not commercial end-users and at 1 for derivative contracts with counterparties that are commercial end-users.

Unlike SA-CCR, the exposure amount determined in the counterparty credit risk framework under the current exposure methodology does not reflect a multiplication factor. Accordingly, the proposal would set the alpha factor equal to 1 for banking organizations that use the current exposure methodology to calculate exposure amount in the counterparty credit risk framework.

Question 187: The agencies seek comment on using the counterparty credit risk framework to calculate the exposure amount for the standalone CVA counterparty-level capital requirement. Does the CVA capital requirement pose particular issues in the case of nonfinancial counterparties? If so, what modifications should the agencies consider to mitigate such issues?

ii. *Calculation of K_{hedged}*

The second component of the BA-CVA calculation, K_{hedged}, represents the risk-based capital requirements for CVA risk after recognizing the risk mitigation benefits of eligible CVA hedges, as expressed by the following formula:

$$K_{hedged} = \sqrt{\left(\rho \cdot \sum_c (SCVA_c - SNH_c) - IH\right)^2 + (1-\rho^2) \cdot \sum_c (SCVA_c - SNH_c)^2 + \sum_c HMA_c}$$

In general, the calculation of K_{hedged} follows that of $K_{unhedged}$, but introduces new terms to reflect the risk-mitigating effect of eligible CVA hedges.[499] The first term, $((\rho \cdot \sum_C(SCVA_c - SNH_c) - IH)^2)$, recognizes the risk mitigating effect of single-name hedges (SNH_c) and index hedges (IH) on the systematic component of a banking organization's aggregate CVA risk. The second term, $((1-\rho^2) \cdot \sum_c(SCVA_c - SNH_c)^2)$, recognizes the risk mitigating effect of single-name hedges on the aggregate idiosyncratic component of aggregate CVA risk. The third term, $\sum_c HMA_c$, aggregates the components of indirect single-name hedges that are not aligned with counterparty credit spreads and is designed to limit the regulatory capital reduction a banking organization may realize from indirect hedges given that such hedges will not fully offset movements in a counterparty's credit spread (that is, indirect hedges cannot reduce K_{hedged} to zero).

I. Single-name hedges of credit spread risk (SNH_c)

Under the proposal, to calculate the capital reduction for a single-name hedging instrument, a banking organization would multiply the supervisory prescribed correlation (r_{hc}) between the credit spread of the counterparty and the hedging instrument, the supervisory risk weight of the reference name of the hedging instrument (RW_h), the remaining maturity of the hedging instrument in years (M_h^{SN}), the notional amount of the hedging instrument (B_h^{SN})[500] and the supervisory discount factor (DF_h^{SN}). The offsetting benefit of all single-name hedges of credit spread risk on the CVA risk of each counterparty (SNH_c) would equal the simple sum of the capital reduction for each eligible CVA hedge that a banking organization uses to hedge the

[499] The standalone CVA capital, $SCVA_c$, and regulatory correlation parameter, ρ, are defined in exactly the same way as in the formula for CVA risk covered positions $K_{unhedged}$. *See* section V.B.5.a.i. of this **SUPPLEMENTARY INFORMATION**.

[500] Under the proposal, the notional amount for single-name contingent CDS would be determined by the current market value of the reference portfolio or instrument.

counterparty credit spread component of CVA risk of a given counterparty as expressed by the following formula:

$$SNH_c = \sum_{h \in c} (r_{hc} \cdot RW_h \cdot M_h^{SN} \cdot B_h^{SN} \cdot DF_h^{SN})$$

Risk weights (RW_h) would be based on a combination of the sector and the credit quality of the reference name of the hedging instrument as prescribed in Table 1 to §__.222 included above. Parameter r_{hc} is the regulatory value of the correlation between the credit spread of the counterparty and the credit spread of the reference name of an eligible single-name hedge as prescribed in Table 2 to §__.222 below.

Table 2 to § __.222—Correlations Between Credit Spread of Counterparty, *c*, and a Single-Name Hedge, *h*

Single-name hedge, h, of counterparty, c	Value of r_{hc}
References counterparty, c, directly	100%
References an affiliate of counterparty, c	80%
References an entity that belongs to the same sector and region as the counterparty, c	50%

II. Hedge mismatch adjustment for indirect single-name hedges (HMA_c)

Under the proposal, the portion of the indirect hedges that are not recognized in SNH_c due to the imperfect regulatory prescribed correlation would be reflected in the hedge mismatch adjustment, HMA_c, as expressed by the following formula:

$$HMA_c = \sum_{h \in c} \left((1 - r_{hc}^2) \cdot (RW_h \cdot M_h^{SN} \cdot B_h^{SN} \cdot DF_h^{SN})^2 \right)$$

While the summation would cover all single-name hedges assigned to counterparty c, only indirect hedges for which correlation with the counterparty spread is non-perfect (that is, the regulatory prescribed correlation (r_{hc}) is less than one) would contribute to HMA_c

III. Index Hedges of Credit Spread Risk (IH)

Under the proposal, the total amount by which index hedges of credit spread risk reduce the systematic component of the aggregate CVA risk across all counterparties, *IH*, would equal the simple sum of the capital reduction amounts for eligible CVA hedges that are index hedges, which would be calculated for each such hedge as the product of the supervisory risk weight (RW_i), the remaining maturity in years (M_i^{ind}), notional amount (B_i^{ind}), and the supervisory discount factor (DF_i^{ind}), as expressed by the following formula:

$$IH = \sum_i \left(RW_i \cdot M_i^{ind} \cdot B_i^{ind} \cdot DF_i^{ind} \right)$$

Each term in the summation in the formula for *IH* above is a simplified representation of how the expected shortfall for the market value of a given index hedge can be calculated. Because of the BA-CVA's underlying assumption that each credit index is driven by the same systematic factor without any idiosyncratic risk component, the expected shortfall of each individual index hedge would be aggregated via simple summation across all such hedges, and the result of this aggregation *(IH)* would appear only in the systematic risk component in the formula for K_{hedged} above.

To determine the appropriate supervisory risk weight (RW_i) for each index hedge, the proposal would require a banking organization to adjust the supervisory risk weights in Table 1 to §__.222. Specifically, for index hedges where all the underlying constituents belong to the same sector and are of the same credit quality, a banking organization would assign the index hedge to the corresponding bucket used for single-name positions and multiply the supervisory risk weight by 0.7. For index hedges where the underlying constituents span multiple sectors or are not of the same credit quality, the banking organization would calculate the notional-weighted average of the risk weights assigned to each underlying constituent in the index based

on the risk weights provided in Table 1 to §__.222 and multiply the result by 0.7. Multiplication by a factor of 0.7 is intended to recognize diversification of idiosyncratic risk of individual index constituents.

b. Standardized approach for CVA risk

The SA-CVA is an adaptation of the sensitivities-based method used in the standardized measure for market risk as described in section V.A.7.a. of this **SUPPLEMENTARY INFORMATION**. The inputs to the SA-CVA calculations are sensitivities of the aggregate regulatory CVA (discussed in the following subsection) and of the market value of all eligible CVA hedges under SA-CVA (discussed below in this section) to delta and vega risk factors specified in the proposal. In general, the proposed SA-CVA would closely follow the sensitivities-based method for market risk with some exceptions. Broadly, the SA-CVA calculation would reflect capital requirements for only delta and vega (but not curvature), apply slightly different steps in the calculation of the risk-weighted net sensitivity, use less granular risk factors and buckets, and include a capital multiplier to account for model risk.

There are other specific differences between the SA-CVA and the sensitivities-based method for market risk. Unlike the market risk of trading instruments, CVA risk always depends on two types of risk factors: the term structure of credit spreads of the counterparty and a set of market risk factors that drives the expected exposure of the banking organization to the counterparty. For this reason, the SA-CVA would have six distinct risk classes for the CVA delta capital requirement: counterparty credit spread and the five risk classes for exposure-related market risk factors which are the interest rate, foreign exchange, reference credit spread, equity, and commodity risk classes. Regulatory CVA is approximately linear in counterparty credit spreads and does not depend on their volatilities. Accordingly, calculation of the CVA vega

capital requirement would not be required in the counterparty credit spread risk class. Expected exposure, on the other hand, is always sensitive to volatilities of market risk factors that drive market values of CVA risk covered positions. Because of this, a banking organization would be required to calculate the CVA vega capital requirements for the five exposure-related risk classes regardless of the presence of options in CVA risk covered positions.

Regulatory CVA would require simulating future exposure that depends on multiple market risk factors over long time horizons. Calculation of each CVA sensitivity to an exposure-related market risk factor would involve a separate regulatory CVA calculation, which could limit the number of CVA sensitivities to market risk factors that a banking organization could realistically calculate. Accordingly, the agencies would reduce the granularity of both delta and vega risk factors in the five exposure-related risk classes in the SA-CVA compared to the sensitivities-based method for market risk. Curvature calculations would not be required. For the five exposure-related risk classes, the SA-CVA would use the same buckets, regulatory risk weight calibrations, and correlation parameters as are used in the sensitivities-based method for market risk, with necessary adjustments for the SA-CVA's reduced granularity of market risk factors.

In contrast to market risk factors that drive exposure, CVA sensitivities to counterparty credit spreads can be calculated based on a single regulatory CVA calculation. In the counterparty credit spread risk class, the SA-CVA would use the same granularity of risk factors as are used in the sensitivities-based method for market risk. Vega and curvature calculations would not be required in the counterparty credit spread risk class because regulatory CVA would be approximately linear with respect to counterparty credit spreads. For counterparty credit

spreads, the SA-CVA would adjust buckets and correlations based on the role that counterparty credit spreads play in CVA calculations.

i. *Regulatory CVA*

Under the proposal, the aggregate regulatory CVA would equal the simple sum of counterparty-level regulatory CVAs. Counterparty-level regulatory CVA is intended to reflect an estimate of the market expectation of future loss that a banking organization would incur on its portfolio of derivatives with a counterparty in the event of the counterparty's default, assuming that the banking organization survives until the maturity of the longest instrument in the portfolio. For consistency in the calculation of risk-based capital across banking organizations, the proposal would require a banking organization to apply a positive sign to non-zero losses, so that regulatory CVA is always a positive quantity. The proposal would require a banking organization to base the calculation of regulatory CVA for each counterparty on at least three sets of inputs: the term structure of market-implied probability of default (market-implied PD) of the counterparty, the market-consensus expected loss-given-default (ELGD), and the simulated paths of discounted future exposure. In addition to the three specified inputs, the proposal would also allow a banking organization to use models that incorporate additional inputs for purposes of calculating regulatory CVA.

I. Term structure of market-implied PD

The proposal would require a banking organization to use credit spreads observed in the markets, if available, to estimate the term structure of the market-implied PD based on market expectations of the likelihood that the counterparty will default by a certain point in the future. Relative to historical default probabilities, market-implied PDs are typically substantially higher as they reflect the premium that investors demand for accepting default risk.

As many counterparties' credit is not actively traded, the proposal would allow a banking organization to use proxies to estimate the term structure of market-implied PD. For these illiquid counterparties, a banking organization would be required to estimate proxy credit spreads from credit spreads observed in the market for the counterparty's liquid peers, determined using, at a minimum, credit quality, industry, and region. Alternatively, the proposal would permit a banking organization to map an illiquid counterparty to a single liquid reference name if the banking organization demonstrates to its primary Federal supervisor the appropriateness of such mapping.[501] In addition, for illiquid counterparties for which there are no available credit spreads of liquid peers, the proposal would permit a banking organization to use an estimate of credit risk to proxy the credit spread of an illiquid counterparty (for example, to use a more fundamental analysis of credit risk based on balance sheet information or other approaches). While historical default probabilities may form part of this analysis, the resulting spread would have to relate to credit markets as well. This requirement would help ensure that the estimated term structure of market-implied PD reflects the market risk premium for counterparty credit risk.

II. Market-consensus ELGD

In general, the proposal would require a banking organization to use the market-consensus ELGD value that is used to calculate the market-implied PDs from the counterparty's credit spreads. The fraction of exposure that a banking organization would lose in the event of a counterparty default (that is, loss given default) depends on the seniority of the derivative contracts that the banking organization has with the counterparty at the time of default. Most CDS contracts, which are used to calculate the market-implied PD, allow for delivery of senior

[501] For example, a banking organization may be permitted to use the credit spread curve of the home country as a proxy for that of a municipality in the home country (that is, setting the municipality credit spread equal to the sovereign credit spread plus a premium).

unsecured bonds and thus have the same seniority as senior unsecured bonds in bankruptcy. By generally requiring a banking organization to use the same market-consensus ELGD as the one used in calculations of the market-implied PD from the credit spreads, the proposal would require a banking organization to generally assume that derivative contracts' seniority is the same as the seniority of senior unsecured bonds. If a banking organization's derivative contracts with the counterparty are more or less senior to senior unsecured bonds, the proposal would allow a banking organization to adjust the market-consensus ELGD to appropriately reflect the lower or higher losses arising from such exposures. However, the proposal would not allow a banking organization to use collateral provided by the counterparty as the justification for changing the market-consensus ELGD as the banking organization would already have considered collateral in determining its exposure to the counterparty.

III. Simulated paths of discounted future exposure

To align regulatory CVA with industry practices, the regulatory CVA calculation in the SA-CVA would generally be based on the exposure models that a banking organization uses to calculate CVA for purposes of financial reporting. Specifically, a banking organization would obtain the simulated paths of discounted future exposure by using the exposure models the banking organization uses for calculating CVA for financial reporting, adjusted, if needed, to meet the requirements imposed for the regulatory CVA calculation, as described below. The proposal would require that these exposure models be subject to the same model calibration processes (with the exception of the margin period of risk, which would have to meet the regulatory floors), and use the same market and transaction data as the exposure models that the banking organization uses for calculating CVA for financial reporting purposes.

To produce the simulated paths of discounted future exposure, a banking organization would price all standardized CVA risk covered positions with the counterparty along simulated paths of relevant market risk factors and discount the prices to today using risk-free interest rates along the path. The banking organization would be required to simulate all market risk factors material to the transactions as stochastic processes for an appropriate number of paths defined on an appropriate set of future time points extending to the maturity of the longest transaction. The proposal would require drifts of risk factors to be consistent with a risk-neutral probability measure and would not permit historical calibration of drifts. The banking organization would be required to calibrate volatilities and correlations of market risk factors to current market data whenever sufficient data exist in a given market, although the proposal would permit a banking organization to use historical calibrations of volatilities and correlations if sufficient current market data are not available. A banking organization's assumed distributions for modelled risk factors would be required to account for the possible non-normality of the distribution of exposures, including the existence of leptokurtosis (that is, "fat tails"), where appropriate. The banking organization would be required to use the same netting recognition as in its CVA calculations for financial reporting. Where a transaction has a significant level of dependence between exposure and the counterparty's credit quality, the banking organization would be required to take this dependence into account.

The proposal would permit a banking organization to recognize financial collateral as a risk mitigant for margined counterparties if the financial collateral would be included in the net independent collateral amount or variation margin amount and the collateral management requirements in SA-CCR are satisfied.

The proposal would require that (1) simulated paths of discounted future exposure capture the effects of margining collateral that is recognized as a risk mitigant along each exposure path; and (2) the exposure model appropriately captures all the relevant contractual features such as the nature of the margin agreement (that is, unilateral versus bilateral), the frequency of margin calls, the type of collateral, thresholds, independent amounts, initial margins, and minimum transfer amounts.[502] To determine collateral available to a banking organization at a given exposure measurement time, the proposal would require a banking organization's exposure model to assume that the counterparty will not post or return any collateral within a certain time period immediately prior to that time, known as the margin period of risk (MPoR). The proposal specifies a minimum length of time for the MPoR. For all CVA risk covered positions, the minimum MPoR is equal to 9 + N business days, or 10 business days for margin agreements with daily or intra-daily exchange of margin.

ii. *Calculation of the SA-CVA approach*

Conceptually, the proposed SA-CVA approach is similar to the proposed sensitivities-based method under the market risk framework, as described in section V.A.7.a. of this **SUPPLEMENTARY INFORMATION**, in that a banking organization would estimate the changes in regulatory CVA arising from CVA risk covered positions and, if applicable, eligible CVA hedges resulting from applying standardized shocks to the relevant risk factors. As in the case of the proposed sensitivities-based method, to help ensure consistency in the application of risk-based capital requirements across banking organizations, the proposal would establish the applicable risk factors, the method to calculate the sensitivity of regulatory CVA and CVA

[502] Minimum transfer amount means the smallest amount of variation margin that may be transferred between counterparties to a netting set pursuant to the variation margin agreement.

hedges to each of the prescribed risk factors, the shock applied to each risk factor, and the process for aggregating the net weighted sensitivities within each risk class and across risk classes to arrive at the total CVA risk-based capital requirement for the portfolio under the SA-CVA. First, under the proposal, a banking organization would identify one or more of the specified risk classes that, in addition to counterparty credit spread risk class, would be applicable to its CVA risk covered positions and its CVA hedges. Based on standard industry classifications, the proposed exposure-related risk classes represent the common, yet distinct market variables that impact the value of CVA risk covered positions and CVA hedges. The proposed sensitivity calculations for delta and vega risk factors would estimate how much the aggregate regulatory CVA arising from CVA risk covered positions and separately the market value of all standardized CVA hedges would change as a result of a small change in a given risk factor, while all other relevant risk factors remain constant. For the sensitivity calculation, a banking organization would be able to use either the standard risk factor shifts or smaller values of risk factor changes, if such smaller values are consistent with those used by the banking organization for internal risk management.

Second, for each delta (and, separately, vega) risk factor, the banking organization would multiply the measured sensitivity of the aggregate CVA arising from CVA risk covered positions to that risk factor and, separately, that of the market value of the aggregate eligible CVA hedges to that risk factor by the standardized risk weight proposed for that risk factor. A banking organization would then subtract the resulting weighted sensitivity for the eligible CVA hedges from the weighted sensitivity for the aggregate CVA arising from the CVA risk covered positions to obtain the net weighted sensitivity to a given risk factor. The agencies intend the proposed risk weights to capture the amount that a risk factor would be expected to move during

the liquidity horizon of the risk factor in stress conditions and generally would be consistent with the risk weights in the proposed sensitivities-based method for market risk outlined in section V.A.7.a.iii. of the **SUPPLEMENTARY INFORMATION**.

Third, to aggregate CVA risk contributions of individual risk factors, the proposal would provide aggregation formulas for calculating the total delta and vega capital requirements for the entire CVA portfolio. Within each risk class, the proposal would group similar risk factors into buckets. Similar to the sensitivities-based method for market risk, a banking organization would aggregate the net risk-weighted sensitivities for delta (and, separately, for vega) risk factors first within each bucket and then across buckets within each risk class using the prescribed aggregation formulas to produce the respective delta and vega risk-based capital requirements. The agencies' intention is that the aggregation formulas limit offsetting and diversification benefits via the prescribed correlation parameters. Under the proposal, the correlation parameters specified for each risk factor pair would limit the risk-mitigating benefit of hedges and diversification, given that the hedge relationship between the underlying position and the hedge as well as the relationship between different types of positions could decrease or become less effective in a time of stress.

Fourth, a banking organization would aggregate the resulting delta and vega risk-class-level capital requirements as the simple sum across risk classes with no recognition of any diversification benefits because in stress, diversification across different risk classes may become less effective.

Finally, the overall risk-based capital requirement for CVA risk would be the simple sum of the separately calculated delta and vega capital requirements without recognition of any

diversification benefits as these measures are intended to capture different types of risk and because in stress, diversification may become less effective.

I. Delta and vega

To appropriately capture linear CVA risks, the proposal would require a banking organization to separately calculate the risk-based capital requirements for delta and vega using the above steps. As the sensitivity to vega risk is always material for CVA (as discussed further below), the proposal would require a banking organization to always measure the sensitivity of regulatory CVA to vega risk factors, regardless of whether the CVA risk covered positions include positions with optionality. When a banking organization calculates the sensitivity of regulatory CVA to a vega risk factor, it would apply the appropriate volatility shift to both types of volatilities that appear in exposure models: volatilities used for generating risk factor paths and volatilities used for pricing options.

II. Risk classes

Under the proposal, a banking organization would be required to identify all of the relevant risk factors for which it would calculate sensitivities for delta risk and vega risk. Based on the identified risk factors, a banking organization would be required to identify the corresponding buckets within relevant risk classes. The CVA of a single counterparty can be represented as the product of counterparty credit spread and expected exposure for various future time points, aggregated across these time points. Because of this structure, counterparty credit spread risk naturally presents itself as a separate delta risk class that is always present in CVA risk regardless of the type of CVA risk covered positions in the portfolio.[503] The risk classes

[503] This is a fundamental distinction between CVA risk and market risk, which, in the latter case, is entirely determined by market risk covered positions.

specified for delta and vega risk factors related to expected exposure under SA-CVA are generally consistent with those under the sensitivities-based method for market risk and include interest rate, foreign exchange, credit spread, equity, and commodity.

For credit spread risk, the proposal would specify two distinct risk classes that may share the same risk factors but would need to be treated separately: (i) counterparty credit spread risk; and (ii) reference credit spread risk. Reference credit spread risk would be defined as the risk of loss that could arise from changes in the underlying credit spread risk factors that drive the exposure component of CVA risk. For example, a banking organization could have a portfolio of derivatives with Firm X as a counterparty and, at the same time, have a CDS referencing credit of Firm X in a portfolio of derivatives with Firm Y. In such cases, under the SA-CVA, the same credit spreads of Firm X would be treated as distinct risk factors in two sets of sensitivity calculations: one within the counterparty credit spread risk class calculations, and the other within the reference credit spread risk class calculations. To incorporate credit spread hedges of CVA risk properly, each such hedge would be designated as either a counterparty credit spread hedge or a reference credit spread hedge and included only in one calculation according to the designation.

Each risk class used for delta would also apply to vega, except for counterparty credit spread risk. The regulatory CVA is approximately linear in counterparty credit spreads and does not depend on their volatilities. Accordingly, calculation of the CVA vega capital requirement would not be required in the counterparty credit spread risk class. On the other hand, expected exposure is always sensitive to volatilities of market risk factors that drive market values of CVA

risk covered positions.[504] Accordingly, for each of the five exposure-related risk classes, a banking organization would be required to compute vega risk factor sensitivities of the aggregate regulatory CVA, in addition to delta risk factor sensitivities, regardless of whether the portfolio includes options.

III. Risk factors

Under the proposal, a banking organization would be required to identify all of the relevant risk factors for which it would calculate sensitivities for delta risk and vega risk. The proposed risk factors differ for each risk class to appropriately reflect the specific market risk variables relevant for each risk class.

To measure the impact of a small change in each of the risk factors on the aggregate regulatory CVA and the market value of eligible CVA hedges, the proposal would specify the sensitivity calculations that a banking organization may use to calculate the CVA sensitivity to small changes in each of the specified delta or vega risk factors, as applicable.[505] Specifically, for the equity, commodity, and foreign exchange delta risk factors, the sensitivity would equal the change in the aggregate regulatory CVA arising from CVA risk covered positions and separately the market value of all eligible CVA hedges due to a one percentage point increase in the delta risk factor divided by one percentage point. For the interest rate, counterparty credit spread, and reference credit spread delta risk factors, the sensitivity would equal the change in the aggregate

[504] CVA expected exposure profile can be characterized as today's price of a call option on the portfolio market value at that time point (or on the increment of the portfolio market value over the MPoR for a margined portfolio). Since the price of an option depends both on the price and volatility of the underlying asset, both delta and vega risk factor sensitivities materially contribute to expected exposure variability, even when the portfolio of CVA risk covered positions with a counterparty does not include options.

[505] As previously noted, for the sensitivity calculation, a banking organization would be able to use either the standard risk factor shifts or smaller values of risk factor changes, if such smaller values are consistent with those used by the banking organization for internal risk management (for example, using infinitesimal values of risk factor shifts in combination with algorithmic differentiation techniques).

regulatory CVA arising from CVA risk covered positions and separately the market value of all eligible CVA hedges due to a one basis point increase in the risk factor divided by one basis point. The sensitivity to a vega risk factor would equal the change in the aggregate regulatory CVA arising from CVA risk covered positions and separately the market value of all eligible CVA hedges due to a one percentage point increase in the volatility risk factor divided by one percentage point. When a banking organization calculates the sensitivity of regulatory CVA arising from CVA risk covered positions and separately of the market value of all eligible CVA hedges to a vega risk factor, the banking organization would apply the shift to the relevant volatility used for generating risk factor simulation paths for regulatory CVA calculations. If there are options in the portfolio with the counterparty, the shift would also be applied to the relevant volatility used to price options along the simulation paths.

In cases where a CVA risk covered position or an eligible CVA hedge references an index, the proposal would require a banking organization to calculate the sensitivities of the aggregate regulatory CVA arising from the CVA risk covered positions or the market value of the eligible CVA hedges to all risk factors upon which the value of the index depends. The sensitivity of the aggregate regulatory CVA or the market value of the eligible CVA hedges to a risk factor would be calculated by applying the shift of the risk factor to all index constituents that depend on this risk factor and recalculating the aggregate regulatory CVA or the market value of the eligible CVA hedges.

For the risk classes of counterparty credit spread risk, reference credit spread risk, and equity risk, the SA-CVA would allow a banking organization to introduce a set of additional risk

factors that directly correspond to credit and equity indices.[506] For a CVA risk covered position or an eligible CVA hedge whose underlying is an index, its contribution to sensitivities to the index constituents would be replaced with its contribution to a single sensitivity to the underlying index, provided that (1) for an index where at least 75 percent of notional value for credit indices or market value for equity indices of the index's constituents on a weighted basis are mapped to the same sector, the entire index would have to be mapped to that sector and treated as a single-name sensitivity in that bucket, and (2) in all other cases, the sensitivity would have to be mapped to the applicable index bucket. The proposal would provide this option because some popular credit and equity indices involve a large number of constituents[507] and calculating sensitivities to each constituent may be impractical for such indices.

C. *Counterparty credit spread risk*

The proposal would define the counterparty credit spread delta risk factors as the absolute shifts of credit spreads of individual entities (counterparties and reference names for counterparty credit spread hedges) and indices (under the optional treatment of indices) for the following tenors: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

In addition to single-name CVA counterparty credit spread hedges, banking organizations use index hedges to hedge the systematic component of counterparty credit spread risk. If an eligible CVA counterparty credit spread risk hedge references a credit index, a banking organization would be required to calculate delta sensitivities of the market value of all eligible CVA hedges of counterparty credit spread risk to the credit spread of each constituent entity

[506] If a banking organization chooses to introduce such additional risk factors, the banking organization would be required to calculate CVA sensitivities to the index risk factors in addition to sensitivities to the non-index risk factors.

[507] For example, the credit index CDX has 125 constituents and the equity index S&P 500 has 500 constituents.

included in the index. In these calculations, a banking organization would be required to shift the credit spread of each of the underlying constituents of the index while holding the credit spreads of all others constant.

The SA-CVA would offer an alternative, optional approach that introduces additional index risk factors for indices. Specifically, for each index referenced by eligible CVA counterparty credit spread risk hedges, delta risk factors would be absolute shifts of the index for the following tenor points: 0.5 years, 1 year, 3 years, 5 years, and 10 years. Under this optional approach, when a banking organization calculates sensitivities to single-name credit spread risk factors, the indices would remain unchanged. For each distinct credit index referenced by an eligible CVA counterparty credit spread risk hedge, the banking organization would perform a separate delta sensitivity calculation where the entire credit index is shifted. The index sensitivity calculations would only affect eligible CVA hedges of counterparty credit spread risk that reference the indices. This alternative is designed to reduce the complexity of constituent-by-constituent calculations, as many popular credit indices have more than a hundred constituents.

D. *Risk factors for exposure-related risk classes*

As noted above, given the computational intensity of calculating the sensitivity of CVA to market risk factors and the less material impact of such risk factors on the volatility of CVA, the proposal would define the delta and vega risk factors for all five market risk classes (interest rate risk, foreign exchange risk, reference credit spread risk, equity risk, and commodity risk) in a much less granular way than under the sensitivity-based method for market risk.

1. Interest rate risk

For both delta and vega risk factors in the interest rate risk class, the proposal would define individual buckets by currency, which would consist of interest rate risk factors and

inflation rate risk factors. For specified currencies (USD, EUR, GBP, AUD, CAD, SEK, or JPY), the delta interest rate risk factors would be defined as the simultaneous absolute change in all risk-free yields in a given currency at each specified tenor point (1 year, 2 years, 5 years, 10 years, and 30 years) and the absolute change in the inflation rate of a given currency. For all other currencies, the delta risk factors for interest rate risk would be defined along two dimensions: the simultaneous parallel shift in all risk-free yields in a given currency and the absolute change in the inflation rate of a given currency.

As the specified currencies are intended to capture the set of liquid currencies that would likely dominate a banking organization's portfolios, the proposal would require a banking organization to identify and apply more granular delta risk factors for such exposures relative to those for all other currencies. Of the ten tenors used under the sensitivities-based method in market risk, the proposed five tenors are intended to capture the most commonly used tenors based on the liquidity in interest rate OTC derivative markets.

For all currencies, the interest rate vega risk factors for each currency would be defined along two dimensions: the simultaneous relative change of all interest rate volatilities for a given currency and the simultaneous relative change of all inflation rate volatilities for a given currency. For vega risk factors, the proposal would reduce the granularity in the tenor dimension in the same manner for all currencies given the computational intensity of calculating the vega risk sensitivity and the less material impact of such risk factors on the volatility of CVA.

2. Foreign exchange risk

The proposal would specify delta and vega buckets for foreign exchange risk as individual foreign currencies. For each foreign exchange bucket, the proposal would define one delta risk factor and one vega risk factor. Specifically, the proposal would define (1) the foreign

exchange delta risk factor as the relative change in the foreign exchange spot rate[508] between a given foreign currency and the reporting currency (or base currency); and (2) the foreign exchange vega risk factor as the simultaneous, relative change of all volatilities for an exchange rate between a banking organization's reporting currency (or base currency) and another given currency. For transactions that reference an exchange rate between a pair of non-reporting currencies, the sensitivities to the foreign exchange spot rates between the bank's reporting currency and each of the referenced non-reporting currencies must be measured.

3. Reference credit spread risk

The proposal would define buckets for the delta and vega risk factors by sector and credit quality which is consistent with the definitions of buckets for non-securitization credit spread risk that are used in the proposed sensitivities-based method for market risk. The proposal would define one reference credit spread risk factor per delta or vega bucket under the SA-CVA. Specifically, the proposal would define (1) the delta risk factor as the simultaneous absolute shift of all credit spreads of all tenors for all reference entities in the bucket; and (2) the vega risk factor as the simultaneous relative shift of the volatilities of all credit spreads of all tenors for all reference entities in the bucket. In addition, similar to the counterparty credit spread risk as described above in section V.B.5.b.ii.III.A. of this **SUPPLEMENTARY INFORMATION**, the SA-CVA would offer an alternative, optional approach that introduces additional index risk factors for qualified indices and allows a banking organization to calculate delta and vega sensitivities of aggregate regulatory CVA and eligible CVA hedges with respect to the qualified indices instead of each constituent of the indices.

[508] Under the proposal, the foreign exchange spot rate would be defined for purposes of CVA risk as the current market price of one unit of another currency expressed in the units of the banking organization's reporting (or base) currency.

4. Equity risk

The proposal would set the buckets for delta and vega risk factors generally matching the buckets for equity risk in the proposed sensitivities-based method for market risk. The proposal would define one equity risk factor per delta or vega bucket to reduce the complexity of calculating CVA sensitivities to equity risk factors. The proposal would define (1) the delta risk factor as the simultaneous relative change of all equity spot prices for all entities in the bucket and (2) the vega risk factor as the simultaneous relative change of all equity price volatilities for all entities in the bucket. In addition, similarly to the counterparty credit spread risk and reference credit spread risk as described in sections V.B.5.b.ii.III.A. and V.B.5.b.ii.III.B.3. of this **SUPPLEMENTARY INFORMATION**, the SA-CVA would offer an alternative, optional approach that introduces additional index risk factors for qualified indices and allows a banking organization to calculate delta and vega sensitivities of aggregate regulatory CVA and eligible CVA hedges with respect to the qualified indices instead of each constituent of the indices.

5. Commodity risk

The proposal would set the buckets for delta and vega risk factors matching the buckets for commodity risk in the proposed sensitivities-based method for market risk. The proposal would define one commodity risk factor per delta or vega bucket under the SA-CVA. Specifically, the proposal would define (1) the delta risk factor as the simultaneous relative shift of all commodity spot prices for all commodities in the bucket and (2) the vega risk factor as the simultaneous relative shift of all commodity price volatilities for all commodities in the bucket.

IV. Buckets, risk weights, and correlations

As noted above, there are six risk classes for delta risk factors in the SA-CVA: the counterparty credit spread risk class and the five risk classes for market risk factors that drive

expected exposure (interest rate, foreign exchange, reference credit spread, equity, and commodity). In addition, there are five exposure-related risk classes for vega risk factors. The granularity of risk factors in the counterparty credit spread risk class matches the one in the non-securitization credit spread risk class in the sensitivities-based method for market risk, while the granularity of both delta and vega risk factors in the exposure-related risk classes is greatly reduced.

A. *Exposure-related risk classes*

The exposure component of regulatory CVA of a portfolio of CVA risk covered positions is affected by delta and vega market risk factors in a similar way as a portfolio of options on future market values (or their increments). Therefore, there is no compelling reason for the exposure-related risk classes in the SA-CVA to deviate from the bucket structure, risk weights, and correlations used in the corresponding risk classes in the sensitivities-based method for market risk, except for accommodating the reduced granularity of exposure-related risk factors in the SA-CVA. Accordingly, for both delta and vega risk factors in the exposure-related risk classes, the SA-CVA would use the bucket structure that matches the bucket structure of the corresponding risk classes in the sensitivities-based method for market risk. Furthermore, the proposal would set the values of all cross-bucket correlations, γ_{bc}, used for aggregation of bucket-level capital requirements across buckets within each exposure-related risk class equal to the corresponding values used in the sensitivities-based method for market risk.

For the foreign exchange, reference credit spread, equity, and commodity risk classes, the SA-CVA would assign one delta (and, separately, one vega) risk factor per bucket. Therefore, in contrast to the sensitivities-based method for market risk, the SA-CVA does not need to provide intra-bucket correlations, ρ_{kl}, for these risk classes. Furthermore, because the sensitivities-based

method for market risk provides no more than one risk weight per bucket for the corresponding risk classes (foreign exchange, non-securitization credit spread, equity, and commodity), the SA-CVA would generally match the values of these risk weights for both delta and vega risk factors.[509]

For the interest rate risk class, similar to the market risk, the SA-CVA would have two groups of buckets/currencies: the "specified" currencies (USD, EUR, GBP, AUD, CAD, SEK, and JPY) and the other currencies. However, while in the sensitivities-based method for market risk the two groups only differ in the values of the risk weights (the risk weights can be divided by $\sqrt{2}$ when applied to the specified currencies), in the SA-CVA they would differ both in the value of risk weights and in the level of granularity for delta risk factors. As mentioned above, the SA-CVA would specify delta risk factors for the specified currencies as the absolute changes of the inflation rate and of the risk-free yields for the following five tenors: 1 year, 2 years, 5 years, 10 years, and 30 years. Risk weights for these risk factors would be set approximately equal to the risk weights for the inflation rate and for the corresponding tenors of risk-free yields in the sensitivities-based method for market risk divided by $\sqrt{2}$. The intra-bucket correlations, ρ_{kl}, for the specified currencies in the SA-CVA would approximately match the ones between the corresponding tenors and the inflation rate in the sensitivities-based method for market risk. For each of the non-specified currencies, the SA-CVA would provide two delta risk factors per bucket/currency: the absolute change of the inflation rate and the parallel shift of the entire risk-free yield curve for a given currency. The risk weights for these risk factors would approximately match the ones for the inflation rate and for the 1-year risk free yield in the sensitivities-based

[509] The only exception would be foreign exchange delta risk: the sensitivities-based method for market risk would use two values for the delta risk weight (depending on the currencies), while the SA-CVA would use a single delta risk weight (set approximately equal to the lower of the two) regardless of the currency.

method for market risk. The intra-bucket correlation between the two risk factors for the non-specified currencies would be set equal to the value of the correlation between the inflation rate and any tenor of the risk-free yield specified in the sensitivities-based method for market risk. As stated above, the SA-CVA would specify two vega risk factors for the interest rate risk class for each bucket/currency: a simultaneous relative change of all inflation rate volatilities and a simultaneous relative change of all interest rate volatilities for a given currency. The SA-CVA would set the vega risk weights for both risk factors equal to the single value of the vega risk weight used for all interest rate vega risk factors in the sensitivities-based method for market risk. The SA-CVA would set the only intra-bucket interest rate vega correlation equal to the value of the SA-CVA intra-bucket interest rate delta correlation for the non-specified currencies.

Question 188: The agencies seek comment on the appropriateness of the proposed buckets, risk weights, and correlations for the exposure-related risk classes. What, if any, alternative bucketing structures, risk weights, or correlations should the agencies consider and why?

B. *Counterparty credit spread risk class*

Fundamentally, counterparty credit spreads are no different from reference credit spreads and, therefore, should follow the same dynamics. While the common dynamics might suggest using the same set of buckets for counterparty credit spread risk class and the reference credit spread risk class, the proposal would modify bucket definitions and structure for the counterparty credit spread risk class based on different counterparty types and the different roles counterparty credit spreads play in CVA risk management.

The counterparty credit spread component of CVA risk is usually substantially greater than the exposure component, and, therefore, is the primary focus of CVA risk management by

banking organizations. To promote prudent risk management by improving recognition of certain hedges of the counterparty credit spread component of CVA risk and to better align the calibration of the CVA risk capital framework with the underlying economic risk, the agencies propose, for the application in the counterparty credit spread risk class, to modify the bucket structure that is used for the non-securitization credit spread risk class in the sensitivities-based method for market risk, as described below. These modifications would not generally affect the risk weights (Table 3 to §__.225) in the counterparty credit spread risk class that would generally follow the corresponding risk weights in the sensitivities-based method for market risk.

Banking organizations often use single-name credit instruments to hedge the counterparty credit spread component of CVA risk of individual counterparties with large CVA and use index credit instruments to hedge the systematic part of the counterparty credit spread component of the aggregate (across counterparties) CVA risk. In the non-securitization credit spread risk class in the sensitivities-based method for market risk, (1) investment grade entities and (2) speculative and sub-speculative grade entities from the same sector generally form two separate buckets based on credit quality. This, however, could undermine the efficiency of hedges of the counterparty credit spread component of CVA risk. In order to prevent this, the proposal would merge the investment grade bucket and speculative and sub-speculative grade bucket of each sector into a single bucket.

Furthermore, banking organizations often use single-name sovereign CDS as indirect single-name counterparty credit spread hedges of CVA risk of illiquid counterparties such as GSEs and local governments. However, in the non-securitization credit spread risk class in the sensitivities-based method for market risk, such entities would belong to the PSE, government-backed non-financials, GSE debt, education, and public administration sector, which form a

bucket separate from sovereign exposures, specified supranational entities, and MDBs. Thus, following the non-securitization credit spread bucket structure of the sensitivities-based method for market risk would result in a situation where the counterparty and the reference entity of the hedge reside in different buckets, thus substantially reducing the effectiveness of the hedge. In order to prevent a such scenario, the proposal would merge the sovereign exposures, specified supranational entities, and MDBs sector and the PSE, government-backed non-financials, GSE debt, education, and public administration sector into a single bucket. To preserve hedging efficiency, the proposal would move government-backed financials from the "financials" bucket to the combined bucket that includes sovereign exposures.

The agencies propose to set the cross-bucket correlations, γ_{bc}, equal to the corresponding correlations that would be applicable under the assumption of the same credit quality in the non-securitization credit spread risk class as in the sensitivities-based method for market risk. The agencies propose to change both the structure and the values of the intra-bucket correlations used in the sensitivities-based method to better recognize indirect single-name hedges where the reference name is in the same bucket as the counterparty. Similar to the non-securitization credit spread risk class in the sensitivities-based method for market risk, the intra-bucket correlations, ρ_{kl}, proposed for the counterparty credit spread risk class would be equal to the product of three correlation parameters. Two of the SA-CVA parameters—for tenor difference and name difference—are the same as in the sensitivities-based method if risk factors are identical but have higher values for non-identical risk factors for better hedge recognition. The third SA-CVA parameter—for credit quality difference—would replace the basis correlation parameter of the sensitivities-based method. This parameter would equal 100 percent if the credit quality of the two names is the same (treating speculative and sub-speculative grade as one credit quality

category) and 80 percent otherwise. The basis correlation parameter is not needed in the SA-CVA because the SA-CVA does not make a distinction between different credit curves referencing the same entity. On the other hand, reference entities of the same sector, but different credit quality would be in different buckets under the sensitivities-based method, so the sensitivities-based method does not need the credit quality difference correlation parameter.

To promote prudent risk management by improving recognition of cross-sector index hedges of the counterparty credit spread component of CVA risk, the agencies are proposing to increase the inter-bucket correlation between bucket 8 (the index bucket) and buckets 1 through 6 from 45 to 70 percent. While the sensitivities-based method applies a correlation value of 45 percent for cross-sector indices within the non-securitization credit spread risk class, this would not appropriately reflect counterparty credit spread risk within the CVA risk framework. Counterparty credit spread risk class has a very specific structure for purposes of the CVA risk, where firms would offset the aggregate CVA amount, which is essentially a weighted sum of individual counterparty credit spreads with positive weights, with a cross-bucket index hedge, which represents its own bucket. Thus, for purposes of the CVA risk capital requirement, the correlation parameter between a specific single-name bucket and the index bucket should reflect the actual correlation between the bucket-level CVA and a cross-bucket index. Because the bucket-level CVA is a weighted sum of the individual counterparty credit spreads within the bucket, it has a substantial amount of idiosyncratic credit spread risk diversified away and can be, therefore, viewed as a single-bucket index. Thus, the correlation between the bucket-level CVA and the cross-bucket index is comparable to the correlation between a single-bucket index and a cross-bucket index. The agencies consider that this correlation is substantially higher than 45 percent and are proposing to increase it to 70 percent. This increase would improve

recognition of cross-bucket index hedges of counterparty credit spread component of CVA risk in SA-CCR.

Question 189: The agencies seek comments on the appropriateness of the proposed risk weights of Table 3 to §__.225 for financials, including government-backed financials. What, if any, alternative risk weights should the agencies consider? Should regulated financial institutions (such banks, insurance companies, broker dealers, pension funds, registered investment companies, and their foreign equivalents) be subject to lower risk weights? Please provide specific details and supporting evidence on the alternative risk weights.

Question 190: To what extent are the proposed buckets, risk weights, and correlations for counterparty credit spread risk class appropriate? What, if any, alternative bucketing structures, risk weights, or correlations should the agencies consider and why?

V. Intra- and inter-bucket aggregation

Consistent with the sensitivities-based method for market risk, the proposal would require a banking organization first to separately aggregate the risk-weighted net sensitivities for CVA delta and CVA vega within their respective buckets and then across buckets within each risk class using the prescribed aggregation formulas to produce respective delta and vega risk capital requirements for CVA risk.

First, for each bucket *b*, a banking organization would aggregate all net weighted sensitivities for all risk factors within this bucket according to the following formula:

$$K_b = \sqrt{\left(\sum_{k\in b} {WS_k}^2 + \sum_{k\in b}\sum_{l\in b, l\neq k} \rho_{kl}\cdot WS_k \cdot WS_l\right) + R\cdot \sum_{k\in b}\left(WS_k^{Hdg}\right)^2}$$

where WS_k is the net weighted sensitivity to risk factor k, WS_k^{Hdg} is the weighted sensitivity of the market value of all standardized CVA hedges to risk factor k, ρ_{kl} is the regulatory correlation parameter between risk factors k and l within bucket b, and R is the hedging disallowance parameter set at 0.01.

While this formula is similar to the intra-bucket aggregation formula in the sensitivities-based method for market risk, it differs by the presence of an additional term under the square root, proportional to the hedging disallowance parameter R. The purpose of this term is to prevent extremely small levels of K_b when most of the risk factors k are perfectly hedged. For the case of perfect hedging ($WS_k = 0$ for all k), the term provides a floor equal to 10 percent of weighted sensitivities of the standardized CVA hedges, aggregated as idiosyncratic risks.

Second, a banking organization would aggregate bucket-level capital requirements across buckets within the same risk class according to the following formula:

$$K = m_{CVA} \cdot \sqrt{\sum_b {K_b}^2 + \sum_b \sum_{c \neq b} \gamma_{bc} \cdot S_b \cdot S_c}$$

where γ_{bc} is the regulatory correlation parameter between bucket b and bucket c; S_b is the sum of the net weighted sensitivities WS_k over all risk factors k in bucket b, floored by $-K_b$ and capped by K_b; and S_c is the sum of the net weighted sensitivities WS_k over all risk factors k in bucket c, floored by $-K_c$ and capped by K_c as given by the following formulas:[510]

$$S_b = max\left(min\left(\sum\nolimits_{k \in b} WS_k\,, K_b\right), -K_b\right)$$

[510] Note that this definition of S_b differs from the one used in the sensitivities-based method for market risk, where the floor and the cap apply only when the quantity under the square root in the aggregation formula is negative.

$$S_c = max\left(min\left(\sum_{k \in c} WS_k, K_c\right), -K_c\right)$$

This aggregation formula differs from the one used in the sensitivities-based method for market risk. In order to compensate for a higher level of model risk in the calculation of sensitivities for the aggregate regulatory CVA arising from the CVA risk covered positions relative to that for market risk covered positions, the proposed inter-bucket aggregation formula includes a multiplication factor (m_{cva}) with a default value equal to one but would allow the primary Federal supervisor to increase the multiplier and scale up risk-based capital required for each risk class (K), if the supervisor determines that the banking organization's CVA model risk warrants such an increase.[511] The primary Federal supervisor would notify the banking organization in writing that a different value must be used.

Finally, as with the sensitivities-based method for market risk, the overall risk-based capital requirement for CVA risk would be the simple sum of the separately calculated risk-class level delta and vega capital requirements across risk classes without any recognition of any diversification benefits given that delta and vega are intended to separately capture different risks.

Question 191: To what extent are the proposed intra- and inter-bucket aggregation methodologies appropriate? What, if any, alternative methodologies should the agencies consider and why?

Question 192: What, if any, alternative methods should the agencies consider for recognizing diversification across risk classes in the calculation of the SA-CVA, and why?

[511] For example, the SA-CVA calculation does not fully account for the dependence between the banking organization's exposure to a counterparty and the counterparty's credit quality.

Question 193: To what extent is the default value of one for the multiplier appropriate or should the agencies consider a higher or lower default value for the multiplier and why?

6. Reporting and disclosure requirements

Table 1 to §__.217, "General Qualitative Disclosure Requirements Related to CVA" is a new disclosure table that would require a banking organization to disclose certain information pertaining to CVA risk, including its risk management objectives and policies for CVA risk and information related to a GSIB's CVA risk management framework, including processes implemented to identify, measure, monitor, and control CVA risks and effectiveness of CVA hedges. Table 2 to §__.217, "Qualitative Disclosures for Banks Using the SA-CVA" is a new disclosure table that would require a banking organization that has approval to use the standardized CVA approach (SA-CVA) to make disclosures related to the banking organization's risk management framework, including a description of the banking organization's risk management framework, a description of how senior management is involved in the CVA risk management framework, and an overview of the governance of the CVA risk management framework such as documentation, independent risk control unit, independent review, and independence of data acquisition from lines of business.

VI. Disclosure requirements

A. Proposed disclosure requirements

Meaningful public disclosures of a banking organization's activities and the features of its risk profile, including risk appetite, work in tandem with the regulatory and supervisory frameworks by helping to support robust market discipline. In this way, meaningful public disclosures help to support the safety and soundness of banking organizations and the financial system more broadly.

The proposal would revise certain existing qualitative disclosure requirements and introduce new and enhanced qualitative disclosure requirements related to the proposed revisions described in this **SUPPLEMENTARY INFORMATION**. The proposal would also remove most of the existing required quantitative disclosures, which would instead be included in regulatory reporting forms. Therefore, the agencies anticipate separately proposing revisions to the Consolidated Reports of Condition and Income, the Regulatory Capital Reporting for Institutions Subject to the Advanced Capital Adequacy Framework (FFIEC 101), and the Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule (FFIEC 102). The Board similarly anticipates proposing corresponding revisions to the Consolidated Financial Statements for Holding Companies (FR Y–9C), the Capital Assessments and Stress Testing (FR Y–14A and FR Y–14Q), and the Systemic Risk Report (FR Y-15) to reflect the changes to the capital rule that would be required under this proposal. The proposal would also remove disclosures related to internal ratings-based systems and internal models that are not required by the proposal.

Under the current capital rule, Category I and II banking organizations generally are subject to enhanced public disclosure in comparison to other banking organizations. Under the proposal, the enhanced public disclosure requirements would generally apply to any Category I and II banking organizations and any banking organization that opts into the expanded risk-based approach. Consistent with the current capital rule, the proposed enhanced public disclosure requirements would be required of the top tier banking organization within a consolidated organization and not other entities within the consolidated organization. Disclosure table 4 would only apply to Category I and II banking organizations. These enhanced disclosure requirements would promote transparency for market participants.

The proposal would not change the current capital rule's requirements regarding public disclosure policy and attestation, the frequency of required disclosures, the location of disclosures, or the treatment of proprietary information.

B. Specific public disclosure requirements

The proposed changes to disclosure requirements pertaining to the risk-based capital framework are described below.[512] Disclosure tables 1,[513] 2,[514] 3,[515] 4,[516] 11[517] (table 9 to § __.162 in the proposal), and 12[518] (table 10 to § __.162 in the proposal) in §__. 173 of the current capital rule would be retained without material modification, although some of the table numbers would change.

The proposal would retain the requirement that Category I and II banking organizations disclose their risk management objectives as they relate to specific risk areas (e.g., credit risk). The proposal would revise the risk areas to which these disclosure requirements apply to help ensure consistency with the broader proposal. In addition, the proposal would require a Category I or II banking organization to describe its risk management objectives as they relate to the organization overall. The required disclosures would include information regarding how each Category I and II banking organization's business model determines and interacts with the overall risk profile; how this risk profile aligns with the parameters of the risk tolerance

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[512] The table numbers refer to the table numbers included in the proposed rule.

[513] *See* Table 1 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) – Scope of Application.

[514] *See* Table 2 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) - Capital Structure.

[515] *See* Table 3 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) - Capital Adequacy.

[516] *See* Table 4 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) - Capital Conservation and Countercyclical Capital Buffers.

[517] *See* Table 11 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) - Equities Not Subject to Subpart F of This Part.

[518] *See* Table 12 to 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) - Interest Rate Risk for Non-Trading Activities.

approved by its board of directors; the banking organization's risk governance structure; channels to communicate, define, and enforce the risk culture within the banking organization; scope and features of risk measurement systems; risk information reporting; qualitative information on stress testing; and the strategies and processes to manage, hedge, and mitigate risks. These disclosures are intended to allow market participants to evaluate the adequacy of Category I and II banking organizations' approaches to risk management.

Table 5 to § __.162, "Credit Risk: General Disclosures," would include the disclosures a banking organization is required to make under the current capital rule regarding its approach to general credit risk.[519] In addition, the proposal would require Category I and II banking organizations to disclose certain additional information regarding its risk management policies and objectives for credit risk. Specifically, the proposal would require Category I and II banking organizations to enhance their existing disclosures by describing how their business model translates into the components of the banking organization's credit risk profile and how it defines credit risk management policy and sets credit limits. Additionally, Category I and II banking organizations would be required to disclose the organizational structure of their credit risk management and control function as well as interactions with other functions. Category I and II banking organizations would also be required to disclose information on their policies related to reporting of credit risk exposure and the credit risk management function that are provided to the banking organization's leadership.

Table 6 to § __.162, "General Disclosure for Counterparty Credit Risk-Related Exposures," would include the disclosures Category I and II banking organizations are required to make under the current capital rule regarding their approach to managing counterparty credit

[519] *See* Table 5 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) – Credit Risk – General Disclosures.

risk.[520] The proposal would also include new disclosure requirements regarding Category I and II banking organizations' methodology for assigning economic capital for counterparty credit risk exposures as well as their policies regarding wrong-way risk exposures. Additionally, the proposal would further require Category I and II banking organizations to disclose their risk management objectives and policies related to counterparty credit risk, including the method used to assign the operating limits defined in terms of internal capital for counterparty credit risk exposures and for CCP exposures, policies relating to guarantees and other risk mitigants and assessments concerning counterparty credit risk (including exposures to CCPs), and the increase in the amount of collateral that the banking organization would be required to provide in the event of a credit rating downgrade.

Table 7 to § __.162, "Credit Risk Mitigation," would include the disclosures Category I and II banking organizations are required to make under the current rule regarding their approach to credit risk mitigation.[521] In addition, the proposal would specify that Category I and II banking organizations must provide a meaningful breakdown of their credit derivative providers, including a breakdown by rating class or by type of counterparty (e.g., banking organizations, other financial institutions, and non-financial institutions). These disclosures would apply to eligible credit risk mitigants under the proposal,[522] although a banking organization would be encouraged to also disclose information about other mitigants. The credit risk mitigation disclosures in Table 7 to § __.162 of the proposal would not apply to synthetic securitization

[520] *See* Table 7 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC) – General Disclosure for Counterparty Credit Risk of OTC Derivative Contracts, Repo-Style Transactions, and Eligible Margin Loans.

[521] *See* Table 8 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC)– Credit Risk Mitigation.

[522] *See* section IV.A.5. of this **SUPPLEMENTARY INFORMATION** for a more detailed discussion on the types of credit risk mitigants that a banking organization would be allowed to recognize for purposes of calculating risk-based capital requirements.

exposures, which would be included in Table 8 to § __.162 as part of the banking organization's disclosures related to securitization exposures.

Table 8 to § __.162, "Securitization," would include the disclosures Category I and II bank holding companies are required to make under the current capital rule regarding their approach to securitization.[523] In addition to the existing qualitative disclosures related to securitization, the proposal would require disclosure of whether the banking organization provides implicit support to a securitization and the risk-based capital impact of such support.

Table 11 to § __.162, "Additional Disclosure Related to the Credit Quality of Assets," is a new disclosure table that would require Category I and II banking organizations to provide further information on the scope of "past due" exposures used for accounting purposes, including the differences, if any, between the banking organization's scope of exposures treated as past due for accounting purposes and those treated as past due for regulatory capital purposes.

Table 12 to § __.162, "General Qualitative Information on a Banking Organization's Operational Risk Framework," is a new disclosure table that would require a Category I and II banking organizations to disclose information regarding its operational risk management processes, including its policies, frameworks, and guidelines for operational risk management; the structure and organization of its operational risk management and control function; the systems and data used to calculate the operational risk capital requirement; the scope and context of its reporting framework on operational risk to executive management and to the board of directors; and the risk mitigation and risk transfer used in the management of operational risk. Table 13 to § __.162, "Main Features of Regulatory Capital Instruments and of Other TLAC-Eligible Instruments," is a new disclosure table that would require Category I banking

[523] *See* Table 9 to § 3.173 (OCC); § 217.173 (Board); § 324.173 (FDIC)– Securitization.

organizations to disclose information regarding the terms and features of its regulatory capital instruments and other instruments eligible for TLAC.[524] In addition, the proposal would require a Category I bank holding company to describe the main features of its regulatory capital instruments and provide disclosures of the full terms and conditions of all instruments included in regulatory capital. Category I bank holding companies would also be required to describe the main features of their covered debt positions and provide disclosures of the full terms and conditions of all covered debt positions.

Question 194: The agencies invite comment on the utility of the proposed public disclosure requirements. What additional considerations, if any, should the agencies consider with regard to the scope and granularity of the proposal's disclosure requirements? What are the advantages and disadvantages of the proposed disclosure requirements?

VII. Estimated Impact on Capital Requirements

The proposal would revise the calculation of risk-weighted assets for Category I and II banking organizations and other banking organizations choosing to adopt the expanded risk-based approach, as well as the calculation of market risk and CVA risk requirements for a small number of other banking organizations. These changes would in turn affect these banking organizations' risk-based capital requirements. The impact on required capital would depend on banking organizations' risk exposures as well as the other capital requirements to which they are subject.

The remainder of this section provides estimates of the impact of the proposal on risk-weighted assets and capital requirements, with particular focus on Category I and II banking

[524] For purposes of Table 13, unique identifiers associated with regulatory capital instruments and other instruments eligible for TLAC may include Committee on Uniform Security Identification Procedures number, Bloomberg identifier for private placement, International Securities Identification Number, or others.

organizations. Section VII.A provides the impact of this proposal relative to the current capital requirements, inclusive of applicable buffer requirements and reflecting recently finalized changes to the enhanced supplementary leverage ratio standards (recent eSLR changes).[525] To provide a broader perspective of recent capital reforms, section VII.B provides cumulative impact estimates of both recent and concurrent capital-related proposals that would affect these banking organizations. The set of proposals considered jointly includes the recent eSLR changes, the Board's GSIB surcharge proposal, and proposed changes to the Board's supervisory stress test.[526] Section VII.C attributes the impact across several broad areas of banking activity. Section VII.D describes the data and estimation methodology used in this section. Discussion of the economic impact of these changes to capital requirements is provided in section VIII.

A. *Standalone Effect of Proposed Capital Rule Changes*

Table VII.1 below presents the estimated impact of the proposal on aggregate capital requirements for Category I and II banking organizations. While banking organizations' minimum regulatory capital ratios and capital buffer requirements have distinct, complementary purposes, the estimates in this proposal represent requirements inclusive of GSIB surcharge and stress capital buffer requirements, as described below, in order to present impact as a single quantity. In addition, the standalone impact estimates of the proposal on tier 1 capital requirements reflect the recent eSLR changes. The methodology behind the estimates is described in section VII.D.

[525] *See* 90 FR 55248 (Dec. 1, 2025).

[526] *See* Federal Reserve Board Requests Comment on Proposals to Enhance the Transparency and Public Accountability of its Annual Stress Test (Oct. 24, 2025), *https://www.federalreserve.gov/newsevents/pressreleases/bcreg20251024a.htm*.

Table VII.1: Estimate of the Proposal's Impact on Aggregate Capital Requirements of Category I and II Banking Organizations (%)

	Common Equity Tier 1	Tier 1
Bank Holding Companies	+1.4%	+1.6%
Depository Institution Subsidiaries	-4.8%	-2.3%

The agencies estimate that the proposal would increase aggregate common equity tier 1 capital requirements for Category I and II bank holding companies by about 1.4 percent relative to current requirements and would increase their aggregate tier 1 capital requirements by about 1.6 percent. Across Category I and II depository institution subsidiaries, the proposal is estimated to decrease aggregate common equity tier 1 and tier 1 capital requirements by about 4.8 and 2.3 percent, respectively. The proposal would increase aggregate capital requirements for holding companies but decrease them for depository institutions because the proposal has a different impact on their aggregate risk-weighted assets, detailed below. Specifically, market risk-weighted assets, which generally increase under the proposal, and operational risk-weighted assets are relatively concentrated at the holding company level. The decrease in tier 1 capital requirements for depository institutions is limited by binding leverage requirements for several banks.

The capital impact estimates are based on balance sheets as of 2025 Q2 and GSIB surcharges that would be applicable in early 2026 under the current rule.[527] The estimates represent a simple average of the impact calculated using the stress capital buffer requirement from the 2024 stress test and the impact using the stress capital buffer requirement from the 2025

[527] These GSIB surcharges are based on the firm-specific minimum of GSIB scores from year-end 2023 and 2024 derived from FR Y-15 Systemic Risk Report data.

stress test. While the specific stress test and level of the resulting stress capital buffer requirement has little effect on the percentage impact of this proposal,[528] it can materially change the impact of other capital changes considered cumulatively with the proposal. The analysis therefore considers an average across two years to mitigate effects of a specific year on the impact estimates.

As detailed in section VII.D.5, the methodology behind these estimates abstracts from bucketing and rounding effects that are present in the capital rule and that would primarily add noise to estimates. In addition, capital requirements include amounts of assets that are subject to threshold-based capital deductions so that deducted and risk-weighted portions of such exposures are treated comparably. The cumulative effect of these methodological choices is small in aggregate.[529]

As described in section VII.D.1, the estimated changes in risk-weighted assets are extrapolated from the Federal Reserve's Basel III Endgame Special Data Collection. This data collection details exposures as of Q2 2023 under the agencies' 2023 Basel III proposal. Adjustments, as described in section VII.D.1.c, are applied to these data to reflect the current proposal, and the resulting estimates are then extrapolated to data as of Q2 2025. This extrapolation procedure, also described in section VII.D.2, accounts for changes in the composition of exposures across different areas of risk, but does not reflect changes in impact associated with changes in the composition of exposures within each of these areas. For example,

[528] For example, the increase in aggregate common equity tier 1 capital requirements is 1.5 and 1.3 percent when using stress capital buffer requirements from 2024 and 2025, respectively. However, the capital impact of the enhanced supplementary leverage ratio proposal on aggregate tier 1 capital requirements of Category I and II bank holding companies would have been a decrease of 0.4 percent and 4.2 percent using 2024 and 2025 stress capital buffer requirements respectively.

[529] If using bucketed GSIB surcharges and rounded stress capital buffer requirements, and excluding threshold deductions from requirements, the estimated change in the aggregate common equity tier 1 capital requirements of Category I and II banking organizations would be an increase of about 0.9 percent.

the extrapolated estimates reflect changes in impact due to a different growth rate of residential real estate lending and trading activities, but would not reflect changes in impact due to a shift in the LTV ratios of the real estate exposures or the composition of the risk within market risk covered positions. Thus, there may be a tradeoff whereby estimates with as of dates closer to Q2 2023 may more accurately reflect capital impact at that point in time than later estimates, but later estimates may still be more informative of impact going forward given that they account for how banking activity has shifted at a high level. Regardless, when using risk exposures and banking activity as of intermediate calendar quarters between Q2 2023 and Q2 2025, the estimated aggregate impact on common equity tier 1 capital requirements varies between an increase of 0.6 percent and an increase of 1.4 percent. Thus, changes in the broad composition of large banking organizations' balance sheets and activity over the past few years, as measured, have not materially affected the estimated impact of this proposal on capital requirements.

Importantly, all of these impact estimates are made ex-ante—before banking activity and risk exposures have adjusted to any changes in incentives that may result from the proposal.[530] As the proposal goes into effect, banking organizations might increase activities that would receive relative reductions in requirements or decrease activities that would receive relative increases in requirements, which could result in a lower ex-post level of capital requirements.

While all impact estimates in this proposal reflect aggregates across banking organizations, the impact on individual banking organizations would vary. Across the nine Category I and II bank holding companies, the standard deviation of the percentage impact on common equity tier 1 capital requirements is estimated at about 8.7 percent. In general, firm-

[530] Arguably, to the extent that some aspects of the proposal's impact might have been anticipated in advance, some of the impact of its effect on incentives may already be reflected in banking organizations' risk exposures and activity.

specific impact is well explained by variation in exposure to risk categories or engagement in business activities that face different impacts under the proposal.

While this proposal would change both the numerator and denominator of risk-based capital ratios,[531] the impact operates primarily through the denominator, risk-weighted assets. To simplify discussion of the impact of the proposal on requirements at a more granular level, the analysis focuses on changes to risk-weighted assets.

Table VII.2 provides risk-weighted assets for Category I and II bank holding companies aggregated by risk category across the current standardized approach, the advanced approaches,[532] and the proposed expanded risk-based approach. Under the proposal, the aggregate risk-weighted assets for such Category I and II banking organizations would increase by about 1.9 percent compared to the current standardized approach (which produces the binding risk-based capital requirements for nearly all of the banking organizations). Market risk-weighted assets increase by approximately 20 percent under the proposal. However, as discussed in section VII.C, the cumulative effect on the requirements applicable to trading activities of this and related capital proposals is more moderate. Meanwhile, combined risk-weighted assets for credit, operational, and CVA risks are roughly equal to general credit risk-weighted assets under the current standardized approach. For the depository institution subsidiaries of these

[531] The impact on the numerator includes the removal of capital deductions for above-threshold mortgage servicing assets. While no Category I or II banking organizations currently have any such deductions, the removal of the deduction treatment may have a significant effect on these banking organizations' incentives to originate and service mortgages, as discussed in section VIII.D.2. In addition, impact estimates account for changes to required capital ratios due to how changes in risk-weighted assets affected the stress capital buffer requirement and the short-term wholesale funding score in the current GSIB surcharge rule. Also, the proposal affects capital requirements by removing the advanced approaches requirements, which occasionally are larger than standardized requirements for some banking organizations.

[532] For purposes of sections VII and VIII, the term "advanced approaches" refers to a banking organization's total risk-weighted asset amount based on the sum of its risk-weighted assets calculated for credit, CVA, and operational risks plus, if applicable, risk-weighted assets for market risk, minus certain deductions.

organizations, risk-weighted assets would decrease by 3.0 percent relative to the standardized approach on aggregate, consistent with the relatively smaller amount of trading activity at the level of the depository institution.

Table VII.2: Category I and II Banking Organization Risk-weighted Assets Under the Proposal by Risk Category ($ billion)

	Current		Expanded risk-based approach
	Standardized approach	Advanced approaches	
Bank Holding Companies			
Credit risk	7,235	4,890	6,165
Operational risk		1,745	927
CVA		280	207
Market risk	453	453	546
Total[533]	7,673	7,362	7,820
Depository Institution Subsidiaries[534]			
Credit risk	6,173	4,015	5,168
Operational risk		1,252	637
CVA		202	132
Market risk	256	257	309
Total	6,413	5,718	6,220

1. Impact on Other Banking Organizations

In addition to the revisions to the capital requirements of Category I and II banking organizations, the proposal would introduce certain changes to the capital requirements of non-Category I or II banking organizations. Specifically, the proposed market risk capital

[533] Data in the "Total" rows of the table also reflect deductions from risk-weighted assets for excess allowances for credit losses and allocated transfer risk reserves.

[534] Includes all depository institution subsidiaries of Category I and II bank holding companies.

requirements would apply to banking organizations with significant trading activity, while no longer applying to a small number that would not meet the proposed applicability thresholds. In addition, some of the banking organizations that would remain subject to market risk capital requirements and have substantial exposure to OTC derivatives would become subject to capital requirements for CVA risk. For these non-Category I and II banking organizations that would remain subject to market risk capital requirements, the proposed market risk and CVA requirements would increase common equity tier 1 capital requirements by 0.9 percent.[535]

Furthermore, other banking organizations would have the option to apply the expanded risk-based approach. The agencies estimate that three Category III or IV holding companies would see a reduction in capital requirements in the range of three to seven percent if they were to choose to apply the expanded risk-based approach instead of the concurrently proposed revised standardized approach. In addition, the agencies estimate that about a third of banking organizations below Category IV would see reductions in capital requirements of between five and ten percent if they were to apply the expanded risk-based approach, although only a small number might see a reduction in capital requirements greater than ten percent. However, various features of the expanded risk-based approach that are appropriate for larger and more complex banking organizations, such as the requirements to adopt SA-CCR and reflect most elements of accumulated other comprehensive income in regulatory capital, may make the framework unappealing to many smaller banking organizations. Section VIII.F.2 considers further how other banking organizations' may respond to the optional application of this rule.

[535] The aggregate impact is small as the additional CVA requirements are significantly offset by estimated reductions in market risk-weighted assets for smaller banking organizations under the proposal.

Lastly, while banking organizations that remain below the Category I and II applicability thresholds would retain this optionality, those that subsequently become Category I or II banking organizations would become subject to the proposal's requirements. The different treatment of business activities under the proposal may affect the incentives of smaller banking organizations that plan to elect to use the expanded risk-based approach.

B. *Cumulative Effect of Proposed Capital Rule Changes*

Other recently finalized or proposed revisions that relate to the regulatory capital framework could also materially affect the capital requirements of Category I and II banking organizations. These include (1) the recent eSLR changes, (2) the concurrent GSIB surcharge proposal, and (3) the Board's proposed stress test changes for the Board's supervisory stress test,[536] which would inform the Board's determination of a bank holding company's stress capital buffer requirement.[537] This section estimates the impact of this Stress Test Transparency Proposal jointly with these other capital reforms. Specifically, the stress testing component of the cumulative analysis here incorporates the data published in the Stress Test Transparency Proposal, which projected impacts to stress capital buffer requirement determinations as if the proposed model changes and proposed revisions to the global market shock scenario design had been implemented in the 2024 and 2025 stress tests, independent of other factors that affect the

[536] The "proposed stress test changes" refer to the proposed model changes and revisions to the global market shock component announced in connection with the Board's proposal to enhance the transparency and public accountability of the Board's supervisory stress test. *See* Board, Enhanced Transparency and Public Accountability of the Supervisory Stress Test Models and Scenarios; Modifications to the Capital Planning and Stress Capital Buffer Requirement Rule, Enhanced Prudential Standards Rule, and Regulation LL, 90 FR 51856 (Nov. 18, 2025) (the "Stress Test Transparency Proposal").

[537] This analysis excludes consideration of the proposal to reduce the volatility of the stress capital buffer requirement, which would not have any standalone impact on the determination of a bank holding company's stress capital buffer requirement. Instead, the proposal would reduce the volatility of the stress capital buffer requirement by averaging the maximum common equity tier 1 capital declines projected in each of the Board's prior two annual supervisory stress tests to inform a bank holding company's stress capital buffer requirement. *See* Board, Modifications to the Capital Plan Rule and Stress Capital Buffer Requirement, 90 FR 16843 (Apr. 22, 2025).

determination of a banking organization's stress capital buffer requirement.[538] In addition, this section provides some historical context for the overall cumulative impact of these proposals on capital requirements.

In addition to capital requirements, the proposal's adjustments to risk-weighted assets would also affect the Board's total loss absorbing capacity (TLAC) and long-term debt requirements for U.S. GSIBs. The estimated impact of this proposal on TLAC and long-term debt requirements is described in the economic analysis section contained in the Board's separate notice of proposed rulemaking for the GSIB surcharge proposal.

1. Cumulative Impact of Recent Proposals on Capital Requirements

Table VII.3 provides estimates of the combined impact of these revisions on Category I and II bank holding companies' aggregate common equity tier 1 and tier 1 capital requirements. The rightmost column in the table presents aggregate leverage requirements for these bank holding companies as a share of aggregate tier 1 capital risk-based requirements.[539]

Table VII.3: Cumulative Impact of Proposals on Capital Requirements of Category I and II Bank Holding Companies

		Cumulative % Change in Requirements		Aggregate Leverage / Risk-Based Requirement
		Common Equity Tier 1	Tier 1	
Current Rule	Pre-Nov 2025 Rules	-	-	99.0%

[538] The estimated capital impact described in this cumulative analysis with respect to the proposed stress test changes announced in the Stress Test Transparency Proposal incorporates the underlying data published by the Board in the Stress Test Transparency Proposal, without changes to the underlying data. That proposal included illustrative analysis that considered the potential effects of the proposed stress test model and scenario changes, independent of other factors and components that inform the Board's stress capital buffer determinations for specific bank holding companies, within the 2024 and 2025 supervisory stress tests. As stated in the Stress Test Transparency Proposal, in aggregate, the proposed stress test model and scenario changes are not expected to materially change capital requirements for bank holding companies subject to the supervisory stress test, across various stress scenarios and jump-off conditions at the start of the test.

[539] As with the estimates reported earlier, the estimates in section VII.B reflect the GSIB surcharge that would be applicable in early 2026.

	+ Recent eSLR changes	-	-2.3%	76.8%
Proposals	+ This proposal	+1.4%	-0.7%	75.8%
	+ GSIB surcharge proposal	-2.4%	-3.9%	79.4%
	+ Proposed stress test changes	-4.8%	-6.0%	81.1%

The combined impact of this proposal and the GSIB surcharge proposal on GSIBs' aggregate common equity tier 1 capital requirements would be a decrease of 2.4 percent. When combined with the proposed stress test changes, the decrease would be 4.8 percent, based on the average impact across 2024 and 2025 stress tests. The aggregate combined capital impact of the proposals is close to the sum of their standalone impact, as there are limited interactions between them.

Turning to tier 1 capital, the recent eSLR changes are projected to reduce requirements for Category I and II bank holding companies by about 2.3 percent. When combined with this proposal, the GSIB surcharge proposal, and the stress testing changes, the reduction in aggregate tier 1 capital requirements is projected to be 6.0 percent. The estimated cumulative reduction of tier 1 capital requirements is only about 1.2 percentage points larger than for common equity tier 1 capital requirements (6.0 percent decrease versus 4.8 percent decrease) despite the 2.3 percent reduction due to recent eSLR changes because tier 1 leverage requirements would become binding for two of the bank holding companies.

The final column of Table VII.3 shows how binding the leverage and risk-based tier 1 capital requirements are by reporting the ratio of the aggregate leverage to risk-based requirements.[540] Before the recent eSLR changes, aggregate leverage and risk-based tier 1 capital

[540] Prior to this proposal, the denominator of this ratio is measured using the greater of advanced approaches and standardized approach requirements.

requirements were almost equal for Category I and II bank holding companies. With the recent eSLR changes, aggregate risk-based requirements would remain significantly higher than leverage requirements after accounting for the cumulative effects of the proposed changes to risk-based requirements, preserving the role of leverage as a backstop capital requirement.

Also, while these estimates reflect an average across requirements under 2024 and 2025 stress tests, the specific stress test significantly affects the impact of certain of these changes in particular. The potential impact of the proposed stress test changes are conditional on the specific stress scenario used. In addition, the level of the stress capital buffer requirement affects the relative level of risk-based and leverage capital requirements, and thus the effect of the recent eSLR changes.

While these proposals would result in a reduction relative to current capital requirements, requirements would still remain higher than they would be absent certain increases in capital requirements in recent years. To illustrate this, Figure VII.1 below plots common equity tier 1 capital requirements for Category I and II bank holding companies under two scenarios.[541] The black curve provides requirements under the then-current rules. The gray curve provides a counterfactual where past increases in capital requirements that do not clearly respond to increasing banking system risks have been neutralized. First, the counterfactual assumes that method 2 coefficients are indexed such that they grow at the same rate as method 1 scores beginning in Q4 2019. This date is chosen as the lack of indexation in method 2 becomes particularly apparent as GSIBs' balance sheets expand rapidly in response to monetary and fiscal policy actions taken in the global COVID-19 pandemic. In addition, the counterfactual replaces

[541] This plot is constructed using rounded stress capital buffer requirements and threshold deductions are not included in requirements.

the stress capital buffer requirement, which came into effect in late 2020, with an estimate of what capital requirements would have been under the previous stress testing framework.[542] The counterfactual also neutralizes the aggregate impact on risk-weighted assets of the introduction of the standardized approach for counterparty credit,[543] and reduces requirements by the estimated amount of the impact of the current expected credit losses (CECL) accounting standard on common equity tier 1 capital.[544] The gap between the two curves grows in early 2020 due to CECL, in late 2020 due to the stress capital buffer requirement, in 2022 due to SA-CCR, and gradually widens over time due to the impact of this balance sheet growth on method 2 scores. The gap is especially large in 2023 due to the impact of the stress capital buffer requirement under the 2022 stress test. The blue diamond on the plot represents requirements in Q2 2025 after the estimated cumulative reduction in requirements of 4.8 percent under the several recently

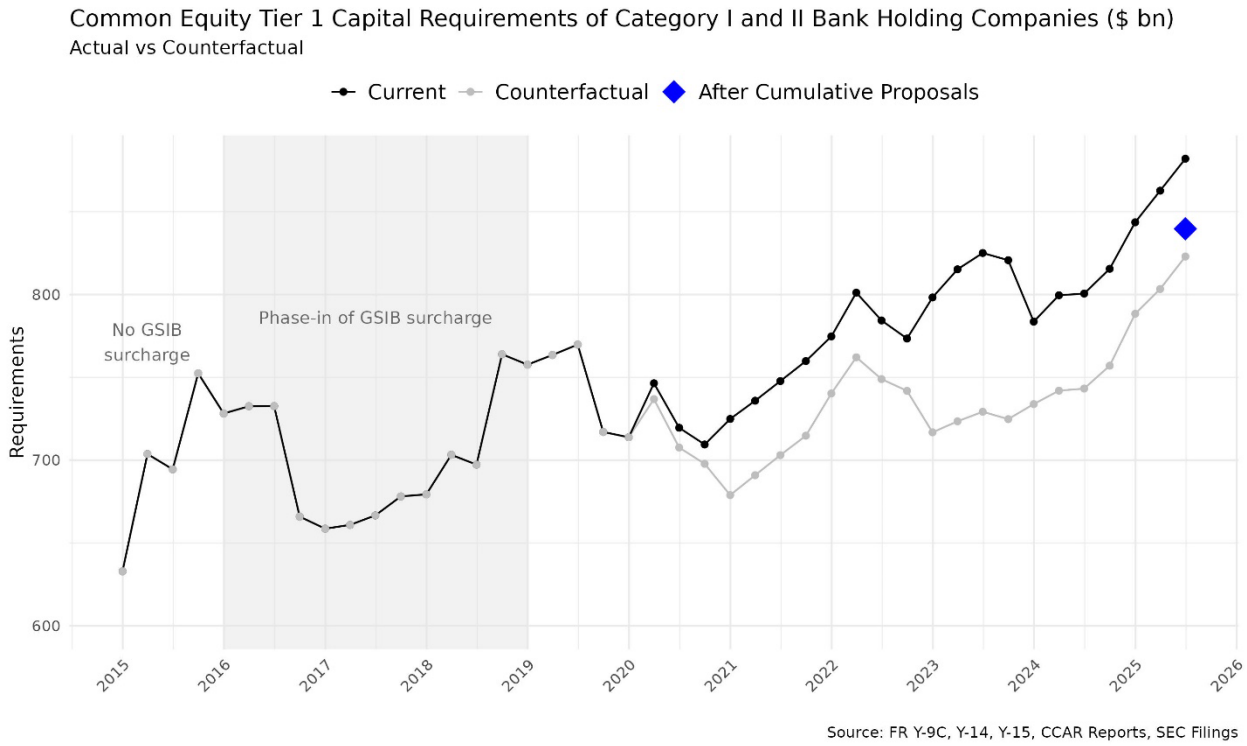
[542] Specifically, the counterfactual subtracts planned cumulative common stock dividends and net share repurchases from holding companies' stress CET1 capital over the whole 9-quarter stress period, then recalculates the maximum decline in the CET1 ratio, and sets a stress requirement equal to 4.5% plus this maximum decline of standardized risk-weighted assets. Overall CET1 capital requirements under the counterfactual equal the greater of this stress requirement or the greater of standardized and advances approaches risk-weighted assets multiplied by 7.0% plus the GSIB surcharge. The counterfactual does not account for changes in assumed stress balance sheet growth that were part of the stress capital buffer rule, but does account for the counterfactual's changes to risk-weighted assets (for SA-CCR) and allowances (for CECL). *See* Federal Reserve Board approves rule to simplify its capital rules for large banks, preserving the strong capital requirements already in place (Mar. 4, 2020), *https://www.federalreserve.gov/newsevents/pressreleases/bcreg20200304a.htm*.

[543] Based on values reported in eight of the nine banking organizations' SEC 10-Q/K filings following SA-CCR adoption (Q2 2020 for Bank of America, Q4 2021 for Goldman Sachs and Morgan Stanley, and Q1 2022 for all others), in aggregate, at adoption, SA-CCR increased risk-weighted assets associated with derivatives exposures by about 15.8 percent. Consequently, in every quarter following SA-CCR adoption, each banking organizations' risk-weighted assets for derivative exposures under the counterfactual is scaled by 1.158.

[544] The impact of additional allowances under CECL in each quarter after adoption is estimated as equal to the capital impact at adoption (January 1, 2020), multiplied by the ratio of the current balance of allowances for loans and lease losses divided by the sum of the balance of such allowances on December 31, 2019, plus the impact of CECL on allowances at adoption. Data are from the FR Y-9C, with reference codes (MDRM) as follows: capital impact at adoption (BHCKJJ26), allowance impact at adoption (BHCKJJ28), and allowances for loans and lease losses (BHCT3123).

proposed revisions.[545] In comparison, aggregate common equity tier 1 capital requirements are lower under the counterfactual.

Figure VII.1



2. Cumulative Impact of Recent Proposals on Common Equity Tier 1 Capital Requirements by Risk Type

[545] The dollar amount of common equity tier 1 requirements in this plot do not correspond with dollar requirements elsewhere in this proposal, primarily because the analysis elsewhere uses an average impact across 2024 and 2025 stress capital buffer requirements and GSIB surcharges applicable in 2026.

The analysis now turns to the cumulative impact at the more granular level, focusing on the specific types of risk measured under the proposal: credit, operational, market, and CVA. The cumulative impact on capital requirements for each risk type can differ markedly from what is implied by the proposal's standalone impact on risk-weighted assets.

As an example, capital requirements for trading activity are affected not only by risk-weighted assets for market risk but also by the overall required capital ratio, which is affected by a banking organization's stress capital buffer requirement. As a result, capital requirements for trading activities are also informed by the revenues and losses such activities generate in the Board's supervisory stress test, independent of other factors, which depend on the scenarios and models used to project outcomes.

As the minimum capital requirements is a fixed percentage point amount regardless of the composition of the banking organization's risks, it can be mapped straightforwardly to risk types based on the risks' share of risk-weighted assets. However, both the GSIB surcharge and stress capital buffer requirement reflect a banking organization's composition of risks, and thus attributing these requirements to risk types is conceptually more complex. Given that the GSIB surcharge proposal has a relatively limited impact on the composition of risks reflected by GSIB scores, this analysis makes the simplifying assignment of GSIB surcharge requirements to risks in proportion to their share of risk-weighted assets as well.

As discussed in the Stress Test Transparency proposal, the proposed stress test changes, independent of other factors, could affect the composition of risks reflected in the modeled losses.[546] Therefore, a more detailed approach to attributing the stress capital buffer requirement

[546] In aggregate, the stress test model and scenario changes are not expected to materially change capital requirements for bank holding companies subject to the supervisory stress test, across various stress scenarios and jump-off conditions at the start of the test. However, notwithstanding the limited overall effect on stressed CET1

is undertaken in this analysis. The approach first considers whether the bank holding company's stress capital buffer requirement has been consistently bound by the 2.5 percent floor. For holding companies with stress capital buffer requirements consistently set at 2.5 percent, the requirement is effectively independent of the stress losses each risk type might generate, and so the 2.5 percent buffer is attributed to risks in proportion to each risk's share of risk-weighted assets. For other holding companies, however, the hypothetical losses generated by risks are reasonably likely to affect the stress capital buffer requirement. For these remaining banking organizations, each modelled driver of the maximum decline in the common equity tier 1 capital ratio under the stress scenario is mapped to risks. Similarly, proposed stress test changes are mapped to risks.

Some of this mapping is relatively straightforward, such as mapping losses associated with provisions to credit risk, trading losses to market risk, counterparty losses to credit risk, and operational losses to operational risk. Revenue sources or other losses are mapped using blunt assumptions. Specifically, interest expenses and offsetting account fees are attributed across market and credit risk in proportion to the holding company's trading versus non-trading assets. Compensation and general noninterest expenses are attributed across risks in proportion to their estimated business-as-usual net revenues. Potential changes in capital requirements due to reconciliation of differences in accounting, tax and regulatory treatments are then allocated proportionally across each risk's contributions to the common equity tier 1 capital decline under the stress capital buffer, which is informed by the Board's stress test results. Finally, potential declines in the common equity tier 1 capital ratio associated with planned distributions are

capital ratios, there may be significant variation across the different loss drivers. For example, the proposed changes could result in less severe credit, market, and operational loss estimates. *See* 90 Federal Register 51856, 51874-51877 (Nov. 18, 2025).

attributed across risks in proportion to their share of risk-weighted assets. Further details of this attribution process are in section VII.D.

Table VII.4 below presents estimates of how common equity tier 1 capital requirements are cumulatively affected by the proposed revisions to capital requirements and the proposed stress test changes. The first two columns provide requirements under the current advanced and standardized approaches. While the standardized approach does not include measures of operational or CVA risk-weighted assets, requirements for these risks in the standardized approach column result from their contribution to the stress capital buffer requirement. The "binding" requirement is determined by which requirement is commonly binding for that bank holding company. Specifically, for all but two bank holding companies, the standardized approach requirement has been binding over at least the past five years, so their binding requirements are set equal to the standardized approach. For the other two bank holding companies, where the advanced approaches have occasionally been binding, the binding requirement reflects an average of the standardized and advanced approaches capital requirements.[547] The requirements under the combined proposals column represents risk-weighted assets measured under this proposal, GSIB surcharges computed under the corresponding GSIB surcharge proposal, and stress capital buffer requirements recalculated when applying the proposed revisions to the stress test, independent of other factors, to historical 2024 and 2025 stress testing scenarios.

[547] For these two bank holding companies, the share of requirements attributed to each risk stripe under standardized and advanced approaches is averaged, and then multiplied by the maximum of standardized and advanced approaches requirements.

Table VII.4: Common Equity Tier 1 Capital Requirements of Category I and II Bank Holding Companies By Risk - Current Rule and Combined Proposal ($bn)

	Current Rules			Combined Proposals	Change vs. Binding[548]
	Advanced Approaches	**Standardized Approach**	**Binding**		
Credit	507	690	680	612	-10.0%
Operational	180	102	113	130	14.9%
Market	47	50	49	42	-5.8%
CVA	29	16	17	34	96.0%
Total	764	858	860	818	-4.8%

Note: This table shows banking activity common equity tier 1 capital requirements for Category I and II bank holding companies under the current standardized and advanced approaches and the proposal, inclusive of the GSIB surcharge proposal and proposed stress test changes. Estimated requirements are constructed separately for 2024 and 2025 stress tests, and the reported numbers reflect the average across these two estimates. Estimates are based on an as of date of June 30, 2025. Source: Special data collection, FR Y-9C, FR Y-14, stress testing output, and agency calculations as described in section VII.D.[549]

In aggregate, common equity tier 1 capital requirements would decrease modestly – by about 5 percent – with notable differences across risk types. The binding requirement is projected to decline from $860 billion under current rules to $818 billion under the combined proposals.

[548] The changes reported reflect the simple average of the percentage change calculated separately using 2024 and 2025 stress tests, and thus differ from the change computed from the dollar amounts in the columns to the left.

[549] Statistics used in agency calculations are from the special data collection, FR Y-9C, and FR Y-14 forms as of June 30, 2025. *See* FFIEC 031 Form Statistics. For Form Y-14M, *see* Board of Governors of the Federal Reserve System, Reporting Forms: FR Y-14M (Capital Assessments and Stress Testing) (version June 2025) ("Form FR Y-14M"), *https://www.federalreserve.gov/apps/reportingforms/Report/Index/FR_Y-14M*. For FR Y-14Q, *see* Board of Governors of the Federal Reserve System, Reporting Forms: FR Y-14Q (Capital Assessments and Stress Testing) (version June 2025) ("Form FR Y-14Q"), *https://www.federalreserve.gov/apps/reportingforms/Report/Index/FR_Y-14Q*.

Credit risk capital requirements would decline by about 10.0 percent under the combined proposals. This decline occurs because the Basel III proposal would generally reduce risk weights for credit exposures, and the proposed stress test changes are not projected to meaningfully modify the capital requirements applicable to credit risk. Therefore, the combined proposals' effects on credit risk capital requirements are more directly aligned with the changes in credit risk-weighted assets implied by the expanded risk-based approach.

Operational risk capital requirements would increase because the Basel III proposal includes operational risk-weighted assets in the expanded risk-based approach. However, the proposed stress test changes would meaningfully reduce the operational risk requirements embedded in the stress capital buffer requirement in this analysis. Taking both the Basel III and the proposed stress test changes together, the requirement for operational risk would increase by about 14.9 percent. Still, operational risk requirements would be substantially lower than those that currently result from banking organizations' internal models under the advanced approaches.

Cumulative market risk capital requirements are projected to decline by approximately 5.8 percent.[550] The increase in market risk-weighted assets as a result of the Basel III proposal would be more than offset by the proposed changes to the global market shock component of the Board's stress test. The changes to the global market shock component would better align the liquidity horizons used to calibrate risk-factor shocks.

Finally, CVA capital requirements would increase substantially because CVA risk-weighted assets would be included in the single risk-based capital requirement applicable to Category I and II banking organizations. The binding common equity tier 1 capital requirement

[550] The reduction would be larger when considering the proposed changes, independent of other factors, as implemented for the 2024 stress test than under the 2025 stress test.

for CVA risk would rise about 96 percent increase. Still, CVA risk would continue to represent a small share of total risk-based capital requirements compared with credit and operational risk. Also, the share of capital requirements for CVA risk would remain similar to its share under the advanced approaches.

C. *Impact by Banking Activities*

To assess how the proposal may affect the incentives for Category I and II banking organizations to engage in different lines of business, this section analyzes the proposal's estimated impact on the risk-weighted assets associated with different banking activities. The section then turns to an analysis of the cumulative impact of the recent and concurrent capital-related proposals considered in the previous section, on the common equity tier 1 capital requirements of these banking activities.

1. Impact on Risk-Weighted Assets by Banking Activity

A single banking activity can be associated with several categories of risk-weighted assets under the expanded risk-based approach. For example, mortgage intermediation can generate credit risk-weighted assets associated with mortgages, mortgage-backed securities, and mortgage servicing assets. In addition, the interest income on the mortgages, fee income on mortgage originations or servicing, and gains on mortgage sales or securitizations would increase risk-weighted assets for operational risk through their inclusion in the business indicator. Thus, all sources of risk-weighted assets need to be considered to understand how the proposal may affect overall capital requirements—and thereby the funding costs—associated with an activity. Conversely, a single category of risk-weighted assets does not generally represent a single type of banking activity. For example, credit risk-weighted assets could represent a loan to a household to buy a car, a line of credit to a nonbank financial company, debt securities primarily

held to preserve the banking organization's liquidity, or an exposure to a corporate counterparty on a derivative contract.

To assess the impact of the proposal on different banking activities, risk-weighted assets were decomposed into three areas intended to be broadly representative of banking organizations' high-level functions: traditional lending, credit facilitation, and trading-related activity. The remaining bank exposures and activities represent banking services, such as wealth management and corporate treasury, as well as fixed assets that could not be neatly slotted into the three primary activity areas.

The largest category of banking activity is what is described here as traditional lending, which primarily serves to fund the economic activity of households and non-financial businesses. In this analysis, traditional lending includes exposures to loans, debt securities (including securitizations), and undrawn commitments. Traditional lending is further subdivided into residential mortgage lending, other retail lending, and corporate lending. Residential mortgage lending includes loans, residential mortgage-backed securities and mortgage securitization and servicing activity. Other retail lending captures all other forms of credit extension to households, such as credit cards, auto loans, installment loans, and student loans. In addition, loans to small businesses below $1 million are included in retail lending. Corporate lending consists of larger loans to non-financial sector businesses and includes both commercial and industrial loans as well as commercial real estate loans. Small business lending would fall under a mix of retail and corporate lending, based primarily on whether the amount borrowed exceeds $1 million.[551]

[551] While the banking activities of large banking organizations are less concentrated in small business lending, they remain significant providers of small business credit. As of Q2 2025, category I and II banking organizations account for about 18 percent of small business loans below $1 million, and 33 percent of small business loans below $100,000. Source: FFIEC Call Report, Line Item "Loans to Small Businesses and Small Farms." This may not capture all small business lending, as the line item only covers exposures of $1 million or less and extensions of

Large banking organizations also engage in credit facilitation beyond the direct lending activity discussed above. This activity includes providing financing to other financial sector entities. It also includes investing in Treasury securities and central bank reserves, which enable the banking organization to meet liquidity needs while engaging in less liquid traditional lending activity. It further includes products, such as guarantees or letters of credit, that facilitate business transactions by offering assurances.

In addition to providing credit, large banking organizations serve an important intermediary role through a range of activities associated with trading. Certain core trading activities generate market risk-weighted assets due to their exposure to gains and losses based on market prices or factors. Such activities include maintaining an inventory of financial instruments when a banking organization acts as a principal to the transactions. Additionally, market risk-weighted assets can result from exposures that arise as part of banking organizations' provision of derivatives or other financial products. Derivatives and other activities that facilitate clients' trading positions, such as securities financing transactions, also generate counterparty credit risk, and derivatives also generate CVA risk.

The remaining risk-weighted assets are associated with "other banking services" or are "fixed or other assets." Other banking services include wealth management and custody, advisory, insurance, and cash management services. These services would generate operational risk-weighted assets through the associated fee income, net of fee expenses, under the proposal. Fixed or other assets include owned real estate, investment in unconsolidated subsidiaries, and deferred tax assets, as well as any residual uncategorized balance sheet assets.

credit to small businesses may fall into other categories, such as real estate exposures, for purposes of the FFIEC Call Report.

While the attribution of risk-weighted assets for credit, market, and CVA risks across these activities is relatively straightforward, operational risk-weighted assets must be split across several activities that generate income. While certain activities may have a disproportionate effect on a banking organizations' GSIB scores, GSIB surcharge requirements are assigned in proportion to each activity's attributed risk-weighted assets to avoid further complexity. Details of the methodology are covered in section VII.D.

Table VII.5 provides risk-weighted assets aggregated by banking activity across the current standardized approach and under the proposal. In most cases, capital requirements under the standardized approach exceed those under the advanced approaches, so this analysis is simplified by considering only the standardized approach here. Table VII.6 further below provides the breakdown of risk-weighted assets of each banking activity under the proposal across the several risk categories.

Despite the explicit measure of operational risk when compared to the current standardized approach, the proposal would generally reduce the risk-weighted assets associated with traditional lending activity. Risk-weighted assets would decrease by 10 percent for residential real estate due to a roughly 21 percent reduction in credit risk-weighted assets on residential mortgages, which is only partly offset by operational risk-weighted assets. Similarly, risk-weighted assets decrease by a significant 18 percent for corporate lending. Risk-weighted assets increase by 9 percent for retail lending due to a smaller 9 percent decrease in credit risk-weighted assets related to the risk-weighting of unconditionally cancelable commitments and comparatively larger operational risk requirements associated with the higher interest margins on most retail lending. Risk-weighted assets associated with credit facilitation would decrease by about 10 percent.

Risk-weighted assets associated with trading-related activity would increase by 31 percent. While more than half of these risk-weighted assets come from counterparty credit risk on derivatives and securities financing transactions, the increase is driven by increases in market risk-weighted assets and operational risk associated with the significant revenue generated by trading-related activity.

While the share of Category I and II banking organizations' risk-weighted assets resulting from trading-related activities would increase, traditional lending activity would still account for the largest share of their risk-weighted assets under the proposal. Specifically, traditional lending activity would account for 44 percent of risk-weighted assets of Category I and II banking organizations under the proposal, a decrease from 50 percent under the current standardized approach. In contrast, the percentage of Category I and II banking organizations' total risk-weighted assets arising from trading-related activities would increase from 23 percent under the standardized approach to 29 percent under the proposal.

Other banking services, which consist primarily of investment management, merchant banking, advisory services and corporate treasury, generate operational risk-weighted assets under the proposal due to their income. Income associated with these banking activities accounts for about 27 percent of Category I and II banking organizations' noninterest income. Consequently, while this analysis does not assign assets to such activities that would generate risk-weighted assets under the standardized approach, they would account for approximately 1.8 percent of risk-weighted assets under the proposal.

Table VII.5: Banking Activity Risk-Weighted Assets Under the Current Standardized Approach and the Proposal

	Standardized Approach ($bn)	Expanded Risk-Based Approach ($bn)	Change vs. Standardized
Traditional Lending	3,863	3,488	-9.7%
Corporate	1,964	1,604	-18.3%
Retail	946	1,029	8.8%
Res. Real Estate	953	855	-10.3%
Credit Facilitation	1,598	1,433	-10.3%
Trading-Related Activities	1,748	2,289	30.9%
Other Banking Services	0	144	N/A
Fixed or Other Assets	463	466	0.5%
Total	7,673	7,820	1.9%

Note: This table shows banking activity risk-weighted assets under the current capital rule and proposal for 9 banking organizations subject to Category I and II capital standards. Risk-weighted assets are as of June 30, 2025.
Source: Special data collection, FR Y-9C, FR Y-14, and agency calculations as described in section VII.D.[552]

[552] Statistics used in agency calculations are from the special data collection, FR Y-9C, and FR Y-14 forms as of June 30, 2025. *See* FFIEC 031 Form Statistics. For Form Y-14M, *see* Board of Governors of the Federal Reserve System, Reporting Forms: FR Y-14M (Capital Assessments and Stress Testing) (version June 2025) ("Form FR Y-14M"), *https://www.federalreserve.gov/apps/reportingforms/Report/Index/FR_Y-14M*. For FR Y-14Q, *see* Board of Governors of the Federal Reserve System, Reporting Forms: FR Y-14Q (Capital Assessments and Stress Testing) (version June 2025) ("Form FR Y-14Q"), *https://www.federalreserve.gov/apps/reportingforms/Report/Index/FR_Y-14Q*.

Table VII.6: Banking Activity Risk-Weighted Assets ($ bn) by Risk Type under the Proposal

	Credit	Operational	Market	CVA	Total[553]
Traditional Lending	3,134	366	0	0	3,488
Corporate	1,523	86	0	0	1,604
Retail	860	173	0	0	1,029
Res. Real Estate	751	106	0	0	855
Credit Facilitation	1,278	160	0	0	1,433
Trading-Related Activities	1,286	257	546	207	2,289
Other Banking Services	0	144	0	0	144
Fixed or Other Assets	467	0	0	0	466
Total	6,165	927	546	207	7,820

Source: Special data collection, FR Y-9C, FR Y-14Q, and agency calculations as described in section VII.D.[554]

2. Cumulative Impact of Recent Proposals on Common Equity Tier 1 Capital Requirements by Banking Activity

The final analysis in this section attributes common equity tier 1 capital requirements to business activities. Due to the challenges of attributing many sources of stress loss to a specific banking activity, this analysis assigns the stress capital buffer requirements associated with each risk type in proportion to each activities' share of the risk type within the proposal's risk-weighted assets calculation. For example, if corporate lending accounts for 15 percent of credit

[553] Includes risk-weighted asset deductions—allocated proportionally to pre-deduction risk-weighted assets.

[554] Statistics used in agency calculations are from the special data collection, FR Y9-C, and FR Y-14Q forms as of June 30, 2025. For FR Y9-C, *see* June 2025 Form Statistics. For FR Y-14Q, *see* Board of Governors of the Federal Reserve System, Reporting Forms: FR Y-14Q (Capital Assessments and Stress Testing) (version June 2025) ("Form FR Y-14Q"), *https://www.federalreserve.gov/apps/reportingforms/Report/Index/FR_Y-14Q*.

risk-weighted assets at a bank, 15 percent of the portion of the banks' stress capital buffer requirement attributed to credit risk would be further attributed to corporate lending.

Table VII.7 presents the cumulative impact of the proposals and proposed stress test changes on requirements by banking activity. The cumulative impact on requirements for traditional lending and credit facilitation roughly track the risk-weighted asset changes. However, the 9 percent increase in common equity tier 1 capital requirements for trading-related activities is significantly smaller than the 31 percent risk-weighted asset impact. This difference is primarily driven by the proposed stress test changes, which would significantly reduce projected market risk losses (particularly in the 2024 stress test) and projected operational losses (which are attributed in significant part to trading-related activity) in this analysis. At the same time, the increase in requirements for trading-related activities is significantly larger than the 6 percent decrease in requirements for market risk,[555] which falls within the broader category of trading-related activities. This follows, as trading-related activities include significant operational risk and CVA requirements, which increase relative to current rules, notwithstanding the proposed stress test changes.

Further discussion of the economic implications of this proposal in combination with other recent capital rulemakings is found in section VIII.

Table VII.7: Banking Activity Common Equity Tier 1 Capital Requirements for Category I and II Banking Organizations Under the Current Standardized Approach and the Combined Proposals

	Standardized Approach ($bn)	**Combined Proposals ($bn)**	**Change vs. Standardized**

[555] See section VII.B.2.

Traditional Lending	402	360	-10.6%
Credit Facilitation	171	151	-11.8%
Trading-Related Activities	224	242	9.2%
Other Banking Services	14	18	33.5%
Fixed or Other Assets	47	47	-0.3%
Total	858	818	-4.6%

Note: This table shows banking activity common equity tier 1 capital requirements under the current capital rule and combined proposals (current proposal, GSIB surcharge, and proposed stress test changes) for 9 banking organizations subject to Category I and II capital standards. Risk-weighted assets are as of June 30, 2025. Source: Special data collection, FR Y-9C, FR Y-14, and agency calculations as described in section VII.D.[556]

D. *Data and Estimation Methodology*

This section describes the data and methodology used to estimate the impact of this proposal on banking organizations' risk-weighted assets and capital requirements. Section VII.D.1 describes the "special data collection" used as a starting point for the risk-weighted asset impact estimates for holding companies, and the adjustments made to these data to reflect the current proposal. Section VII.D.2 describes how these estimates of risk-weighted assets are extrapolated to more recent time periods and depository institution subsidiaries. Section VII.D.3 describes how risk-weighted assets are attributed across banking activities under the current standardized approach as well as under the proposal. Section VII.D.4 describes how impacts on capital requirements are constructed from the estimated total risk-weighted assets. Section

[556] Statistics used in agency calculations are from the special data collection, FR Y-9C, and FR Y-14 forms as of June 30, 2025. *See* FFIEC 031 Form Statistics. For Form Y-14M, *see* Board of Governors of the Federal Reserve System, Reporting Forms: FR Y-14M (Capital Assessments and Stress Testing) (version June 2025) ("Form FR Y-14M"), *https://www.federalreserve.gov/apps/reportingforms/Report/Index/FR_Y-14M*. For FR Y-14Q, *see* Board of Governors of the Federal Reserve System, Reporting Forms: FR Y-14Q (Capital Assessments and Stress Testing) (version June 2025) ("Form FR Y-14Q"), *https://www.federalreserve.gov/apps/reportingforms/Report/Index/FR_Y-14Q*.

VII.D.5 describes how stress capital buffer capital requirements, as informed by the Board's supervisory stress test, are attributed to risk types within the cumulative capital impact analysis.

Question 195: The agencies request comment on all aspects of the impact analysis in this proposal, including the estimation of risk-weighted assets and capital requirements, the attribution of risk-weighted assets to banking activities and the attribution of stress capital buffer requirements to risk categories. What changes or alternative methodologies, if any, should the agencies consider, and why? What additional analysis or data should the agencies consider, and why? Commenters are encouraged to provide any additional data that would be relevant.

1. Estimation of risk-weighted assets under the proposed expanded risk-based approach

a. Special data collection

In late 2023, the Board collected data on risk-weighted assets from 32 large bank holding companies based on the specific requirements contained in a July 27, 2023, capital proposal.[557] The data in this voluntary collection reflected respondents' exposures as of June 30, 2023.[558] The differences between the current proposal and the proposal on which the special data collection was intended to inform are broad and material. However, the definitions of risk exposures under the current proposal is still significantly better aligned with the special data collection than alternative sources, making the special data collection the most suitable starting point for much of the impact analysis.[559]

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[557] *See https://www.federalreserve.gov/newsevents/pressreleases/bcreg20231020b.htm.*

[558] One banking organization submitted data as of the third quarter of 2023, instead of as of June 30, 2023. The data provided by this banking organization was not used for the analysis described in this proposal. This banking organization would not be subject to the current proposal.

[559] The Board is releasing an aggregated form of the special data collection in order to preserve the confidentiality of the responses provided by individual banking organizations while also providing additional information to the

The special data collection includes data from all nine Category I and II bank holding companies, as well as most of the additional bank holding companies that are expected to be subject to the proposed market risk capital requirements, and these data were substantially complete.[560] In addition, the special data collection includes estimates of market risk and CVA covering most of the additional bank holding companies that would be subject to market risk and CVA. However, the collection did require some limited imputation of data points to address inconsistencies, as discussed below in section VII.D.1.ii. In addition, significant adjustments were made to reflect differences between the current proposal and the 2023 proposal. These adjustments, detailed below in section VII.D.1.iii, were informed by a combination of FR Y-14 data and industry comment letters received in response to the 2023 proposal. For comparison with the current capital rule, the analysis also relied on regulatory financial reports (FFIEC Call Reports, FR Y-9C, FR Y-15, FFIEC 101, and FFIEC 102), supplemented with data on stress capital buffer requirements.[561]

A few important caveats remain for impact estimates included in this section. Although the agencies and participating banking organizations have corrected known erroneous data

public. The aggregated form of the special data collection will be available on the Board's website, see: *https://www.federalreserve.gov/supervisionreg/basel/basel-default.htm*.

[560] Specifically, banking holding companies with complete market risk estimates in the special data collection represent over 96 percent of the Q2 2025 trading assets plus liabilities of all bank holding companies expected to be subject to market risk capital requirements.

[561] Reporting forms issued by the Federal Financial Institutions Examination Council (FFIEC) are available at www.ffiec.gov and reporting forms issued by the Federal Reserve Board are available at www.federalreserve.gov. The "Call Report" collectively refers to the data from the FFIEC 031, 041, and 051 forms. Specifically, *see* FFIEC 031 Form Statistics and FFIEC 041 Form Statistics. For FFIEC 051 ("FFIEC 051 Form Statistics"), *see* FFIEC, Reporting Forms, Consolidated Reports of Condition and Income for a Bank with Domestic Offices Only and Total Assets Less than $5 Billion: FFIEC 051 (version June 2023). Bulk data download available at: *https://cdr.ffiec.gov/public/PWS/DownloadBulkData.aspx*. Certain financial reports filed by banking organizations, including portions of the FFIEC 101 and FFIEC 102 reports, as well as FR Y-14 reports, are not available publicly because they contain confidential supervisory information and are confidential business information of the reporting banking organizations. Where the agencies relied on confidential information collected through these reports for estimates in this **SUPPLEMENTAL INFORMATION**, the agencies have described in detail what confidential data were used and how they were used.

submissions through extensive dialogue and resubmissions from reporting banking organizations, some data quality issues could remain. In addition, the adjustments detailed in section VII.D.1.iii in many cases are only approximations and may not account for all material differences between the current proposal and the 2023 proposal upon which the special data collection was based. Also, the impact estimates do not reflect potential longer-term changes in banking organizations' behavior or changes in market conditions that may occur after implementation of the proposal. Section VIII includes discussion of the economic implications of the capital impact of the proposal on different banking activities and under different economic conditions.

b. Data imputations

The imputations fall into two categories: *recalculations* and *proxies*. *Recalculations* are applied to adjust certain firm-wide totals based on subcomponent data where a banking organization did not report such total values or because inconsistencies were identified in a banking organization's calculations based on its subcomponent data. *Proxies* are extrapolations of missing data from one banking organization based on submissions of similar banking organizations. Proxies were only applied in cases where subcomponent data that could enable a recalculation were also not provided.

There are three areas that required recalculations:

(1) *CVA risk-weighted assets*, where one GSIB submitted data using an incorrect formula that was included in an early version of the data submission instruction, before the Board issued an update to correct the error in submission instructions. In this case, the Board used the correct formula to recalculate CVA risk-weighted assets.

(2) *Operational risk-weighted assets*, where some banking organizations' total operational risk-weighted assets were calculated in a manner inconsistent with the formula published in the proposal. In these cases, the agencies recalculated total operational risk-weighted assets from their subcomponents by applying the formula in the proposal, which had a material effect for one GSIB.

(3) *Internal models approach market risk-weighted assets*, where some banking organizations provided internal models approach values for one or more trading desks but did not follow the formula for calculating the entity-wide market risk capital requirement using these values. In these cases, the agencies assumed that these trading desks are model-eligible and applied the proposed formula to recalculate market risk weighted assets, which caps the banking organization's entity-wide internal models-based market risk-weighted assets.[562]

These recalculations carry through to firm-wide calculations. For example, the agencies recalculated total risk-weighted assets to reflect recalculated operational or market risk-weighted assets where appropriate.

Proxies were applied where a banking organization's submission for market risk-weighted assets was missing or equal to zero, and the banking organization's regulatory reports suggested that it would likely be subject to market risk under the proposal. For these few holding companies, market risk-weighted assets under the proposal were proxied by market risk-weighted assets under the current rule, multiplied by (one plus) the median percentage change in market risk-weighted assets under the proposal across peer holding companies in the data collection. These peer groups were constructed as (i) Category I and II holding companies, (ii)

[562] Estimates of the impact of the proposal cap the banking organization's entity-wide internal models-based market risk capital requirement at the capital requirement under the standardized approach.

Category III and IV domestic holding companies, and (iii) Category III and IV foreign holding companies. As with recalculated values, the proxied value was carried through to the calculation of total risk-weighted assets.

c. Data adjustments to reflect current proposal

The special data collection measures risk-weighted assets under the 2023 proposal, necessitating adjustments to reflect the impact of this proposal. Where possible, the special data collection is used to estimate these adjustments to risk-weighted assets. However, in some cases, a sufficiently accurate estimate requires additional regulatory data or industry estimates. The discussion below details how the estimates used in this proposal were constructed.[563]

The current proposal would apply the Basel III risk weights for residential real estate exposures, removing 20 percentage points from the set of risk weights proposed in 2023. To reflect this, risk-weighted assets were adjusted by an amount equal to 20 percent of the estimated residential real estate exposure in the special data collection. In calculating real estate exposure, on-balance sheet residential real estate exposures are taken as those reported as regulatory residential real estate under risk weights that correspond to such exposures under the 2023 proposal.[564] Because there is no specific item for off-balance sheet residential real estate exposures in the special data collection, these are estimated as the amount of home equity loan commitments in the FR Y-9C under the assumption that these are all unconditionally cancelable exposures with a 10 percent credit conversion factor under the proposal.[565]

[563] The estimated risk-weighted assets do not include adjustments for details of the current proposal not reflected in the 2023 special data collection where the impact is both expected to be immaterial and difficult to reliably estimate.

[564] Special data collection item 6.e under 40, 45, 50, 60, 70, or 90 percent risk weights and item 6.f under 50, 55, 65, 80, 95, and 125 percent risk weights.

[565] FR Y-9C, Schedule HC-L item 1.a.

Similarly, the current proposal would reduce retail risk weights by 10 percentage points relative to the 2023 proposal. The impact of this modification is calculated similarly to the residential real estate modification, with the applicable on- and off-balance sheet retail exposure estimated using special data collection exposures reported under 55, 85, or 110 percent risk weights in the items corresponding to retail and unconditionally cancelable commitments, respectively.

The scope of applicability of the 65 percent risk weight for investment grade corporate exposures has expanded significantly relative to the 2023 proposal. Data from the special data collection are used to estimate the impact of this change. Specifically, for each banking organization, memo items M.6 and M.10 are used as estimates of the amount of additional investment grade corporate exposure to which the 65 percent risk weight would apply.[566] Across Category I and II banking organizations, an estimated 53 percent of balance sheet corporate exposure and 60 percent of off-balance sheet corporate exposure is classified as investment-grade and risk-weighted at 65 percent under the proposal, including the exposure already risk-weighted at 65 percent under the 2023 proposal. The bank-specific difference between this amount and the amount of corporate exposure risk-weighted at 65 percent under the 2023 proposal is multiplied by the negative 35-percentage-point change in risk weight to obtain the estimated adjustment to risk-weighted assets.

[566] One banking organization's entry on memo item 10 is divided by 1000 due to a likely unit error. In addition, in each of memo items 6 and 10, there is one entry that is likely incorrect (i.e. zero or amounts exceeding total corporate exposure risk-weighted at 100 percent), and treated as missing. The missing values for the (on/off-balance sheet) investment-grade corporate exposures risk weighted at 100 percent are imputed by multiplying (on/off-balance sheet) corporate exposures risk-weighted at 100 percent (item 8) by the aggregate investment grade share of (on/off-balance sheet) corporate exposures, based on those banking organizations in the special data collection where the investment grade 100 percent risk weighted memo item is reported.

The treatment of equity exposures in the banking book differs significantly under this proposal versus the special data collection. As this proposal retains the current treatment of banking book equity exposures, their risk-weighted assets under the current simple risk-weight method are used as the starting point for their estimated risk-weighted assets under the proposal.[567] However, a downward adjustment is applied to this amount to account for publicly traded equity exposures that are scoped into market risk under this proposal. This adjustment was estimated using memo item 2 of the "Equity exposures" template of the special data collection. For the few banking organizations that did not provide data for this memo item, the share of equity exposure migrating to the trading book is imputed as the aggregate share of such exposure across the special data collection banking organizations that did provide these data.[568] In calculating risk-weighted assets, it is assumed that the migrating equity exposures would have otherwise received the 100 percent risk weight applicable to "non-significant" equity exposures.

Risk-weighted assets in the special data collection are also adjusted to reflect removal of the minimum haircut floor. As the special data collection does not provide the calculation of a standalone impact of the minimum haircut floor in the 2023 proposal on risk-weighted assets, the impact of removing the haircut floor is estimated by calculating the difference between the current standardized approach and the expanded risk-based approach for exposures that would fail the minimum haircut floor requirement.[569]

The adjustments to operational risk-weighted assets in the special data collection are constructed in two stages. First, risk-weighted assets for operational risk are recalculated using

[567] Specifically, risk-weighted assets are taken as the amount reported in Schedule B of the FFIEC 101, item 23, column G.

[568] The estimate of the aggregate share of equity exposures migrating out of the equity framework is 3.79 percent.

[569] Specifically, this difference is the sum of items 1 through 4 and 11 through 14 of column M minus the sum of those same items in column K within the "transacts fail hairct flrs" sheet of the special data collection.

an internal loss multiplier equal to one for all banking organizations. Risk-weighted assets for operational risk are then recomputed using the business indicator as defined in the proposal, replacing the financial and services components with a noninterest component that also downscales net income from investment management, investment services, and treasury services.[570] This noninterest component is computed primarily from the special data collection "Operational risk" sheet as the three-year average of the absolute value of net noninterest income before operational losses (Part 2, sum of 2.a, 2.c, 3.a and 3.b, plus Part 1, item 1, minus the sum of 2.b and 2.d), accounting for a scaling of net noninterest income associated with investment management, and investment and treasury services, plus the three-year average operational losses (Part 1, item 1). To account for the scaling of net noninterest income from historically lower operational risk activities, the three-year average absolute value of net noninterest income is scaled by a factor that accounts for the scaling of net income associated with investment management and investment and treasury services in the proposal.[571] Due to data limitations, this factor is based on these activities share of total, not net, noninterest income.

The agencies used information from the special data collection to recalculate market risk-weighted assets under the proposal.[572] The main changes from the 2023 proposal were to: (1) recognize full diversification for certain non-modellable risk factors, (2) recognize

[570] The proposal would not downscale all treasury services (as defined in the FR Y-14Q report), but rather only certain treasury services (see Section IV.D.1 of this Supplemental Information). However, data on the relevant subset of treasury services is not available to the agencies. This discrepancy implies that the aggregate impact of the proposal would be slightly smaller than estimated. If none of treasury services income were subject to the scaling factor, the impact of the proposal on aggregate common equity tier 1 capital requirements would only be about 0.3 percent higher.

[571] Specifically, the scaling factor equals one minus the ratio of 70 percent of three-year average of the sum of investment management, investment services, and treasury services noninterest income divided by three-year average total noninterest income. Investment management, investment services, treasury services, and total noninterest income are items 19, 20, 21, and 26 of FR Y-14Q Schedule G.

[572] Due to nonlinearities in market risk formulas, firm-level data are required to construct these estimates.

diversification between positions modeled under the standardized approach and the internal models approach, (3) use a single default risk calculation for all trading desks rather than separate default risk calculations for modeled and non-modeled desks, (4) cap the amount of capital required under the internal models approach at the amount required by the standardized approach for market risk in certain circumstances, (5) remove the Spearman Correlation profit and loss attribution test for internally modelled desks, and (6) clarify netting for Uniform Mortgage-Backed Securities.[573] In addition to the changes noted above, the estimated impact of the proposal includes an estimated impact on risk-weighted assets from a reduction in the scope of application of the market risk framework of the capital rule. Due to limited data on which to base the corresponding impact estimate for scope, it is assumed that the credit risk-weighted assets of these currently market risk-weighted exposures would equal the current market risk-weighted assets of these exposures.[574]

Most market risk impact estimates are obtained by applying formulas in the regulation. To calculate the impact of removing the Spearman Correlation test, the agencies assume a 20 percentage point increase in the share of modeled capital requirements and also assume that shifting positions from the standardized approach to internal models reduces capital requirements by 50 percent.[575]

[573] The analysis assumes that banking organizations receive supervisory approval to cap the amount of capital required under the internal models approach at the amount of capital required for all trading desks under the standardized approach. For more information on this process, *see* section V.A.3.b.

[574] This conservative assumption results in the small increase in risk-weighted assets noted in section VII.A.1, as the proposed market risk rule would otherwise result in an overall decrease in market risk-weighted assets for these banking organizations.

[575] The 50 percent impact is derived from an analysis of the ratio of modelled capital requirements compared to standardized approach capital requirements for the same portfolio using information from the special data collection.

Additionally, due to data limitations, to reflect the impacts of clarifying netting for Uniform Mortgage-Backed Securities, an estimate from the joint comment letter from the International Swaps and Derivatives Association and Securities Industry and Financial Markets Association was used. This letter estimates an approximately nine percent reduction in capital requirements for market risk positions capitalized under the standardized approach across eight GSIBs.[576] These impact estimates apply the nine percent reduction in standardized approach capital requirements across all banking organizations.

Due to data limitations, to reflect the exemption of client-facing derivative transactions from CVA risk, an estimate from the joint comment letter from the International Swaps and Derivatives Association and Securities Industry and Financial Markets Association was used. This letter estimates that such a change would reduce proposed CVA risk-weighted assets relative to the 2023 proposal by about 9 percent in aggregate.[577] This 9 percent impact was applied to each bank's CVA risk-weighted assets.

Lastly, to reflect a change in the securitization p-factor under the proposal, the agencies use estimates of securitization risk-weighted assets under a p-factor of 0.5 (memo item 1 in the "Securitization exposures" sheet of the data collection). This estimate was completed by all holding companies that would be subject to this proposal.

2. Extrapolation of estimates to other time periods and banking organizations

[576] The nine percent figure is imputed from the comment letter. Page 23 includes a figure indicating a $70.3 billion reduction in risk-weighted assets from the "GSE" change on a base of $801.7 billion in risk-weighted assets under the standardized approach. $70.3 billion is approximately nine percent of $801.7 billion. See Comment Letter from International Swaps and Derivatives Association and the Securities Industry and Financial Markets Association, (Jan. 16, 2024), *https://www.federalreserve.gov/SECRS/2024/February/20240220/R-1813/R-1813_011724_156753_496678267479_1.pdf*.

[577] Comment Letter from International Swaps and Derivatives Association and the Securities Industry and Financial Markets Association, at 103 & n. 269, 160 (Jan. 16, 2024), *https://www.federalreserve.gov/SECRS/2024/February/20240220/R-1813/R-1813_011724_156753_496678267479_1.pdf*.

As it has been more than two years since the as of date of the special data collection (June 30, 2023), the analysis in this proposal adjusts risk-weighted assets to reflect more current balance sheets. The adjustment approach in this proposal is intended to capture not only general growth, but also the potential effect of broad shifts in the composition of banking organizations' balance sheets since 2023. Specifically, the analysis in this proposal decomposes risk-weighted assets into eleven exposure segments, and then establishes an index for each segment and banking organization; a measure which is assumed to change over time in proportion to the exposures' risk-weighted assets under the proposal. The risk-weighted assets for each segment under the proposal, as of Q2 2025, are then estimated as the segment's risk-weighted assets under the special data collection, adjusted for differences between the 2023 and current proposal as described above, and then multiplied by one plus the cumulative growth in the segment's index over the period Q2 2023 through Q2 2025. Total risk-weighted assets under the proposal as of Q2 2025 are then taken by summing across the segments.[578]

The analysis in this proposal takes a similar approach when estimating risk-weighted assets for the depository institution subsidiaries of holding companies present in the special data collection. Specifically, the index for each segment is measured at both the depository institution and holding company levels, and the share of risk-weighted assets at the depository institution subsidiary is estimated to be the same as the share of the corresponding index at the depository institution subsidiary.

[578] In addition, total risk-weighted assets reflect a small adjustment for an estimate of risk-weighted asset deductions as of Q2 2025—actual deductions for allocated transfer risk reserve (FR Y-9C HC-R Part II, item 30), plus an adjusted deduction for excess AACL. This adjusted excess AACL deduction is estimated as zero for holding companies reporting no excess AACL deduction in Q2 2025 (FR Y-9C HC-R Part II, item 29), and for other holding companies it is equal to this reported amount plus 1.25 percent of the difference in the credit risk-weighted assets of non-equity exposures between the proposal and the current standardized approach.

The eleven exposure segments and their corresponding indices, are described below. Given their function, the indices must exist over time at both the holding company and depository institution levels. Furthermore, the selected indices should bear a close conceptual relationship with the risk-weighted assets associated with the exposure. This improves the reliability of the estimates by ensuring that drivers of changes in the index should generally be reflected in changes to risk-weighted assets under the proposal. In most cases, the chosen index is the risk-weighted assets of the exposure segment under the standardized approach.

The eleven exposure segments include operational risk, market risk, CVA, and eight areas of credit risk exposure. The eight segments within credit risk are: residential real estate,[579] retail,[580] securitization, banking book equity, SFTs,[581] derivatives,[582] all other balance sheet exposures,[583] and all other off-balance sheet exposures.[584] For nine of the eleven exposure segments, the chosen index represents risk-weighted assets for the exposure segment under the standardized approach, or a close approximation thereof.[585] Standardized risk-weighted assets

[579] Includes all risk-weighted assets reported in items 6.a, e, and f of the special data collection "General credit risk exposures" sheet, plus 10 percent of the exposure amount reported in item 1.a of FR Y-9C HC-L (i.e. home equity line of credit risk-weighted assets when assuming a 100 percent credit risk weight and a 10 percent CCF under the proposal).

[580] Includes all risk-weighted assets reported in item 7, plus risk-weighted assets of exposures risk-weighted at 55, 85 or 110 percent in item 12 of the special data collection "General credit risk exposures" sheet.

[581] Includes all risk-weighted assets reported in items 18, 20 and 21 of the special data collection "General credit risk exposures" sheet, plus risk-weighted assets reported in items 1 through 4 and 11 through 14 of the "Transacts fail min hairct flrs" sheet.

[582] Includes all risk-weighted assets reported in items 24 and 25 of the special data collection "General credit risk exposures" sheet.

[583] Defined as all risk-weighted assets reported in part 1 of "General credit risk exposures" in the special data collection, less those amounts already included within residential real estate or retail.

[584] Defined as all risk-weighted assets reported in part 2 of "General credit risk exposures" in the special data collection, less those amounts already included within residential real estate, retail, SFT or derivatives.

[585] For these nine exposure segments, the standardized approach-based index is defined by items in regulatory reports as follows. Unless indicated otherwise, amounts represent risk-weighted assets associated with the indicated items from the FR Y-9C, HC-R Part II, with corresponding values from FFIEC Call reports used for depository institution subsidiaries. Market risk –item 27. Residential real estate – items 4.a and 5.a, amounts in columns H, I

should change similarly to risk-weighted assets under this proposal as long as there are not large changes within the exposure segment associated with the additional risk-drivers incorporated within the proposal. For example, risk-weighted assets for residential real estate should grow similarly as long as the loan-to-value composition of the portfolio does not shift significantly.

Neither operational risk or CVA risk are part of current standardized risk-weighted assets, so a different approach to indexing is required. CVA risk-weighted assets measured under the advanced approaches is used as the index for CVA.[586] Lastly, for operational risk, the agencies index the business indicator to an approximation developed from regulatory report data items. This approximation equals three-year average absolute modified revenue, where modified revenue has two parts. The first part is the minimum of net interest income and 2.25 percent of interest earning assets.[587] The second part is modified net noninterest income, defined as noninterest income plus realized gains or losses on securities, minus 70 percent of investment management noninterest income and other noninterest expenses.[588] Operational risk weighted-assets are extracted by applying the operational risk formula to the estimated Q2 2025 business indicator, which in turn equals the business indicator measured from the special collection data, indexed by growth in this approximate indicator.

3. Attribution of Risk-weighted Assets to Banking Activities

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and S. Retail – HC-C items 6.a through d (all amounts assumed risk-weighted at 100 percent). Securitization –items 9 and 10. Banking book equity – FFIEC 101, Schedule B, item 23. SFTs –item 16. Derivatives – items 20 and 21. All other off-balance sheet items – items 12 through 15, 17, and 18. All other balance sheet items – item 28, minus the amounts for the other eight standardized risk-weighted asset exposure segments.

[586] Specifically, items 31.a and b of FFIEC 101 Schedule B.

[587] Net interest income is FR Y-9C Schedule HI item 5.m and interest earning assets are approximated as the sum of Schedule HC items 1.b, 3, 4.a, and 4.b, Schedule HC-B item 8 (cols A and D), and Schedule HC-D item 12. Corresponding items from FFIEC Call reports are used for the depository institution subsidiaries.

[588] Specific FR Y-9C data used are in Schedule HI - item 5.m (noninterest income), item 6 (gains on securities sales), item 7.d (other noninterest expense). Investment management noninterest income is taken as item TPPNRS68 from the FR Y-14A.

This section provides the methodology used to attribute all risk-weighted assets under the standardized and proposed expanded risk-based approach, to the banking activities that most likely generated them. The sample includes the bank holding companies that participated in the special data collection, including all that would be subject to this proposal. The attribution of banking activity applied in this section is chosen to distinguish the several functions that large banking organizations serve in the U.S. economy. Banks may decide to expand or contract the business units that perform each of these functions based on the required capital, among other factors. These categories of banking activity are chosen to be broad enough to allow for a mapping of risk exposures between the FR Y-9C, which collects standardized risk-weighted assets, and the special data collection.

Section VII.D.3.a applies this exercise to expanded total risk-weighted assets, as reported in the special data collection and modified to reflect the proposal. Section VII.D.3.b describes how the agencies estimate the attribution of risk-weighted assets under the standardized approach to these same banking activities. The total risk-weighted assets attributed align with amounts reported within the sections VII.C and VIII.

a. Attribution of Expanded Total Risk-Weighted Assets

When estimating risk-weighted assets by banking activity, the agencies attribute all risk-weighted assets reported in the special data collection under the expanded risk-based approach as well as all adjustments (described above in section VII.D.1.c) to these figures that were made to reflect the current proposal.

Most risk-weighted asset items in the special data collection are attributed entirely to a specific banking activity. These comparatively simple attributions are described below.

Traditional lending includes all credit risk-weighted assets associated with exposures to GSEs, residential and commercial real estate, and retail exposures, as well as all securitizations.[589] Risk-weighted assets for equity exposures not subject to the market risk framework are also attributed to traditional lending as, like loans, these are typically illiquid long-term funding arrangements.[590] Within these traditional lending exposures, securitization risk-weighted assets are split evenly across the residential real estate, retail, and corporate lending categories due to data limitations. In aggregate, securitizations account for less than 3 percent of risk-weighted assets under the proposal. Exposures to GSEs and residential real estate, including statutory multifamily and "other real estate exposures," are attributed to residential real estate lending, and all other exposures except for "retail" are attributed to corporate lending.

Credit facilitation includes credit risk-weighted exposures to sovereigns, supranational entities, public-sector enterprises, and banks.[591] This banking activity also includes credit risk-weighted assets associated with letters of credit, guarantees, contingent items, and forward agreements.[592]

Trading-related activities include all market risk-weighted assets, as well as credit risk-weighted assets associated with derivatives, repo-style transactions, and exposures to unsettled

[589] These exposures correspond to items 3, 6 and 7 of "general credit risk exposures" plus item 1.c of "overview" of the special data collection template.

[590] These exposures correspond to item 2 of part 1 of the "overview" sheet of the special data collection template, modified to reflect the current treatment of banking book equity exposures.

[591] Within the special data collection template, these correspond to items 1, 2, 4 and 5 of "general credit risk exposures."

[592] Within the special data collection template, these correspond to items 14 through 17, 19, 22 and 23 of "general credit risk exposures."

transactions.[593] In addition, CVA risk and default fund contributions accompany the derivative exposures.[594]

Fixed or other assets include credit risk-weighted assets associated with insurance and other exposures, except for mortgage servicing assets which are included in residential real estate lending.[595] This segment also incorporates exposures that were deducted from common equity tier 1 capital under the 2023 proposal, and therefore not present in risk-weighted assets, but risk-weighted at 250 percent under this proposal.[596]

The remaining risk-weighted assets under the proposal are split across several banking activities. These include credit risk associated with commitments and corporate exposures, as well as operational risk and deductions from risk-weighted assets for excess allowances or allocated transfer risk reserves.

Credit risk-weighted assets associated with corporate exposures are attributed to either traditional lending or credit facilitation based on whether the borrower is a financial firm.[597] This is determined from the proportion of such exposures to non-financial firms based on the FR Y-14Q Schedule H.1 data.[598] The adjustment to risk-weighted assets that is made to account for the

[593] Within the special data collection template, market risk-weighted assets correspond to item 4 in part 1 of "overview" and the credit risk items correspond to item 1.b of overview and items 18, 20, 21, 24, 25 and 27 of "general credit risk exposures."

[594] In the special data collection, default fund contributions are item 26 of "general credit risk exposures" and CVA risk-weighted assets are item 5 on part 1 of the "overview" sheet.

[595] Within the special data collection template, these correspond to items 9 and 10 of "general credit risk exposures."

[596] These exposures are mostly deferred tax assets, and thus would be reported as other assets on the balance sheet if not deducted.

[597] The small amount of corporate exposures not reported under either a 65 percent or 100 percent risk weight in the special data collection (item 8) are attributed to lending and credit facilitation. The small amount of corporate risk-weighted assets not reported under a specific risk weight are attributed to banking activities pro rata with all other corporate exposures across the entire sample.

[598] Specifically, starting from all drawn exposure in the H.1 (commercial and industrial loan data) that are reported in items 1.e.1, 3, 4, 9.a, 9.b.2 and 10.b of the FR Y-9C and have known NAICS codes, the fraction to borrowers in NAICS starting 52 or 53 is attributed to credit facilitation with the remainder to corporate lending. The average share across other banking organizations is used where NAICS are not reported for the banking organization.

broader applicability of the 65 percent investment grade corporate risk weight under the proposal, as compared to the 2023 proposal, is similarly split across traditional lending and credit facilitation based on the proportion of non-public investment grade corporate exposures that are indicated as exposures to highly regulated industries in the special data collection.

Commitments could represent exposures to counterparties that are corporate, retail, banks, or sovereigns.[599] The likely type of counterparty is indicated by the risk weight assigned to the commitment exposure. Therefore, within each risk weight, commitments are allocated to banking activities based on the activity's share of balance sheet exposure assigned that risk weight.[600]

Under the proposal, the operational risk-weighted assets of each banking organization are attributed to banking activities based on their contribution to the banking organization's business indicator. The business indicator is comprised of an interest, lease, and dividend component and a noninterest component. Operational risk-weighted assets are attributed to these two components in proportion to their share of the business indicator. The operational risk-weighted assets attributed to each of these components are further attributed to the banking activities as discussed below.

The interest, lease, and dividend component is proportional to the banking organization's net interest income until it hits a cap equal to 2.25 percent of average interest-earning assets. Thus, each banking activity's share of the net interest component equals either the activity's share of net interest income if the banking organization is below the cap or the activity's share of

[599] Commitments represent items 12 and 13 in the "general credit risk exposures" sheet of the special data collection template.

[600] Balance sheet exposures are those reported in Part 1 of "general credit risk exposures" in the special data collection.

interest-earning assets if the banking organization is above the cap. As many banking organizations are currently near the cap, the agencies first estimate for each banking organization the probability that it will be subject to the cap in the long run. This estimate is equal to the fraction of the previous ten years (2015 through 2025) in which the banking organization had a net interest margin exceeding 2.25 percent.[601] Then, a weight equal to the probability of having net interest margin above the cap is applied to the segment's share of interest-earning assets, while a weight equal to the probability of having net interest margin below the cap is applied to the segment's share of net interest income. To calculate each segment's share of net interest income and interest-earning assets, the agencies rely on data from the FR Y-14Q Schedule G and special data collection.[602]

While the noninterest income component includes historical operational losses, these are excluded from the attribution of the component across business segments.[603] Furthermore, due to data limitations and the difficulty of allocating noninterest expenses, the agencies use each segment's share of noninterest income as a proxy for its share of net noninterest income. Noninterest income is taken from the FR Y-14Q Schedule G. Traditional lending is associated with noninterest income from retail and small business banking and corporate lending (items 14 and 15). Credit facilitation accounts for noninterest income associated with syndicated lending

[601] The average probability of having a net interest margin over 2.25 percent equals about 61 percent for the four GSIB universal bank holding companies and is zero for the other five Category I and II bank holding companies.

[602] Net interest income in the FR Y-14Q Schedule G is attributed to segments as follows: traditional lending - retail and small business banking (except deposits) and commercial lending.(items 1 and 2, except 1E); trading – sales and trading and investment services (items 5 and 7); credit facilitation - investment banking (item 3); other banking services – merchant banking, investment management, insurance services, and other immaterial segments (items 4, 6, and 9 through 11). Net interest income associated with deposits and corporate treasury is excluded from the calculation. Interest-bearing assets are estimated as those reported in special data collection items 1 through 8, which are attributed to business activities as discussed earlier in this section.

[603] This approach is equivalent to an assumption that operational losses are distributed across business segments in the same proportion as net noninterest income.

(item 16D). Trading-related activities are associated with noninterest income from equity and debt capital markets activities as well as sales and trading and investment services (items 16B, 16C, 18 and 20). The other banking services segment's noninterest income includes investment banking advisory, merchant banking, investment management, investment services, insurance services, and other small income sources (items 16A, 17, 19, and 21 through 25).

Each banking activity's share of both the interest, lease, and dividend component and noninterest income component is floored at zero, and scaled so that the sum of shares across banking activities for each component is equal to one. To calculate the operational risk-weighted assets for each banking activity, these component shares are multiplied by the operational risk-weighted assets associated with that component, and the contributions of the two components are added together.

As a final step, deductions from risk-weighted assets associated with excess allowances and allocated transfer risk reserve are attributed to business segments for each banking organization in proportion to those segments' risk-weighted assets.[604]

b. Attribution of Risk-Weighted Assets Under the Standardized Approach

In this second part of the analysis, the agencies construct an estimate of standardized risk-weighted assets for the same banking activities. For credit risk exposures on the balance sheet, the agencies extrapolate from the special data collection. Adjustments to risk-weighted assets are applied to ensure that total standardized risk-weighted assets equal those in the FR Y-9C. For other exposures, the agencies take standardized risk-weighted asset amounts directly from the FR Y-9C.

[604] Allowance and transfer risk reserve deductions amount to only about 0.3 percent of risk-weighted assets in aggregate, so their attribution does not materially affect conclusions.

The FR Y-9C does not disaggregate balance sheet exposures sufficiently to allow for the direct calculation of risk-weighted assets by banking activity. Therefore, the agencies risk-weight the balance sheet exposure amounts from the special data collection using assumed standardized risk weights, discussed below. These assumed risk weights apply in place of the risk weights under the proposal wherever the risk weight in the special data collection does not exist under the standardized approach. In addition, the assumed standardized risk weights are applied in place of the 150 percent risk weight for all special data collection items where a 150 percent risk weight (1) might be applicable to non-defaulted exposures under the 2023 proposal and (2) would be applicable only to defaulted exposures under the standardized approach.[605]

For assumed risk weights, the agencies use the most commonly applicable standardized risk weight for the special data collection item. This assumed risk weight is zero percent for sovereign and supranational exposures (items 1 and 2); 20 percent for GSEs, public sector entities, U.S. depository institutions, and self-liquidating trade-related items (items 3, 4.a, 4.c, and 5); 50 percent for statutory multifamily mortgages, pre-sold construction loans, and residential real estate (items 6.a., b, e, and f); 150 percent for high-volatility commercial real estate (item 6.c); and 100 percent for all other balance sheet exposures. In addition, the assumed risk weight for equity exposures not subject to the market risk framework is 100 percent, as almost all such exposures fall under the non-significant equity exposure threshold in the standardized approach. Because the assumed risk weights are slightly different from the actual average risk weight, the resulting estimates of standardized risk-weighted assets using assumed

[605] Specifically, the assumed risk weight is applied to exposures to the U.S. government, supranational entities, GSEs, U.S. public sector entities, U.S. depository institutions, ADC (not high-volatility commercial real estate) and other real estate loans, and corporate exposures.

risk weights are scaled so that the total balance sheet risk-weighted assets align with the comparable amounts in the FR Y-9C for each banking organization.[606]

For the remaining off-balance sheet and counterparty credit risk exposures, as well as securitizations and market risk, standardized risk-weighted assets corresponding to items or small sets of items in the special data collection can be taken directly from the FR Y-9C Schedule HC-R Part 2. Traditional lending includes securitization exposures and retained recourse on small business obligations (items 9, 10, and 15). Trading-related activities include all market risk-weighted assets, as well as credit risk-weighted assets associated with repo-style transactions, derivatives, central counterparty default fund contributions, and exposures to unsettled transactions (items 8.b, 16, 20 through 22, and 27). The credit facilitation segment includes letters of credit and other off-balance sheet liabilities (items 12 through 14 and 17).

Commitments (items 18 and 19) are present in multiple banking segments. Consistent with the attribution of commitment risk-weighted assets under the proposal discussed above, in each risk weight, commitment exposures are attributed to banking activities pro rata based on the activity's share of balance sheet exposures assigned to that risk weight.[607] This distribution of balance sheet exposures across special data collection items is also used to estimate an average assumed standardized risk weight for the commitment. As a final step, the estimated risk-weighted assets for commitments summed across banking segments are scaled to match the risk-weighted asset amount reported in the FR Y-9C. This scaling addresses not only potential errors

[606] Specifically, the agencies match the sum of standardized risk-weighted assets associated with items 1 through 8.a in FR Y-9C HC-R Part 2. On average, the initial estimates of standardized risk-weighted assets using assumed risk weights are scaled down by about 2 percent.

[607] Risk-weighted assets associated with unconditionally cancelable commitments are zero under the standardized approach.

in the assumed standardized risk weights, but also the change in credit conversion factors under the proposal.[608]

At this stage, by construction, the standardized risk-weighted asset amounts match with those reported in the FR Y-9C prior to application of any deduction for excess allowances or allocated transfer risk reserve. As was done throughout other estimates in section VII, the agencies allocate these risk-weighted asset deductions across banking segments in proportion to their pre-deduction total risk-weighted assets.

4. Estimation of capital requirements

The capital requirements computed in this proposal include both common equity tier 1 and tier 1 risk-based requirements under the standardized and advanced approaches as well as tier 1 leverage and supplemental leverage ratio requirements. Dollar amounts of requirements are calculated by multiplying the applicable requirement ratio by the relevant risk-weighted asset or exposure measure. In addition, in order to capture changes to the definition of capital, the requirements calculated in this proposal include the estimated amount of changes in capital deductions, plus the current amount of threshold deductions for deferred tax assets, mortgage servicing assets, or investments.[609] Previous sections discuss the how risk-weighted assets are computed under the proposal, and the analysis assumes no changes to leverage exposure measures under all proposals under consideration. Therefore, the remainder of this section discusses how the buffer requirements are calculated.[610]

[608] The calculation implicitly assumes that the percentage change in commitments' average credit conversion factors is the same across business segments within each banking organization.

[609] As of Q2 2025, only one of the bank holding companies that would be subject to this proposal had any threshold capital deductions, and none had deductions for mortgage servicing assets. Therefore, this adjustment has limited impact.

[610] The calculation of method 1 GSIB surcharge, using the approach described below, is applicable to estimating the enhanced supplementary leverage ratio requirement under the recently finalized rule.

The risk-based capital ratio requirements used within the estimates throughout this proposal include all applicable minimum capital ratio and buffer requirements, including the stress capital buffer requirement and GSIB surcharge. The estimated stress capital buffer requirement and GSIB surcharge are adjusted to reflect the mechanical effect of risk-weighted asset changes under this proposal. In addition, the GSIB surcharges and stress capital buffer estimates, as described below, are linearized to avoid discontinuities in requirements that could result in the short-run from small changes in risk-weighted assets or GSIB scores when using bucketed GSIB surcharges or rounded stress capital buffer requirements.

Under the capital plan rules, the stress capital buffer requirement is generally calculated as (1) the difference between a banking organization's starting and minimum projected common equity tier 1 capital under the severely adverse scenario in the Board's supervisory stress test plus (2) the sum of the dollar amount of the banking organization's planned common stock dividend for each of the fourth through seventh quarters of the capital planning horizon as a percentage of risk-weighted assets.[611] Therefore, stress capital buffer requirements, expressed as a ratio, would differ under the proposal due to the proposal's impact on risk-weighted assets. To adjust the stress capital buffer requirement to reflect the proposal, the Board assumed that the estimated percentage difference in risk-weighted assets between the expanded risk-based approach and the standardized approach would have applied at the date at which the stress capital buffer requirement was calculated. Specifically, the estimates in this proposal adjust the actual stress capital buffer requirements by (i) removing the 2.5 percent floor and rounding, (ii) multiplying by the ratio of risk-weighted assets under the standardized approach relative to risk-weighted assets under the expanded risk-based approach in this proposal, and then (iii)

[611] *See* 12 CFR 225.8(f)(2) and 12 CFR 238.170(f)(2).

reapplying the 2.5 percent floor on the requirement. For comparability, stress capital buffer requirements under current rules in this proposal also removes the effect of rounding.[612] Therefore, for bank holding companies whose stress capital buffer requirements exceed 2.5 percent under both the standardized and expanded risk-based approach, the change in risk-weighted assets under the proposal has no effect on the stress capital buffer requirement when expressed in dollar terms. However, for bank holding companies whose stress capital buffer requirement would equal the 2.5 percent floor under both the standardized approach and the proposed expanded-risk based approach, the dollar amount of the stress capital buffer requirement would change proportionally to any changes in risk-weighted assets.

Under the current rule, risk-weighted assets are an input in method 2 of the GSIB surcharge calculation.[613] In particular, the short-term wholesale funding score's contribution to a GSIB's method 2 score is calculated by dividing the average of a banking organization's weighted short-term wholesale funding amount by its average risk-weighted assets and multiplying that amount by a fixed factor of 350.[614] Hence, increases (or decreases) in a banking organization's risk-weighted assets would decrease (or increase) its method 2 score, thereby partially offsetting in GSIB surcharge requirements the proposal's effect on capital requirements. The standalone impact analysis in section VII.A adjusts the short-term wholesale funding score used in the GSIB surcharge calculation with the proposal's estimated impact on risk-weighted assets and recalculates GSIBs' method 2 scores and capital surcharges using the adjusted short-term wholesale funding indicator.[615] The GSIB score for each year is then taken as the minimum

[612] Under the current capital plan, stress capital buffer requirements are rounded to the nearest 0.1 percent.

[613] *See* 12 CFR part 217, subpart H.

[614] *See* 12 CFR 217.406 (calculation of the short-term wholesale funding score).

[615] The cumulative impact analysis in section VII.B and VII.C does not require this adjustment as under the GSIB proposal, the method 2 score would be unaffected by changes in risk-weighted assets.

of the method 1 and 2 score, which is then converted into a surcharge using the following linearization which approximates the surcharge step function: surcharge = 0.01 + 0.00005 x max[0 , score – 180]. The same linearization is applied to scores calculated under the GSIB surcharge proposal, noting that scores under the GSIB surcharge proposal are independent of risk-weighted assets. In this proposal, analyses use the linearized version of the surcharge applicable in 2026, which reflects the minimum of the surcharge based on year-end 2023 and year-end 2024 score data.

5. Attribution of Stress Capital Buffer Requirement to Risk Categories

Analysis of the cumulative impact of the several changes to large banking organizations' capital requirements at the risk or business activity level, as described in sections VII.B and VII.C, necessitates a mapping from the components of stress capital buffer requirements to the risks that they reflect. This section describes the method used to attribute stress capital buffer requirements to the four risk types (credit, market, operational, and CVA) measured under this proposal.

The stress capital buffer requirement represents the maximum decline in each bank holding company's common equity tier 1 capital ratio, plus four quarters of planned common stock dividends, also expressed as a percentage of risk-weighted assets.[616] Thus, the quarter in the stress scenario with the minimum capital ratio is first identified, and the drivers of the cumulative change in capital through that quarter are attributed to risks. In estimates reflecting changes to the stress test, the impact (on minimum capital ratio) of several proposed changes is also attributed to risks. Lastly, the common stock dividends are attributed. Details of the attribution are covered below. Note that the analysis attributing capital requirements to banking

[616] Before application of the 2.5 percent floor on the requirement.

activities, as described in section VII.C, does not require an explicit attribution of stress capital buffer requirements to banking activities. Instead, as discussed in section VII.C, this attribution is extrapolated from the combination of the attribution of risk-weighted assets by risk type to banking activities (discussed above in section VII.D.3) and the attribution of stress capital buffer requirements to risk types discussed here.

First, the drivers of the stress capital decline that can be entirely attributed to a specific risk type are attributed. All credit loss provisions are attributed to credit risk,[617] along with losses on loans held at fair value and private equity, gains or losses on asset-liability hedges, changes in capital due to "accumulated other comprehensive income" (AOCI), and expenses associated with other real estate owned. Losses from the largest counterparty default in the stress test are also attributed to credit risk. Reducing the credit-attributed losses, interest income on all assets except trading assets are attributed to credit risk. When changes to the stress test are considered, those changes associated with credit losses (including counterparty credit), assets under fair value option, securities losses, and net interest margin models are attributed to credit risk. Losses (or gains) attributed to market risk include those on public equity securities, and both mark-to-market and intraday trading. Trading revenue and interest income on trading assets are also attributed to market risk. When considered, the impact of changes associated with the global market shock component of the severely adverse scenario are attributed to market risk. Counterparty losses associated with credit valuation adjustments, net of hedges, are attributed to CVA. Lastly, modeled operational losses are attributed to operational risk. These losses change under proposed changes to the stress test.

[617] The adjustment credit for allowances held at the start of the stress test is also attributed to credit risk.

Second, all interest expenses, net of income from account fees and services charges are attributed across credit and market risk in proportion to the trading book share of total assets. The implicit assumption here is that the funding composition of a dollar of trading and non-trading assets is the same.

Third, estimated changes in capital with drivers that are not neatly associated with the specific types of measured are attributed across credit, market, and CVA risk categories in proportion to their share of risk-weighted assets. These drivers consist primarily of noninterest income associated with fiduciary and investment banking services, but also include other noninterest income, servicing fees, changes in goodwill, and income due to minority interests. Under the proposed stress test changes, changes in losses associated with the proposed use of a discount path approach are also attributed in proportion to risk-weighted asset shares.

Fourth, the major operating expense categories that cut across banking activities are attributed across the risks in proportion to each risk's share of an estimate of the "business as usual" income associated with the risk. The operating expenses attributed in this step include those associated with employee compensation, fixed assets and all other non-interest expenses other than operational losses and expenses associated with other real estate owned. When considering requirements incorporating proposed stress test changes, the operating expenses attributed here reflects the proposed use of efficiency ratio-based expense projections. The estimate of "business as usual" income associated with each risk type equals that risk type's share of net interest income plus non-interest income, where these items are attributed to risks as described above.

Fifth, accounting and regulatory capital-related adjustments that are driven by losses in general are applied across risks in proportion to their stress losses as attributed thus far. These

adjustments include those associated with deferred tax assets, taxes and associated valuation allowance adjustment, and any (generally de minimus) changes in common equity tier 1 threshold deduction amounts.

Lastly, as the stress capital buffer requirement associated with common and preferred stock dividends is independent of the risks the bank holding company undertakes or the gains and losses realized in the stress test, it functions similarly to a requirement that is a fixed percentage of risk-weighted assets. Therefore, the dividend portion of the stress capital buffer requirement is attributed to risks in proportion to their share of risk-weighted assets under whichever framework (standardized or expanded risk-based) is being applied in the given estimate.

At this point in the process, the impact of the 2.5 percent floor on the stress capital buffer requirement is considered. Since the introduction of the stress capital buffer in 2020, three of the nine bank holding companies subject to this proposal have consistently had pre-floor stress capital buffer requirements below 2.5 percent. For these bank holding companies, the stress capital buffer requirement is independent of the specific drivers of the stress test loss, and is effectively proportional to risk-weighted assets. Therefore, the stress capital buffer requirement for these three bank holding companies is attributed proportionally to risk-weighted assets. For the other bank holding companies, the stress capital buffer requirements is routinely in excess of 2.5 percent, so the requirement is attributed as described above. However, in those instances where the pre-floor requirement for these bank holding companies is below 2.5 percent, the additional requirement associated with the 2.5 percent floor is attributed across risk types in proportion to their associated risk-weighted assets.

VIII. Economic analysis

This section evaluates the projected economic effect of the proposal by analyzing its key costs and benefits. When applicable, the analysis considers the effects of the GSIB surcharge proposal, the standardized approach proposal, and the proposed changes to the supervisory stress testing models and scenarios.

Section VIII.A presents an overview of the baseline of the economic analysis by examining the current state of banking organizations and the economy absent the combined proposals. It provides context for subsequent analyses on changes in risk-weighted assets, capital requirements, revenue sources, assets, and the relative importance of bank and nonbank financial intermediation.

Section VIII.B compares the anticipated risk-weighted asset effects of the proposal with three reasonable alternative implementations of the Basel standards. Changes in risk-weighted assets under the proposal would be within the range of impact of the alternatives while providing a substantial degree of risk-sensitivity.

Section VIII.C discusses the macroeconomic effects of changes in capital requirements. Based on the agencies' analysis, the decrease in capital requirements stemming from the proposal combined with the GSIB surcharge proposal and the standardized approach proposal would maintain levels of banking organization capital that are reasonable to achieve a safe and sound banking system based on the academic literature. Using a variety of methods, this literature provides a wide range of optimal capital requirements that balance the benefits of safety and soundness against the costs of reduced banking organization lending from higher

requirements. This section also acknowledges certain limitations in applying this literature to analyze the proposed regulatory changes.[618]

The proposal aims to enhance the measurement of credit, operational, and market risk to more accurately capture the underlying risks of covered banking organizations' activities. Improved risk measurement helps avoid unintended inefficiencies and potential misallocation of resources from capital regulation. Given the effects of regulatory capital requirements on the real economy, the proposal may improve economic efficiency. Moreover, reducing complexity in the regulatory framework enhances transparency of capital requirements and supports market discipline, with potential safety and soundness benefits.

Section VIII.D presents information on the potential effects of the proposal on banking organization lending, such as credit card, residential mortgage, and business lending.[619] Lending is a key business for banking organizations and an essential method for intermediating between savers and borrowers. The section analyzes a range of lending products that facilitate consumption and investment throughout the economy. The proposal's changes to risk sensitivity, operational risk, and treatment of off-balance sheet exposures would be the primary drivers of changes in capital requirements, potentially encouraging banking organizations to shift lending toward activities with projected reductions in risk weights.

Residential mortgage lending would incorporate LTV-based risk weights to enhance risk sensitivity. At the same time, lower risk weights would likely lead to a modest increase in mortgage lending by the banking organizations. Risk-weighted assets for corporate lending is

[618] The literature on optimal capital levels has limitations in its applicability to the proposed changes, as it typically assumes fixed risk weights and focuses primarily on loan portfolios rather than trading activities. This is particularly relevant given the important role of capital markets in the U.S. economy.

[619] While this analysis primarily relies on data for the largest banks, the findings are also likely applicable to any smaller banks that choose to adopt the expanded risk-based approach, as the expected changes in risk weighted assets for lending portfolios would be similar.

projected to decrease due to more favorable treatment of investment-grade borrowers and lower standardized credit conversion factors for conditional equity and credit commitments with more than one year to maturity, which together outweigh new operational risk requirements and higher credit conversion factors for off-balance sheet exposures with less than one year to maturity. Credit card portfolios would experience mixed effects by borrower repayment behavior and utilization rates. Depending on whether the new risk-weight on unutilized balances and the operational risk add-ons outweigh lower risk-weights on utilized balances, risk-weighted assets on credit card exposures under the proposal could be higher or lower than the current standardized approach.

Section VIII.E assesses the projected effects of the proposal on trading activities of banking organizations and the potential impact on their customers and on markets. The agencies expect the proposal would help preserve the availability of intermediation and market functioning during economic downturns by determining capital requirements based on losses from historical stress periods, which exhibits less cyclicality than the current approach. Also, trading products that are less liquid or more difficult to model would require more market risk capital. This may increase the cost of intermediation of some products but would also better align capital requirements with risk.

Trading activity involves market risk, counterparty credit risk, CVA risk, and operational risk. This proposal makes major revisions to the market risk framework which would affect incentives for banking organizations' hedging strategies and risk modelling methods. In addition, risk-weighted assets related to trading activity would increase from the inclusion of CVA and operational risk-weighted assets, which are not part of the current standardized approach that generally determines capital requirements today. The majority of capital requirements for trading

activity today comes from counterparty credit risk-weighted assets, and this would remain true under the proposal.

Taken together with the proposed changes to the GSIB surcharge and supervisory stress test models, and the recent revision of the eSLR, the cumulative effect on capital requirements related to trading activity is expected to be about a 9 percent increase for Category I and II banking organizations. Increases in risk-weighted assets from changes in the market risk framework and inclusion of CVA and operational risk are expected to be materially offset by the proposed changes to the global market shock in supervisory stress tests. Non-Category I and II banking organizations will see generally a small impact to their trading activity given the relatively smaller change in their market risk and CVA.

Section VIII.F considers the potential effects of the proposal on competition between financial institutions. The proposed changes to capital requirements for large U.S. banking organizations are expected to have implications for competition both domestically and internationally. By aligning U.S. capital requirements more closely with international standards, the proposal may enhance Category I and II banking organizations' ability to compete globally without compromising their comparatively strong capital positions. The revised risk weights, and increased certainty in capital requirements from moving to a single set of risk-based requirements, are anticipated to support more consistent lending and market-making activities throughout economic cycles.

The proposal incorporates measures that maintain competitive balance while acknowledging the business model differences between large and small institutions. Notably, the proposal would allow banking organizations of any size to adopt the new risk-weight framework. This proposal preserves higher overall capital requirements for Category I and II banking

organizations which, along with the parallel proposal to revise the U.S. standardized approach, would mitigate concerns about an unlevel playing field. Moreover, reducing complexity in the regulatory framework enhances transparency of capital requirements and supports market discipline, with potential safety and soundness benefits.

The proposal would likely, in aggregate, encourage the migration of certain activities, particularly traditional lending, back towards banking organizations while effects on trading activities would be more mixed. Lower risk weights for most mortgages and the removal of the mortgage servicing assets threshold capital deduction could encourage covered banking organizations to maintain or expand these activities relative to nonbank financial intermediaries, directly and via correspondent lending relationships with independent mortgage banks and smaller depository institutions. More broadly, enhanced competition in key lending markets could reduce the premiums that lenders can charge above their costs, providing greater economic benefits to consumers. For Category I and II banking organizations, heterogenous effects on different products within the proposed market risk framework could incentivize liquidity provision for those products to either shift toward or away from nonbank financial intermediaries, with increases in risk weights being offset by both reductions in the GSIB surcharge proposal and the proposed revision to stress test scenarios.

A. Overview of the baseline

This section discusses the current state of Category I and II banking organizations and the economy absent the proposal (the baseline) to help understand the potential effects of the proposal. To help contextualize the broader macroeconomic effects of the proposal, a discussion of the total banking system is also included.

Sections VIII.A.1 and VIII.A.2 provide context for the changes in capital requirements under the proposal by exploring the cross-section and time series of bank capital. Sections VIII.A.3 and VIII.A.4 help to contextualize results presented in sections VIII.D and VIII.E that discuss the potential effects on lending, trading, and other business activities by breaking down the principal revenue sources and assets of covered banking organizations. Finally, sections VIII.A.5 and VIII.A.6 document the relative dependency of the economy on bank and nonbank sources of financial intermediation. These sections support later analyses in section VIII.D regarding the potential macroeconomic and financial intermediation effects of the proposal on the U.S. economy.

1. Capital Ratios of Category I and II Banking Organizations – Cross Section

Banking organizations generally maintain capital ratios above regulatory capital requirements, including any applicable buffer requirements. The excess above such requirements – often called "management buffers" – varies across banking organizations and would likely continue to vary under the proposal as such buffers reflect firm-specific considerations. Table VIII.1 shows the average required and actual common equity tier 1 capital levels for Category I and II banking organizations.

Table VIII.1: Minimum-Plus-Buffer Required and Actual Common Equity Tier 1 Capital Levels for Banking Organizations Subject to Category I or II Capital Standards

Standardized Approach Requirement	**Advanced Approaches Requirement**	**Actual CET1 Capital**
$858 Billion	$764 Billion	$1,008 Billion

Note: This table shows aggregate required and actual common equity tier 1 capital levels as of June 30, 2025, for the top-tier holding companies of Category I and II banking organizations. For this purpose, capital requirements include applicable buffer requirements, including, as applicable, the GSIB surcharge requirement and, under the standardized approach only, the stress capital buffer requirement. Required capital ratios were calculated using the methodology described in section VII.D. Source: FR Y-9C and FFIEC 101.[620]

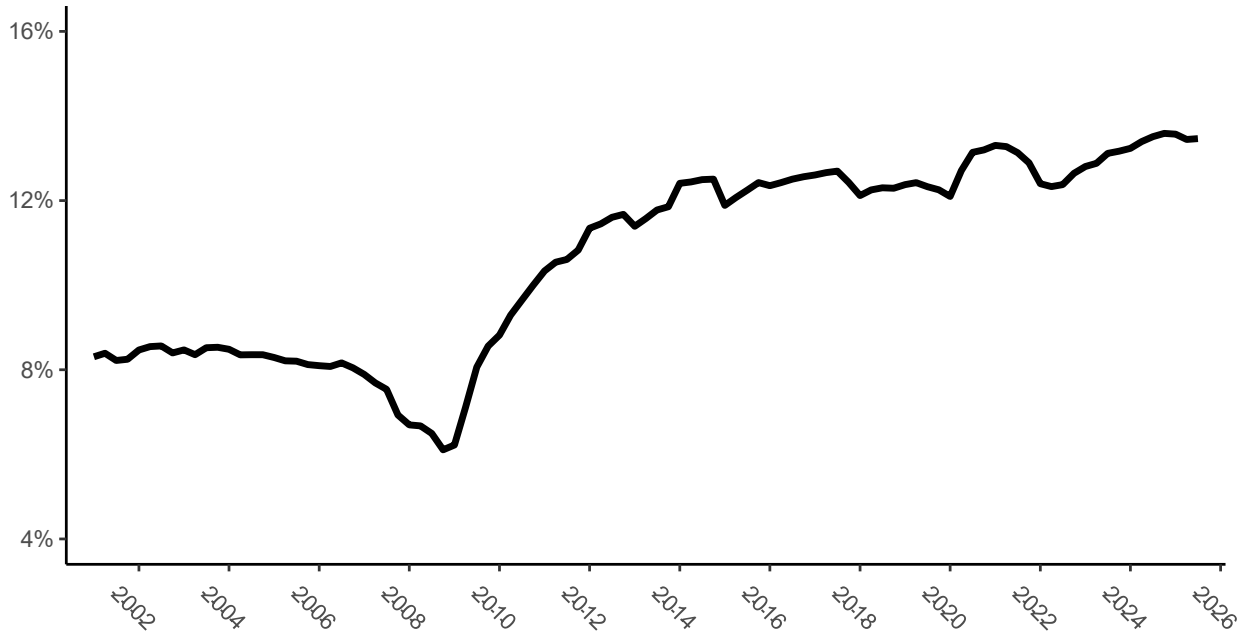
2. Capital Ratios of Banking Organizations – Time Series

Observing banking organizations' capital ratios over time helps provide another perspective on the capital in the U.S. banking system.[621] In this case, the agencies consider the entire banking system to provide context for considering the potential effects of the proposal from a broader macroeconomic perspective. Figure VIII.1 shows that the aggregate common equity tier 1 capital ratios of the U.S. banking system have increased slowly from around 12 percent in the middle of the last decade to a bit above 13 percent now. Currently, the U.S. banking system, not counting credit unions, maintains over $2.2 trillion in common equity tier 1 capital to help support approximately $31 trillion in assets ($17 trillion in risk-weighted assets). The proposal is expected to generally maintain the overall stability of capital in the U.S. banking system.

[620] Statistics are calculated from the FR Y-9C and FFIEC 101, as of June 30, 2025 (collectively, "June 2025 Form Statistics").

[621] The analysis presented in section VIII.A.2 was conducted using data from all top-level depository institution holding companies that file the FR Y-9C, except for community banking organizations that have opted into the community bank leverage ratio framework and therefore do not report risk-based capital ratios. Credit unions are not included in the analysis.

Figure VIII.3: Aggregate U.S. Banking System Common Equity Tier 1 Capital Ratio (Percent)



Note: This figure shows aggregate common equity tier 1 capital as a percentage of aggregate risk-weighted assets from March 31, 2001, to September 30, 2025. Source: Federal Reserve Bank of New York.[622]

3. Portfolio Characteristics of Category I and II Banking Organizations – By Revenue

Capital requirements affect banking organizations' choice of business model and hence the composition of their revenue. Interest income, primarily accrued from loans and fixed-income securities, is a key source of banking organization revenue. Across Category I and II banking organizations, interest income constitutes nearly 69 percent of total gross income.[623] The

[622] Data from Quarterly Trends for Consolidated U.S. Banking Organizations *https://www.newyorkfed.org/research/banking_research/quarterly_trends.html* (Downloaded on 1/15/26).

[623] Estimates are based on data from the FR Y-9C filings of banking organizations subject to Category I or II capital standards as of June 30, 2025. Interest Income share is calculated as Total Interest Income (BHCK4107) divided by the sum of Total Interest Income and Total Noninterest Income (BHCK4079).

remaining approximately 31 percent of total gross income is earned from noninterest sources, such as fees and commissions. These and other figures included in this section are based on Y-9C data.

A significant share of interest income (39 percent) comes from domestic loan portfolios, which generally include residential mortgages; commercial mortgages; other loans to businesses; and consumer loans such as credit cards, student loans, and auto loans. Another 27 percent comes from interest on securities held for investment and trading assets. The remainder of interest income comes from foreign loans (6 percent) and other interest earning activities (29 percent) including federal funds sold, interest on balances due from other depository institutions, and lease financing receivables.

Roughly 36 percent of noninterest income is earned from trading activities. Securities-related activities account for nearly 35 percent of gross noninterest income. This category includes fees and commissions from activities such as securities brokerage, investment banking, and advisory activities.

While these are the broad patterns of aggregate income, there is substantial variation across Category I and II banking organizations. The largest universal banking organizations offer a wide array of services, whereas other banking organizations are more specialized.

Therefore, while aggregate statistics provide an overview of covered banking organizations subject to the proposal, each banking organization differs in its revenue streams. Hence, the potential effects of the proposal are likely to vary depending on each banking organization's business model, although the overall effect is likely to reinforce the role of banks in traditional banking activities. Moreover, the proposed rule could also create feedback effects

that alter these metrics as banking organizations adjust their business activities to optimize their risk-weighted assets.

4. Portfolio Characteristics of Category I and II Banking Organizations – By Broad Asset Class

This section presents the composition of the aggregate assets of Category I and II banking organizations. The largest asset category on the balance sheet of these banking organizations is loans and leases (31 percent), which are the traditional lending business of banking organizations. Another major category is securities (19 percent), which includes both held-to-maturity and available-for-sale debt securities, as well as equity securities not held for trading.[624] Debt securities holdings include primarily government and corporate bonds, and mortgage-backed securities. The trading assets category (19 percent), which includes securities that are in banking organizations' trading portfolios as well as derivatives and other financial instruments, is also a major asset category. Trading securities are generally substantial for banking organizations engaged heavily in investment banking activities, a group that includes six of the nine Category I and II bank holding companies.

As with the presentation of the sources of aggregate income, these aggregate statistics mask heterogeneity across Category I and II banking organizations. The heterogeneity in their asset compositions exposes these banking organizations to different combinations of credit, market, and operational risk. Therefore, the effects of the proposal would vary based on individual banking organizations' business models.

[624] Estimates are based on data from schedule RC of the FR Y-9C filings on June 30, 2025. Loans and leases consist of Loans and Leases Held for Sale (BHCK5369) and Loans and Leases Held for Investment (BHCKB528). Securities held for investment includes Held to Maturity (BHCKJJ34) and Available for Sale Securities (BHCK1773). Trading assets is BHCK3545.

Balance sheet data provide an incomplete picture of risk because they do not account for off-balance sheet exposures, including contingent liabilities like loan commitments and letters of credit. Banking organizations subject to Category I or II capital standards have close to $6 trillion in total undrawn loan commitments, including consumer credit card lines, lines of credit extended to non-financial corporates as well as nonbank financial entities, commitments to fund commercial real estate and other construction loans, securities underwriting commitments, and other commitments.[625] This total is about a third of the size of these banking organizations' on-balance sheet assets of $16.8 trillion. The proposal would apply different risk weights and credit conversion factors for certain off-balance sheet exposures, relative to the standardized approach.

5. Dependency of the U.S. Economy on the Banking System

As shown in Figure VIII.2 below, U.S. businesses and households receive a larger share of financing from nonbank entities relative to other advanced economies due to the depth and breadth of U.S. financial markets. The difference in bank dependence is partially due to the United States having a more market-oriented financial system that provides more opportunities for various forms of equity financing as well as for nonbanks to participate in credit markets compared with the more bank-oriented financial systems of Europe and Japan. This difference may affect how the implementation of the Basel standards would impact the U.S. economy when compared to the impact on the economies of Europe and Japan. To better understand these differences, the agencies analyzed trends in total bank credit in the United States as a share of

[625] The undrawn loan commitments calculation includes the sum of items BHCKJ455, BHCKJ456, BHCK3816, BHCK6550, BHCK3817, BHCKJ457, BHCKJ458, and BHCKJ459 from schedule HC-L. To provide a sense of the relative importance of off-balance sheet exposures, the agencies use data from Schedule HC-L of FR Y-9C reports as of June 30, 2025.

gross domestic product (GDP) and compared these trends with those of the United Kingdom, Japan, and the Euro Area using data from the Bank for International Settlements (BIS).[626]

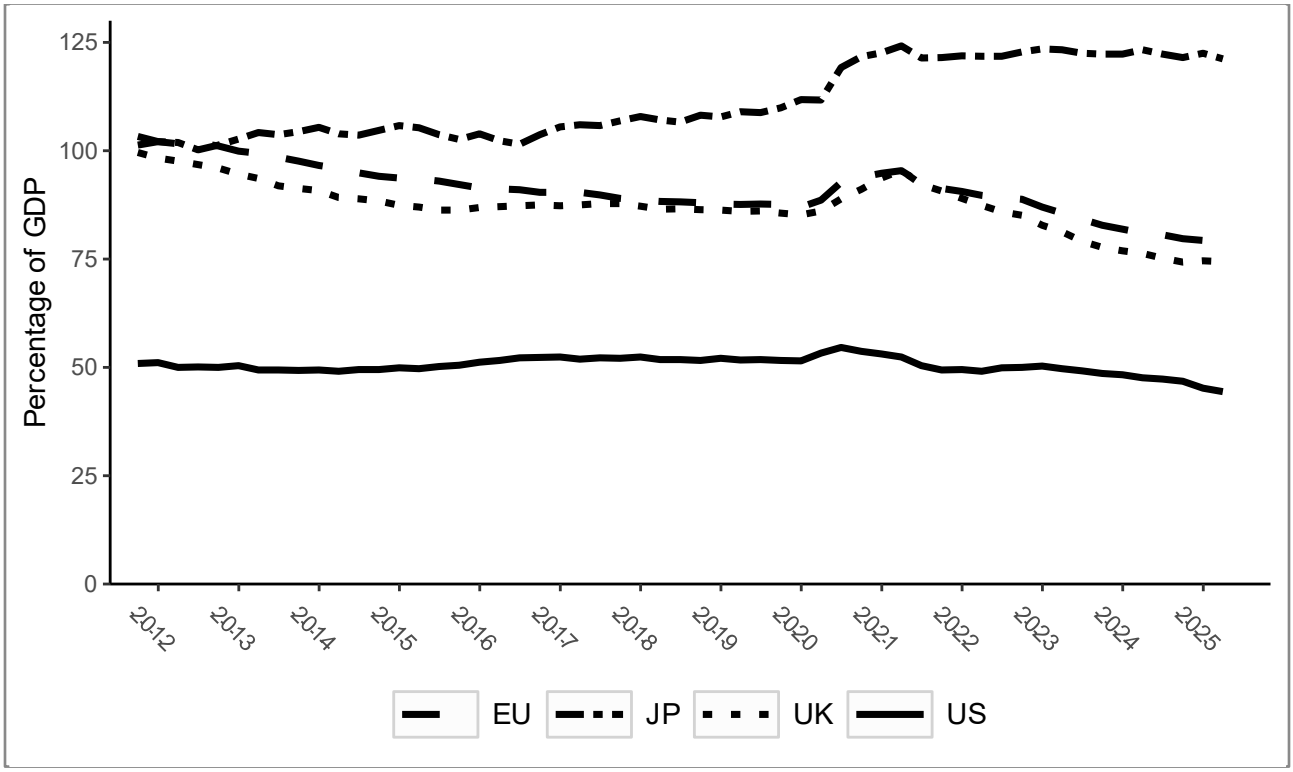
In other advanced economies, particularly in Europe and Japan, banks are the primary source of credit for the non-financial sector. As shown in Figure VIII.2, the share of credit to the non-financial sector coming from banks is significantly higher in these jurisdictions than in the United States. Moreover, the share of banking sector credit in the United States has remained relatively constant over the past decade.[627] Because a smaller share of private sector credit originates from the banking system in the United States, the proposal, which directly affects only covered banking organizations, is likely to have more modest macroeconomic effects than a similar regulation in a more bank-dependent economy.

However, looking at the potential direct effects alone may underestimate the impact of the proposal. Covered banking organizations facilitate significant provision of credit to households and nonbank financial institutions through their role in financial markets (these effects are described in section VIII.D.

[626] Bank of International Settlements (BIS), BIS Data Portal, *Credit to the Non-Financial Sector* (data flow ID: BIS,WS_TC,2.0), "Comparative View of Advanced Economies - Credit from Banks, Domestic to Private Non-Financial Sector at Market Value, Percentage of GDP, Adjusted for Breaks" (series key: Q.5R.P.B.M.770.A) (data sets downloaded on September 29, 2025) ("BIS Data: Credit (2025)"), *https://data.bis.org/topics/TOTAL_CREDIT/BIS,WS_TC,2.0/Q.5R.P.B.M.770.A?additional_ts=BIS%2CWS_TC%2C2.0%255EQ.DE%2BFR%2BUS%2BGB.P.B.M.770.A*.

[627] Over time, the share of bank credit in the United Kingdom and the European Union has declined some, converging partway towards the United States's level.

Figure VIII.2: Credit from the Banking Sector to the Private Non-Financial Sector as a Share of GDP



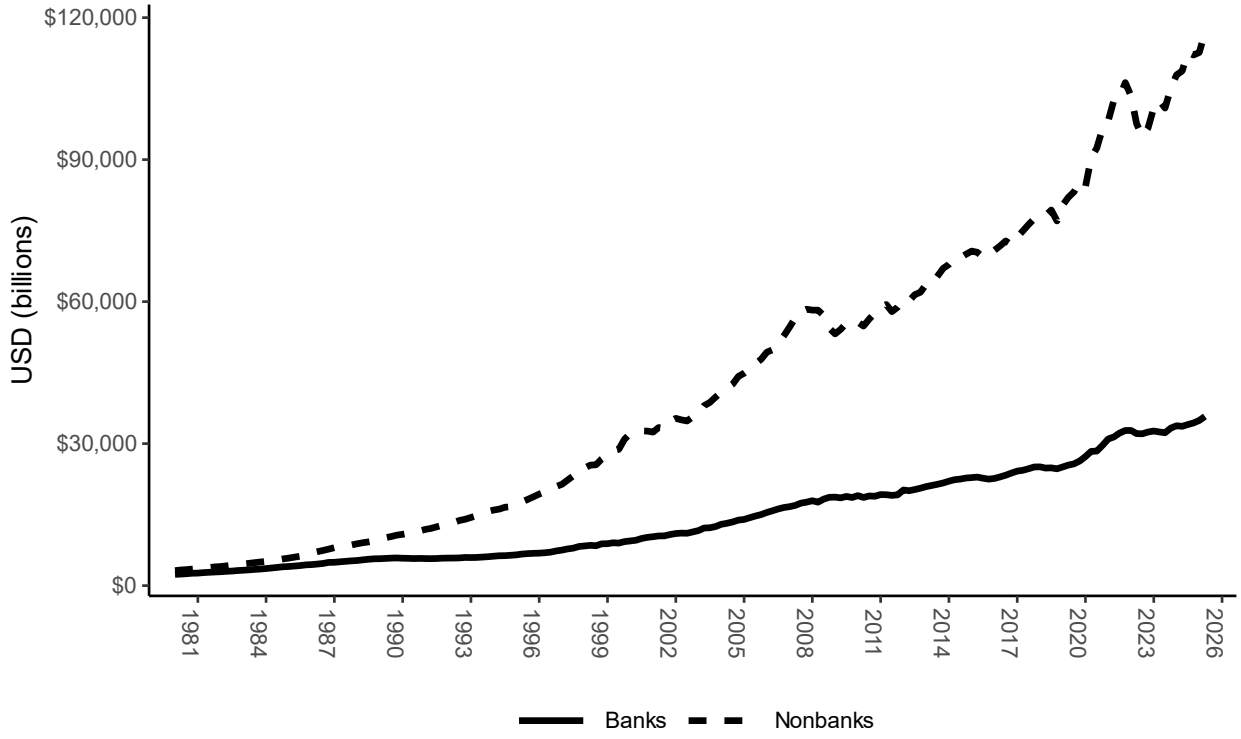
Note: This figure shows credit from the banking sector to the private non-financial sector as a share of GDP between December 31, 2011 and June 30, 2025. Source: BIS.[628]

6. Nonbank Financial Intermediaries

U.S. nonbank financial entity (nonbank) assets are currently three times larger than bank assets (Figure VIII.3). This is the result of a longstanding trend; since 1985, nonbank assets have grown much faster than bank assets.

[628] BIS Data: Credit (2025).

Figure VIII.3: Total Assets of Banks and Nonbanks



Note: This figure shows the total assets of banks and nonbanks in billions of U.S. dollars between December 31, 1979, and June 30, 2025 in the United States. Source: Flow of Funds, and agency calculations.[629] Nonbanks include the following Flow of Fund sectors: asset-backed securities, broker/dealers, closed-end funds, exchange-traded funds, finance companies, money market funds, mortgage real estate investment trusts, mutual funds, other financial businesses, insurance companies (PC insurance), and pension funds. Banks include the following Flow of Funds sectors: Banks and Holding Companies.

[629] Statistics used in agency calculations are from the Board of Governors of the Federal Reserve System, Z.1 Financial Accounts of the United States (from Dec. 31, 1979, to June. 30, 2025), *https://www.federalreserve.gov/releases/z1/*. The bank data consists of the sum of series FL702000095.Q and FL734194005.Q. The nonbank data consists of series FL792000095.Q less the sum of series FL702000095.Q and FL734194005.Q.

The growth in total assets discussed above is often cited to gauge the shift in financial activity between traditional banks and nonbanks. However, this analysis omits other linkages, such as credit lines provided by banking organizations to nonbanks,[630] and can also overestimate activity by nonbanks.[631]

The amount of credit that banks and nonbanks provide to the non-financial private sector is another way to measure the migration of activity out of the traditional banking sector. Figure VIII.4 shows that the share of credit to the non-financial private sector provided by banking organizations has been between 30 and 35 percent since the early 2000s. This share has persisted through regulatory changes and economic events, including the U.S. implementation of Basel II and Basel III reforms, the 2007-09 financial crisis, and the COVID-19 pandemic. The faster growth in nonbank assets (Figure VIII.3) and (Figure VIII.4) noting the increased role of nonbanks in the investment activity of U.S. households and small and medium enterprises. For example, a substantial share of mortgage origination is now primarily undertaken by nonbanks.[632]

Figure VIII.4 also shows a sharp decline in bank credit to the non-financial private sector in the 1980s from the higher levels of the 1970s. This decline was likely driven by a combination of regulation and financial sector innovation that reshaped the U.S. financial system.[633] One of

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[630] Viral V. Acharya, Nicola Cetorelli & Bruce Tuckman, "Where Do Banks End and NBFIs Begin?" *National Bureau of Economic Research*, Working Paper No. 32216, (March 2024) ("Acharya et al. (2024)"), *https://dx.doi.org/10.2139/ssrn.4760963*.

[631] Joshua Gallin, "Shadow Banking and the Funding of the Nonfinancial Sector," *Measuring Wealth and Financial Intermediation and Their Links to the Real Economy*, Chapter 4, 89-124 (February 2015) ("Gallin (2015)"), https://doi.org/10.7208/chicago/9780226204437.003.0004.

[632] Rebucci, Alessandro; Sclip, Alex; Sapriza, Horacio; and te Kaat, Daniel. (August 2025) "Bank Liquidity and Financing of Nonbank Mortgage Companies." *Federal Reserve Bank of Richmond Economic Brief*, No. 25-33, *https://www.richmondfed.org/publications/research/economic_brief/2025/eb_25-33*.

[633] Mark A. Calabria, "The Rise of Nonbank Mortgage Lending," *Regulation*, 46(18) (2023) ("Calabria (2023)"), *https://www.cato.org/regulation/summer-2023/rise-nonbank-mortgage-lending*.

these developments was the introduction of formal leverage requirements in bank supervision and regulation in 1981.[634] Other important changes also contributed to this decline. In the 1980s, the financial landscape began to shift significantly, marked by the expanded activities of government-sponsored enterprises (GSEs) and U.S. agencies, including Fannie Mae, Freddie Mac, and Ginnie Mae. During this period, certain housing GSEs rapidly expanded their role in the mortgage market by securitizing a substantial share of residential loans. Previously, the bulk of loans had generally been held on the balance sheets of banking organizations.[635] This expansion of securitization allowed nonbanks to intermediate a larger share of mortgage lending, a trend that accelerated with the creation of real estate mortgage investment conduits in the late 1980s.[636] As a result, the share of credit provided by banking organizations to the non-financial private sector began to decline sharply. This rise in GSE activity and the broader growth of securitization markets played a pivotal role in the long-term shift of credit provision away from banking organizations.[637] As described in the sections below, by adjusting the capital framework, the proposal may support lessening of this decline in the share of credit to the non-financial private sector provided by banking organizations.

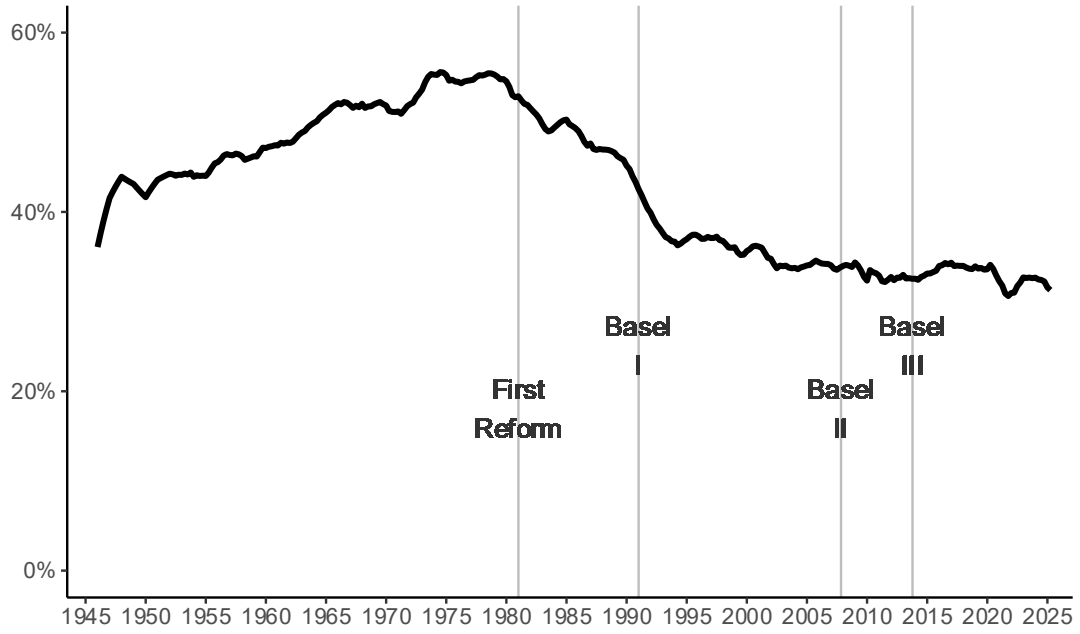
[634] Federal Reserve Bank of St. Louis, Federal Reserve History, "Bank Capital Standards" (March 2024), *https://www.federalreservehistory.org/essays/bank-capital-standards;* "Capital Adequacy Guidelines," 68 *Federal Reserve Bulletin*, 33 (1982).

[635] Dwight M. Jaffee & Kenneth T. Rosen, "Mortgage Securitization Trends," *Journal of Housing Research*, 1(1), 117-37 (1990) ("Jaffee and Rosen (1990)"), *http://www.jstor.org/stable/24825876*.

[636] Solomon Y. Deku & Alper Kara, "A Historical and Regional Overview of Securitization," *Securitization: Past, Present and Future*, 57-91 (August 2017) ("Deku and Kara (2017)"), *https://doi.org/10.1007/978-3-319-60128-1_4*.

[637] *See* Calabria (2023).

Figure VIII.4: Share of Credit to Non-Financial Private Sector Provided by Banks



Note: This figure shows the share of credit provided by banking organizations to the private non-financial sector between 1945 and 2025. Vertical lines represent the issuance date of the U.S. final rules for the introduction of formal capital requirements, including implementation of leverage ratio requirements in 1981 and the different Basel accords. Source: BIS, *Credit to the Non-Financial Sector*, "United States - Credit from All Sectors to Private Non-Financial Sector at Market Value, U.S. Dollar, Adjusted for Breaks."[638]

The nonbank sector is diverse, comprising investment funds, insurance providers, pensions, specialty finance companies (such as mortgage lenders and private credit funds), and market infrastructure providers, among other types of institutions. Nonbanks that are funded by

[638] BIS, BIS Data Portal, *Credit to the Non-Financial Sector* (data flow ID: BIS,WS_TC,2.0), "United States - Credit from All Sectors to Private Non-Financial Sector at Market Value, U.S. Dollar, Adjusted for Breaks" (series key: Q.US.P.A.M.USD.A) (data set downloaded on October 17, 2025), *https://data.bis.org/topics/TOTAL_CREDIT/BIS,WS_TC,2.0/Q.US.P.A.M.USD.A*.

less stable sources of funding or are highly leveraged and nonbanks' funding access interlinkages with wholesale capital markets, institutional investors, and banking institutions can pose financial stability concerns. For example, as seen during the 2007-09 financial crisis, the suspension of redemptions by one money market mutual fund can cause contagion as investors are incentivized to withdraw from other funds.[639] In addition, during the market dislocations in the early days of the COVID-19 pandemic, principal trading firms, facing volatile and uncertain markets, may have pulled back from providing liquidity to U.S. Treasury markets, thus contributing to the overall stressed market conditions.[640] Moreover, the uneven regulatory oversight of nonbanks, relative to banks, may increase their vulnerability to runs, liquidity stresses, and other systemic shocks, with potential financial stability consequences.[641] Any potential shifts in activity from the nonbank sector to the banking sector stemming from this proposal may help alleviate such vulnerabilities.

The presence of nonbanks alongside, and in competition with, traditional banks can also promote access to credit for households and businesses and improve the secondary market liquidity for this credit. Nonbanks, with business models, funding structures, and use of technology that differ from traditional banks, can help to diversify the financial landscape, foster

[639] "Financial Crisis Inquiry Commission, The Financial Crisis Inquiry Commission: Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States," *Featured Commission Publications*, (February 2011), *https://www.govinfo.gov/content/pkg/GPO-FCIC/pdf/GPO-FCIC.pdf.*

[640] U.S. Department of the Treasury, the Board of Governors of the Federal Reserve System, the Federal Reserve Bank of New York, the U.S. Securities and Exchange Commission & the U.S. Commodity Futures Trading Commission, "Recent Disruptions and Potential Reforms in the U.S. Treasury Market: A Staff Progress Report" (November 2021), *https://home.treasury.gov/system/files/136/IAWG-Treasury-Report.pdf*.

[641] Gary Gorton & Andrew Metrick, "Getting Up to Speed on the Financial Crisis: A One-Weekend-Reader's Guide," *Journal of Economic Literature* 50(1), 128–150 (March 2012) ("Gorton and Metrick (2012)"), *https://www.doi.org/10.1257/jel.50.1.128*.

innovation, and enhance the overall efficiency of financial services.[642] These tradeoffs are discussed further when analyzing the potential competitive effects of the proposal in section VIII.F.

B. Reasonable alternatives

This section compares the estimated consequences of the proposal on banking organization risk-weighted assets with three reasonable alternatives to implement the Basel standards in the United States and achieve the objectives of the proposal. These alternatives, along with the proposal, represent different approaches intended to promote robust levels of capital, risk sensitivity, and a simplified capital framework. Similar to the current capital rule, Alternative 1 would subject Category I and II banking organizations to two sets of risk-based capital ratio requirements: one set based on the proposed revisions to the standardized approach, the other set based on the proposed expanded risk-based approach (subsequently referred to as the dual calculation implementation). Alternative 2 would replace the current capital framework with a version of the Basel standards that does not contain any of the U.S.-specific adjustments in the proposal that account for factors such as the specific characteristics of U.S. markets, practices of U.S. banking organizations, or U.S. statutory mandates and policy objectives and, in contrast to the proposal, would assume use of models-based approaches for credit risk (subsequently referred to as the BCBS models-based implementation). Alternative 3 would also not contain the U.S.-specific adjustments outlined in the proposal and would only allow use of standardized, non-modelled approaches within the Basel standards without any U.S.-specific adjustments (subsequently referred to as the BCBS standardized implementation). Both

[642] Stijn Claessens & Laura E. Kodres, "The Regulatory Responses to the Global Financial Crisis: Some Uncomfortable Questions," *International Monetary Fund*, Working Paper No. 2014/046 (March 2014) ("Claessens and Kodres (2014)"), *https://www.imf.org/external/pubs/ft/wp/2014/wp1446.pdf*.

Alternatives 2 and 3 would entail a single calculation and rely on data from the quantitative impact studies conducted by the Basel Committee on Banking Supervision.[643] This section discusses each alternative in turn, then presents a quantitative comparison of their effects on the risk-weighted assets of Category I banking organizations.

1. Alternative 1: Dual Calculation Implementation

Category I and II banking organizations are currently required to calculate two sets of risk-based capital ratio requirements: one set based on the standardized approach (which also applies generally to other banking organizations), the other set based on the advanced approaches. The binding requirement for purposes of complying with minimum risk-based capital requirements is the lower of each ratio calculated under the two approaches.[644] Under the proposal, Category I and II banking organizations would be subject to requirements based on the expanded risk-based approach and revised market risk framework. The standardized approach would no longer apply to these banking organizations and the advanced approaches would be eliminated. Thus, such banking organizations would no longer be required to calculate two sets of risk-based capital ratios.

In contrast, Alternative 1's dual calculation implementation assumes that Category I and II banking organizations would be required to calculate ratios under both the standardized approach (inclusive of proposed amendments in the companion proposal to modify the standardized approach) and the expanded risk-based approach. In the context of comparing the

[643] See, e.g., Basel Committee on Banking Supervision (2010, 2025).
Basel Committee on Banking Supervision. "Results of the Comprehensive Quantitative Impact Study." Bank for International Settlements, December 2010. https://www.bis.org/publ/bcbs186.pdf.

Basel Committee on Banking Supervision. "Basel III Monitoring Report." Bank for International Settlements, October 2025. https://www.bis.org/bcbs/publ/d599.pdf.

[644] The lower of the two ratios is the stricter of the two requirements.

proposal with the reasonable alternatives, which focuses on comparisons of risk-weighted assets, the approach under the dual calculation implementation that yields the higher amount of risk-weighted assets would be considered the binding approach.

The retention of the standardized approach requirements alongside the expanded risk-based approach for banking organizations using the latter approach could be justified by the goal of improving comparability in capital resulting from the proposals. As discussed in section I.B and II.C, the proposal introduces consistent, comparable, and robust capital requirements, without requiring two parallel sets of requirements like in Alternative 1.

2. Alternative 2: BCBS Models-based Implementation

In the design of this proposal, the agencies made certain adjustments to the Basel standards to address factors such as specific characteristics of U.S. markets, practices of U.S. banking organizations, and U.S. policy objectives. The BCBS models-based implementation would not include these U.S.-specific adjustments and would assume the use of internal models for credit risk and market risk, similar to implementation of the Basel standards in other jurisdictions. The scope of application for mandatory use would remain Category I and II banking organizations, consistent with the proposal and the current advanced approaches framework.

Empirically, under the BCBS models-based implementation, modelled risk-weighted assets would generally be higher than the Basel standardized approach output floor.[645] However, the Basel output floor, which limits the benefits banking organizations can derive from using

[645] The Basel standards include a floor to risk-weighted assets, which corresponds to 72.5 percent of risk-weighted assets calculated only using standardized approaches.

internal models to calculate minimum capital requirements, would be binding for a few Category I or II banking organizations.

The key methodological difference in the treatment of credit risk under the BCBS models-based implementation is that it continues the use of the internal ratings-based approach for credit risk, albeit in a constrained way.[646] In contrast, the proposal does not allow the use of internal models to determine risk-weighted assets for credit portfolios. This generally causes a lower requirement, under Alternative 2, for low-default non-sovereign exposures.

The proposal's market risk capital requirements include several important differences relative to the BCBS models-based framework. For example, the proposal would recognize market risk diversification between modelled and unmodelled positions. The proposal would also change the internal models approach to streamline testing requirements and modify the treatment of non-modellable risk factors. Additionally, risk weights and correlation parameters for some risk buckets in the standardized approach to market risk would be calibrated for U.S.-specific markets. The proposal also includes a simplified partial look-through approach for calculating fund exposures based on an appropriate index that is less conservative than the Basel standard.

The proposal's credit valuation adjustment (CVA) risk requirements are similar to those under the BCBS models-based implementation. One important difference is that client-facing exposures, in connection with client-cleared derivative transactions, are excluded from CVA risk capital requirements under the proposal. Another important difference is that the proposal introduces a separate counterparty credit spread risk weight category for certain lower-risk financial institutions.

[646] With credit risk, the BCBS Basel III internal rating-based approaches remove the estimation of loss given default for lower default portfolios (large corporates, sovereigns, banks). In addition, the output floor constrains the degree to which those models can reduce the contribution of risk weighted assets to risk-weighted assets.

The proposal also differs in certain key respects from the operational risk Basel standard and, therefore, from Alternative 2.[647] Under the Basel standards, the business indicator is composed of three components: 1) the interest, lease, and dividend component; 2) the services component; and 3) the financial component. The proposal retains the interest, lease, and dividend component. However, the services and financial components are replaced with a single noninterest component, in part to allow for netting of applicable income and expenses.[648] In addition, the proposal would scale the income and expenses of the investment management business line in the business indicator calculation while the Basel standard does not scale any business line.

3. Alternative 3: BCBS Standardized Implementation

The BCBS standardized implementation under Alternative 3 modifies Alternative 2 in two respects. First, Alternative 3 only contemplates the use of standardized approaches for credit and market risk as outlined in the Basel standards. Thus, Alternative 3 would remove the option to use models to determine market risk capital requirements compared to the proposal. Requiring the use of the market risk standardized approach generally results in higher, less risk-sensitive capital requirements. Second, because alternative 3 reflects only the use of standardized approaches, it does not include the 72.5 percent output floor.

4. Quantitative Estimates and Discussion

[647] The proposal is consistent with the approach in the Basel standards of setting the internal loss multiplier equal to 1.

[648] In particular, the BCBS models-based implementation 1) calculates the services component on a gross basis, 2) does not allow netting across banking book and trading book activities in the financial component, and 3) does not allow netting across activities captured in the services component and those captured in the financial component.

For each of the three alternatives, the agencies estimate aggregate risk-weighted assets under the alternatives and contrast them with the estimated levels under the proposal. The results for Category I banking organizations appear in Table VIII.2.[649]

Table VIII.2: Aggregate GSIB Risk-Weighted Assets under the Reasonable Alternatives ($ billion)

			Dual Calculation*	BCBS Models-based*	BCBS Standardized
	Current Standardized	Proposal	Alternative 1	Alternative 2	Alternative 3
Credit risk	7,144	6,095	6,120	5,044	6,971
Operational risk		920	904	1,169	1,207
CVA		207	207	226	233
Market risk	453	545	545	866	997
Total	7,597	7,768	7,776	7,305	9,408
Change from Current Standardized		2.2%	2.4%	-3.9%	23.8%

*This table shows the RWA component of the most binding component of the requirement. Totals are the sum of most binding requirement. Estimates as of Q2 2025.

Under the dual calculation implementation, aggregate risk-weighted assets would be slightly higher than risk-weighted assets under the proposal, and about 2 percent above current

[649] While Category II banking organizations are also subject to the proposal, there is insufficient Basel quantitative impact study data to calculate the impact for such banking organizations under Alternative 2 and Alternative 3. Category II banking organizations are part of the impact figures in section VII. In addition, Table VIII.2 does not reflect RWA deductions. Therefore, the aggregate figures for risk-weighted assets under the proposal, in Table VIII.2, are slightly different from those reported in Tables VII.2 and VII.5 in sections VII.A and VII.C.1, respectively.

levels under the standardized approach, which most commonly is the more binding of the current risk-based capital requirements. The dual calculation requirements are only slightly higher that under the proposal, as only one of the smaller banking organizations subject to the proposal would have higher risk-weighted assets under the standardized approach proposal.

The BCBS models-based implementation would modestly reduce aggregate risk-weighted assets by about 4 percent, relative to the current standardized approach. Most Category I banking organizations would have lower risk-weighted assets under Alternative 2 than under the proposal.

The BCBS standardized approach would substantially increase aggregate risk-weighted assets by 24 percent, relative to current standardized approach. All Category I bank holding companies have higher risk-weighted assets under Alternative 3 than under the proposal or the other alternatives.

Despite variations in their estimated effects on total risk-weighted assets, the proposal and alternatives maintain similar relative contributions across risk stripes. Table VIII.2 illustrates this composition, with credit risk contributing the majority at 70-80 percent of the total, operational risk accounting for 12-16 percent, market risk representing 7-12 percent, and CVA comprising the smallest portion at 3 percent. Risk-weighted assets are directly changed by the proposal, and these alternatives do not necessarily imply equivalent changes to capital requirements. Typically, capital requirements move in the same direction as changes in risk-weighted assets. But changes in capital requirements would likely be smaller in percentage terms primarily because the capital amount required by the stress capital buffer framework would be unaffected by changes in risk-weighted assets for holding companies for which the 2.5 percent capital conservation buffer requirement floor does not bind. In addition, changes in risk-weighted

assets may not translate into proportional changes in tier 1 capital requirements if leverage requirements, rather than risk-based capital requirements, were binding for a given banking organization.

C. Macroeconomic Effects and the Analysis of the Proposal with Respect to Estimates of Optimal Capital Levels

This section situates the proposal within the context of the academic literature and policy analysis on the optimal capital levels of the banking system. The proposal would change risk weights to more closely align with the risks of covered banking organizations. These changes in risk weights imply that the amount of required capital would change for these banking organizations, potentially resulting in a change to U.S. banking system capital requirements. The economic effect of these changes can be evaluated in light of the findings of the optimal capital research.

As noted, the proposal would mandatorily apply to Category I and II banking organizations and banking organizations with significant trading activity. These banking organizations hold about half of the assets of the U.S. banking system. In addition, the standardized approach proposal would revise capital requirements for non-Category I and II banking organizations that are subject to the risk-based framework. As such, the analysis considers the literature on the optimal level of capital for all banking organizations.[650]

As shown earlier in Figure II.1, the aggregate U.S. banking system has more than $2.2 trillion of common equity tier 1 capital, equaling 13.4 percent of risk-weighted assets (as of June 30, 2025).

1. Impact of the Proposals

[650] This reflects the fact that the literature on optimal capital level focuses on the banking sector of an economy, not just the large banks.

The agencies examined the impact of the proposals on capital requirements for the U.S. banking system. This analysis includes the proposed revisions to the calculation of risk-weighted assets and the proposed amendments to the GSIB surcharge framework under the Board's GSIB surcharge proposal. It also includes the proposed revisions to the risk-weights in the U.S. standardized approach. When applicable, it also notes the impact of the recent proposal to modify the Board's stress tests.

Based on the estimates reported in section VII.C.2, the revisions to the risk-weight framework and the GSIB surcharge would result in a decrease to common equity tier 1 capital minimum plus buffer requirements for Category I and II bank holding companies of $42.1 billion (inclusive of changes to stress capital buffer and GSIB surcharge requirements). The estimated capital decrease is based on balance sheets and exposures as of June 30, 2025. The actual impact may be higher or lower depending on the future behavior of Category I and II banking organizations.

Capital requirements for Category III and IV bank holding companies would change due to revisions to risk-weighted assets for these banking organizations that engage in significant trading activity, as well as the accompanying proposal to revise the standardized approach. In conjunction with the proposed stress test changes, these proposals are expected to lower common equity tier 1 requirements of such bank holding companies by $19.5 billion. Turning to bank holding companies with assets below $100 billion, the proposals under consideration would lower their common equity tier 1 requirements by $26.2 billion. Altogether, these proposals would lower the common equity tier 1 requirements in the U.S. banking system by about $87.7 billion. Excluding the effects of the stress test proposal, the three proposals under consideration would lower common equity tier 1 requirements by about $58.3 billion.

Using the total amount of common equity tier 1 capital in the U.S. banking system of $2.22 trillion as a denominator and assuming affected banking organizations would decrease their capital dollar-for-dollar with the decrease in capital requirements – in effect maintaining the same dollar amount of capital over requirements as they currently do – the proposals altogether would lower aggregate capital in the U.S. banking system by 4.0 percent.[651] When this percentage decrease is applied to the current common equity tier 1 capital ratio of the U.S. banking system of 13.4 percent, the combined proposals are estimated to decrease the common equity tier 1 capital ratio of the U.S. banking system to an amount that is equivalent to about 12.9 percent when measured relative to risk-weighted assets under the current rule.[652]

To situate the proposals' effect on the quantity of capital in the U.S. banking system in the literature on the optimal level of capital, the agencies discuss the historical evolution of this literature as well as more recent advances.

2. Development of the Literature on the Optimal Level of Capital in the Banking System

The Basel Committee's long-term economic impact assessment of capital requirements (BCBS 2010 study) represented an important milestone in the development of the literature on the optimal capital level in the banking system.[653] This study was carried out in the aftermath of the 2007-09 financial crisis and supported the increase in capital requirements that was part of

[651] The corresponding decrease in capital requirements from the three proposals under consideration – the Basel III proposal, the standardized approach proposal and the G-SIB surcharge proposal – yields an estimated decrease of 2.6 percent. The lower estimates arises due to excluding the effects of the proposed changes to the stress tests.

[652] The projected common equity tier 1 capital ratio of 12.9 percent is obtained via 13.4 percent × (1-0.040).

[653] *See generally* Basel Committee, "An Assessment of the Long-Term Economic Impact of Stronger Capital and Liquidity Requirements" (Aug. 2010), *https://www.bis.org/publ/bcbs173.pdf* ("BCBS 2010 study").

the initial phase of the Basel III reforms.[654] It helped spur a number of related studies by academics and staff at regulatory agencies across the world.

The BCBS 2010 study developed a framework in which the benefits of higher capital stem from a reduced probability of a financial crisis.[655] These benefits can be quantified by estimating the degree to which higher bank capital reduces the probability of a crisis and multiplying this reduction in probability by the expected economic output loss caused by a crisis. The cost of higher capital requirements stems from the increased cost of funding for banks, which can lead to higher interest rates on lending and thus lower economic activity, depending on market structure, competition, and other factors. The trade-off between these benefits and costs yields the optimal level of capital in the banking system. That said, significant uncertainties and limitations remain on how to measure these benefits and costs, and different approaches used in various studies yield different estimates of the optimal level of capital. Moreover, as discussed subsequently in section VIII.C.3, the literature has since developed additional frameworks.

The BCBS 2010 study applies this framework using several macroeconomic models to capture a range of possible costs and benefits, resulting in a range of possible values for the optimal level of capital in the banking system. The study concludes that the optimal capital requirement, measured as tangible common equity capital to risk-weighted assets, is in the range of 10-14 percent,[656] which encompasses the projected new level of the common equity tier 1 capital ratio of the U.S. banking system, under the proposals, of about 13 percent, as described in

[654] *See, e.g.*, Basel Committee, "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" (June 2011), *https://www.bis.org/publ/bcbs189.htm*.

[655] *See* BCBS 2010 study.

[656] *See* BCBS 2010 study.

section VII.B. The fact that the projected capital level falls within the range of optimal values suggests that the overall proposals are consistent with the analysis of the BCBS 2010 study.

Other studies provide additional perspective. For example, Fender and Lewrick (2016) argue that after accounting for differences in measurement of capital and risk-weighted assets over time,[657] the BCBS 2010 study implies a lower optimal level for the common equity tier 1 capital ratio of around 8-11 percent. Miles, Yang, and Marcheggiano (2013) apply a similar framework to data on global banks and find that the optimal capital level is higher, in the range of 16-20 percent.[658] This result stems partly from their finding that increased capital would have a smaller adverse effect on interest rates, and thus economic activity, than the BCBS 2010 study estimates.

Conversely, Brooke et al. (2015) apply a similar framework and find that, after accounting for the benefits from improvements in the resolution framework, one would obtain a lower optimal capital level than in the BCBS 2010 study.[659] This study has played a key role in informing the Bank of England's views on the optimal level of capital in the UK banking system.[660] Their analysis suggests that the optimal capital level for tier 1 capital (rather than

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[657] *See* Ingo Fender & Ulf Lewrick, Monetary and Economic Department, BIS, *Adding it All Up: The Macroeconomic Impact of Basel III and Outstanding Reform Issues* (BIS, Working Paper No. 591, Nov. 2016) ("Fender and Lewrick (2016)"), *https://www.bis.org/publ/work591.pdf*.

[658] *See* David Miles, Jing Yand, & Gilberto Marcheggiano, "Optimal Bank Capital," 123 The Economic Journal 1, 29 Table 10 (Mar. 2013) ("Miles, Yang and Marcheggiano (2013)"), *https://academic.oup.com/ej/article/123/567/1/5080596*.

[659] *See* Martin Brooke, Oliver Bush, Robert Edwards, Jas Ellis, Bill Francis, Rashmi Harimohan, Katharine Neiss, and Caspar Siegert, *Bank of England, Measuring the Macroeconomic Costs and Benefits of Higher UK Bank Capital Requirements* (Bank of England, Financial Stability Paper No. 35, Dec. 2015) ("Brooke et al. (2015)"), *https://www.bankofengland.co.uk/-/media/boe/files/financial-stability-paper/2015/measuring-the-macroeconomic-costs-and-benefits-of.pdf*.

[660] *See* Bank of England, "Financial Stability in Focus: The FPC's assessment of bank capital requirements", *https://www.bankofengland.co.uk/financial-stability-in-focus/2025/fsif-the-fpcs-assessment-of-bank-capital-requirements.*

common equity tier 1 capital) ranges from 10-14 percent.[661] In comparison, the projected tier 1 capital in the U.S. banking system from the combined proposals would be about 14 percent, suggesting that the proposals could result in capital levels within the optimal range.

Firestone et al. (2019) apply the framework of the BCBS 2010 study to the U.S. banking system and find that the optimal capital level for tier 1 capital ranges from 13-26 percent.[662] In this case, the projected capital in the U.S. banking system would fall in the low end of the range. The wide range stems in part from uncertainty regarding the economic costs of financial crises, as the benefits of higher capital levels increase with the severity of the financial crises that are averted by the increased capital.

Soederhuizen et al. (2023) build on this framework and study the optimal capital level in the Euro area.[663] They use a more advanced model for the costs of increased bank capital levels and obtain an optimal level of common equity tier 1 capital relative to risk-weighted assets of 16-31 percent, higher than the level currently maintained by the U.S. banking system. Soederhuizen et al. (2023) also find that the optimal capital level differs across Euro member states. This heterogeneity, along with the range of optimal capital estimates in the papers in this section, underlines the uncertainty in the estimated optimal capital levels.

[661] Tier 1 capital includes a broader set of instruments than common equity tier 1 capital. Thus, a banking organization will typically have a higher tier 1 capital ratio than a common equity tier 1 capital ratio.

[662] *See* Simon Firestone, Amy Lorenc, & Ben Ranish, "An Empirical Economic Assessment of the Costs and Benefits of Bank Capital in the United States," 101 *Federal Reserve Bank of St. Louis Review* 203, 203–30 (2019) ("Firestone et al. (2019)"), *https://doi.org/10.20955/r.101.203-30.*

[663] *See* Beau Soederhuizen, Gerrit Hugo van Heuvelen, Rob Luginbuhl, & Bert van Stiphout-Kramer, Netherlands Bureau for Economic Policy Analysis (CPB), "Optimal Capital Ratios for Banks in the Euro Area," 69 Journal of Financial Stability, Art. No. 101164 (Dec. 2023) ("Soederhuizen et al. (2023)"), *https://doi.org/10.1016/j.jfs.2023.101164*.

Jorda et al. (2021) challenge the underlying premise of the literature that follows from BCBS (2010) that higher capital levels reduce the probability of a financial crisis.[664] Instead, they find that higher capital levels reduce the severity of a crisis by promoting a faster economic recovery but have no impact on the probability of a financial crisis. Accounting for their findings could result in different estimates of optimal capital levels than what is obtained in the studies discussed above.[665]

Admati and Hellwig (2024) provide another perspective on the level of optimal capital in the banking system and argue that it ought to be much higher than current capital levels.[666] Their argument hinges on the ability of nonbanks to provide a substitute for bank credit, thus ameliorating the cost of higher capital requirements on bank lending. That said, such substitution of financial services away from banks towards nonbanks may pose other concerns, as discussed in section VIII.F.3.

3. General Equilibrium Models of Optimal Capital Levels

One limitation of the above studies is that the models they employ do not account for the optimizing behavior of agents, a key theoretical underpinning of modern economics. As discussed below, recent developments in modeling of optimal capital levels have turned towards embedding optimizing behavior of agents, including households, non-financial businesses, and

[664] *See* Oscar Jorda, Björn Richter, Moritz Schularick, and Alan Taylor, "Bank Capital Redux: Solvency, Liquidity, and Crisis," 88 *The Review of Economic Studies* 260, 260–268 (2021) ("Jorda et al. (2021)"), *https://doi.org/10.1093/restud/rdaa040*.

[665] The analytical framework in Jorda et al. (2021) does not yield an estimate of the optimal level of bank capital. *See* Jorda et al. (2021).

[666] *See* Anat Admati and Martin Hellwig, The Bankers' New Clothes: What's Wrong with Banking and What to Do About It (2024) ("Admati and Hellwig (2024)").

banks. Notably, the cost-benefit tradeoff examined in these models can differ from the tradeoff in the literature based on the BCBS 2010 study discussed above.[667]

Begenau (2020) reflects a new approach in this literature.[668] In particular, this study argues that higher capital requirements can spur lending by reducing the incentives of banks to take on deposits, which results in a lower cost of deposits and potentially a lower overall cost of funding. In this model, households value the liquidity services provided by deposits, and higher capital requirements can lead to lower provision of those services. This study finds that the optimal capital requirement equals 12.4 percent of risky assets, close to the projected capital levels in the U.S. banking system.

Begenau and Landvoigt (2022) study optimal capital ratios in a setting with banks and unregulated nonbanks.[669] In this setup, they find that higher capital requirements shift activity to the unregulated sector. However, the authors argue that such a shift can be optimal as it moves activity away from a banking sector that is supported by government guarantees. This study reports an optimal leverage ratio capital requirement of 16 percent, higher than the projected capital in the U.S. banking system.

Elenev et al. (2021) embed financial crises into an equilibrium macroeconomic model of households, non-financial businesses, and banks.[670] In this model, higher capital requirements

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[667] These models tend to be more complex than those based on the BCBS 2010 study, and their results are obtained via matching elements of the data to those implied by the model. As such, this literature tends to avoid framing findings in terms of a range and instead discusses robustness of the findings to modeling assumptions.

[668] *See* Juliane Begenau, "Capital Requirements, Risk Choice, and Liquidity Provision in a Business-Cycle Model," 136 Journal of Financial Economics 355, 355–378 (May 2020) ("Begenau (2020)"), *https://doi.org/10.1016/j.jfineco.2019.10.004*.

[669] Julaine Begenau and Tim Landvoigt, "Financial Regulation in a Quantitative Model of the Modern Banking System," 89 The Review of Economic Studies 1748,1748–1784 (July 2022) ("Begenau and Landvoigt (2022)"), *https://doi.org/10.1093/restud/rdab088*.

[670] Vadim Elenev, Tim Landvoigt & Stijn Van Nieuwerburgh, "A Macroeconomic Model With Financially Constrained Producers and Intermediaries," 89 *Econometrica* 1361, 1361–1418 (May 2021) ("Elenev et al. (2021)"), *https://doi.org/10.3982/ECTA16438*.

result in a smaller financial sector and thus a smaller economy. The calibrated model implies that welfare is maximized at a capital requirement of 6 percent of risky assets, well below current and projected requirements.

Begenau et al. (2025) examine bank capital requirements in the context of delayed accounting for loan-loss recognition.[671] In their model, optimal capital requirements are lower than current values. This decrease in optimal capital requirements arises in conjunction with an expedited loan loss recognition relative to current practices, which makes the banking system safer by ensuring timely accounting for non-performing loans.

Davyduik (2017) uses an equilibrium model to study how capital requirements vary over the business cycle and finds that a countercyclical capital requirement increases welfare.[672] According to the calibration in this model, the optimal level of the capital requirement fluctuates around 6 percent over the business cycle.

The agencies find that the decrease in the capital required in the U.S. banking system under the combined proposals would result in a level of banking organization capital that is reasonable, as informed by the literature based on the BCBS 2010 study, as well as the more recent studies based on the optimizing behavior of agents. Collectively, the studies surveyed indicate uncertainty about the true level of optimal capital requirements, providing a range of estimates that are roughly equivalent to between 5 and 31 percent of risk-weighted assets.[673] Four of these 13 studies find optimal capital requirements substantially below the projected level

[671] Juliane Begenau, Saki Bigio, Jeremy Majerovitz and Matias Vieyra, "A Q-Theory of Banks", forthcoming, The Review of Economic Studies ("Begenau et al. (2025)"), *https://doi.org/doi:10.1093/restud/rdaf035*.

[672] Tetiana Davydiuk, Dynamic Bank Capital Requirements (Oct. 2017) ("Davydiuk (2017)"), https://dx.doi.org/10.2139/ssrn.3110800.

[673] See also Stephen Cecchetti, Jeremy Kress and Kermit Schoenholtz, "Basel Endgame: Bank Capital Requirements and the Future of International Standard Setting", 39(3) *Journal of Economic Perspectives, 149-170. https://doi.org/10.1257/jep.20241434*

of capital in the U.S. banking system under the proposal. Four studies find the projected capital levels approximately optimal and five of the studies would recommend higher levels of capital. Notably, more recent studies tend towards the lower end of the above range for optimal capital requirements, indicating the continuing evolution of this literature. However, there are certain limitations to applying this literature to the proposal, as detailed in the following section.

In the event that the Board chooses to adopt the GSIB surcharge proposal or the agencies choose to adopt the proposals under consideration on separate timelines, the effect on the overall level of required capital in the banking system would be smaller than if the three proposals were adopted together. As such, viewed through the lens of the literature on optimal capital, the impact of each individual proposal would also remain within the optimal range and thus achieve a reasonable level of capital in the banking system.

4. Limitations of Applying the Academic Studies on Optimal Capital Levels to Evaluating the Proposals

The proposals would establish risk weights applicable to banking activities that align more closely with the risks of these activities, relative to the current standardized approach, and improve transparency and consistency of requirements relative to the advanced approaches framework. Part of the changes in the proposed capital requirements stem from these differences in risk weights.[674] The literature on optimal capital levels, however, takes the assignment of risk weights as given and examines the optimal level of capital given equilibrium levels of safe and risky assets. As such, this literature may be less suitable for analyzing a change in capital

[674] Capital requirements for large banking organizations would also change due to the companion proposal to reform the G-SIB surcharge.

requirements resulting from changes in risk weights, as opposed to a direct change in the required capital for a certain quantity of risky assets.

A related measurement challenge stems from the broad range of loss-absorbing instruments that banking organizations use to meet the different capital requirements. While there are a few exceptions, such as Brooke et al. (2015), many of the studies do not distinguish between these different capital instruments.[675] This makes it challenging to determine which capital ratio is most applicable to mapping the results of a given study to the U.S. banking system.

As noted in section VII.C.1, the proposal would increase total risk-weighted assets applicable to trading-related activities by 31 percent while reducing total risk-weighted assets relating to lending by about 10 percent.[676] The optimal capital level literature, including the studies based on optimizing macroeconomic agents, primarily focuses on capitalizing for the risks posed by banks' loan portfolios. The literature neither considers the risk associated with trading activity nor the potential macroeconomic effect of changes in the provision of trading activity. This reduces the applicability of the optimal capital levels literature to the proposal, given the prominent role that capital markets play in the financing of economic activity in the United States.[677]

One additional limitation is that the optimal level of capital can differ across jurisdictions. For example, Stavrekeva (2020) finds that jurisdictions with a higher fiscal capacity may have a lower optimal capital level as the fiscal authorities may be better positioned to absorb shocks by

[675] *See* Brooke et al. (2015).

[676] As discussed subsequently in section VIII.E, the changes to the GMS in the stress testing proposal would significantly offset the capital impact of this increase in trading related risk-weighted activities.

[677] *See supra* Figure VIII.4 – Share of Credit to Non-Financial Private Sector Provided by Banks.

bailing out the financial system.[678] However, the agencies note that one function of the regulatory capital framework is to reduce the probability of a crisis and the need for extraordinary government support in the event of stress. Conversely, a small open economy may wish to have a higher capital level to reduce the likelihood of banking stress that subsequently triggers a sovereign debt crisis.[679] Differences in the degree to which an economy uses a bank-based system of finance versus a market-based system may also affect the optimal level of capital in the banking system.

5. Differences Across U.S. Households

The literature on the optimal capital level typically considers macroeconomic benefits and costs through the lens of an economic agent that represents the household sector.[680] As such, these models typically look past heterogeneity across U.S. households. However, the economic situation of different households may influence their costs and benefits from banking organization capital requirements.

Commenters on previous capital proposals have raised concerns that certain increased risk weights may increase costs and impede access to credit for members of disadvantaged communities. Economic theories link net worth to the cost of external finance.[681] Specifically,

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[678] *See* Vania Stavrakeva, "Optimal Bank Regulation and Fiscal Capacity," 87 *The Review of Economic Studies* 1034, 1034–89 (Mar. 2020) ("Stavrakeva (2020)"), *https://doi.org/10.1093/restud/rdz012*.

[679] Alter and Beyer (2014) provides an empirical analysis of spillovers between banks and sovereign debt. *See* Adrian Alter and Andreas Beyer, "The Dynamics of Spillover Effects During the European Sovereign Debt Turmoil," 42 Journal of Banking & Finance 134, 134–153 (May 2024) ("Alter and Beyer (2014)"), *https://doi.org/10.1016/j.jbankfin.2014.01.030*.

[680] Such models are typically referred to as "representative agent" models.

[681] *See* Ben S. Bernanke and Mark Gertler, "Inside the Black Box: The Credit Channel of Monetary Policy Transmission" 9 Journal of Economic Perspectives 27, 27–48 (Fall 1995) ("Bernanke and Gertler (1995)"), *https://www.aeaweb.org/articles?id=10.1257/jep.9.4.27;* Ben S. Bernanke, Mark Gertler, and Simon Gilchrist, "The Financial Accelerator in a Quantitative Business Cycle Framework," *Handbook of Macroeconomics*, Vol. 1, Ch. 21 (John B. Taylor & Michael Woodford eds., 1999) ("Bernanke et al. (1999)"), *https://doi.org/10.1016/S1574-0048(99)10034-X.*

members of disadvantaged communities would likely have lower net worth and thus be more adversely affected by an increased cost of borrowing. For example, Fairlie et al. (2022) find that borrowers from certain disadvantaged communities face higher interest rates and exhibit more reluctance to seek bank debt.[682] The reduction in capital requirements stemming from the proposals may encourage banking organizations to introduce new banking products and expand the availability of products to more customers, facilitating financial inclusion.

Conversely, members of disadvantaged communities may be at higher risk of suffering losses during financial stress. For example, Bayer et al. (2016) find that members of such communities had higher rates of delinquency and default on their mortgage debt during the 2007-09 financial crisis.[683] In addition, Contreras et al. (2023) show that bank failures can increase income inequality.[684]

Question 196: What alternative approaches, if any, should the agencies consider for assessing the macroeconomic benefits and costs of the changes in the level of required capital that would result from the proposals, and why?

6. Benefits from Improved Risks Measurement

The proposal's changes to the measurement of credit risk, market risk, and operational risk aim to improve how regulatory capital ratios capture the underlying economic riskiness of covered banking organizations' balance sheets and activities. Improving the measurement of key

[682] *See* Robert Fairlie, Frank M. Fossen, Reid Johnsen, & Gentian Droboniku, "Were Small Businesses More Likely to Permanently Close in the Pandemic?," 60 *Small Business Economics* 1613, 1613–1629 (2023) ("Fairlie et al. (2023)"), *https://doi.org/10.1007/s11187-022-00662-1.*

[683] *See* Patrick Bayer, Fernando Ferreira, & Stephen L. Ross, "The Vulnerability of Minority Homeowners in the Housing Boom and Bust," 8 American Economic Journal: Economic Policy 1, 1–27 (Feb. 2016) ("Bayer et al. (2016)"), *https://www.aeaweb.org/articles?id=10.1257/pol.20140074.*

[684] Salvador Contreras, Amit Ghosh, & Iftekhar Hasan, "The Effect of Bank Failures on Small Business Loans and Income Inequality," 146 Journal of Banking & Finance, Art. No. 106690 (Jan. 2023) ("Contreras et al. (2023)"), *https://doi.org/10.1016/j.jbankfin.2022.106690.*

policy inputs and reducing complexity in the regulatory framework contributes to enhancing and consistency while avoiding potential deadweight losses in the banking sector associated with miscalibrated capital requirements.

While capital requirements figure prominently in banking organizations' intermediation decisions, pinning down their optimal level to foster economic activity and to increase welfare is challenging. Deposit insurance is viewed in the literature as one of the rationales for the existence of capital requirements.[685] The use of capital requirements to mitigate moral hazard induced by government guarantees and contribute to financial stability depends on appropriate calibration to avoid excessive risk-taking behavior by banking organizations.[686] By improving the measurement of risks that banking organizations are subject to, the proposal contributes to avoiding potential deadweight losses resulting from the deviation of capital requirements from their socially optimal level.

Given the far-reaching effects of banking policies on the real economy,[687] the proposal aims to reduce the unintended consequences of capital regulation by improving the measurement of risks to which covered banking organizations are exposed. For instance, migration of certain

[685] John H. Kareken & Neil Wallace, "Deposit Insurance and Bank Regulation: A Partial-Equilibrium Exposition," *The Journal of Business*, 51(3), 413-438 (July 1978) ("Kareken and Wallace (1978)"), https://www.jstor.org/stable/2352275; Skander J. Van den Heuvel, "The Welfare Cost of Bank Capital Requirements," *The Journal of Monetary Economics*, 55(2), 298-320 (March 2008) ("Van den Heuvel (2008)"), https://doi.org/10.1016/j.jmoneco.2007.12.001.

[686] Caterina Mendicino, Kalin Nikolov, Javier Suarez & Dominik Supera, "Optimal Dynamic Capital Requirements," *The Journal of Money, Credit and Banking*, 50(6), 1271-297 (September 2018) ("Mendicino et al. (2018)"), https://doi.org/10.1111/jmcb.12490; Vadim Elenev, Tim Landvoigt & Stijn Van Nieuwerburgh, "A Macroeconomic Model With Financially Constrained Producers and Intermediaries," *Econometrica*, 89(3), 1361-1418 (May 2021) ("Elenev et al. (2021)"), https://doi.org/10.3982/ECTA16438.

[687] Jose M. Berrospide & Rochelle M. Edge, "Bank capital buffers and lending, firm financing and spending: What can we learn from five years of stress test results?", *The Journal of Financial Intermediation*, 57 (January 2024) ("Berrospide and Edge (2024)"), https://doi.org/10.1016/j.jfi.2023.101061.

lending activity from depository institutions to nonbanks, as described in section VIII.A.6, may be mitigated by improving risk measurement inside of the banking sector.

Reducing complexity in the regulatory framework enhances transparency of capital requirements and supports market discipline. As financial innovation made the banking system more complex, financial regulation has been strengthened to preserve the safety and soundness of the banking sector.[688] Increased regulatory burden and complexity stemming from this more restrictive environment may have contributed to the increase in noninterest expenses faced by covered banking organizations through higher compliance costs.[689] Overly complex banking regulation could also contribute to systemic risk by incentivizing regulatory arbitrage and encouraging migration of activities toward nonbanks.[690] By making the regulatory framework simpler, the proposal aims to reduce compliance burdens while preserving the financial stability benefits of banking regulation.

7. Microprudential Consequences of the Proposals

As discussed in section VII.B.1, the proposed revisions to the calculation of risk-weighted assets and the G-SIB surcharge are projected to reduce the capital requirements of

[688] Richard J. Herring, "The Evolving Complexity of Capital Regulation," *The Journal of Financial Services Research*, 53, 183-205 (April 2018) ("Herring (2018)"), https://doi.org/10.1007/s10693-018-0295-8.

[689] Thomas L. Hogan & Scott Burns, "Has Dodd–Frank affected bank expenses?" *The Journal of Regulatory Economics*, 55, 214-236 (April 2019) ("Hogan and Burns (2019)"), https://doi.org/10.1007/s11149-019-09379-8;

Adrien Alvero, Sakai Ando & Kairong Xiao, "Watch What They Do, Not What They Say: Estimating Regulatory Costs from Revealed Preferences," *The Review of Financial Studies*, 36(6), 2224-2273 (June 2023) ("Alvero et al. (2023)"), https://doi.org/10.1093/rfs/hhac089; Jean-Edouard Colliard & Co-Pierre Georg, "Measuring regulatory complexity," *The Journal of Financial Economics*, 174, 104186 (December 2025) ("Colliard and Georg (2025)"), https://doi.org/10.1016/j.jfineco.2025.104186.

[690] Prasanna Gai, Malcolm Kemp, Antonio Sanchez Serrano & Isabel Schnabel, "Regulatory complexity and the quest for robust regulation," *SUERF Policy Note*, 86 (July 2019) ("Gai et al. (2019)"), https://www.suerf.org/publications/suerf-policy-notes-and-briefs/regulatory-complexity-and-the-quest-for-robust-regulation/.

Category I and II banking organizations by about 2.7%. This projected change is primarily from the GSIB surcharge proposal, while the proposed changes to the calculation of risk-weighted assets leaves capital requirements approximately unchanged. When combined with the effects of the proposed changes to stress test model and scenarios, common equity tier 1 requirements for Category I and II banking organizations are projected to decline by a moderate 5.1%. Furthermore, the proposed changes to risk weights are expected to lower common equity tier 1 requirements for Category I and II depository institutions by about 5.3%.

These lower capital requirements could moderately reduce these banking organizations' ability to withstand financial stress, marginally increasing their risk of failure. Specifically, reducing capital requirements could increase the size and likelihood of losses, thereby shifting losses from shareholders to creditors and the Deposit Insurance Fund in the event that the FDIC is required to resolve the insured depository institution. Category I and II depository institutions remain subject to heightened supervisory and regulatory standards. Additionally, the parent GSIBs remain subject to resolution planning requirements, designed to facilitate rapid and orderly resolution under the U.S. Bankruptcy Code. The resolution plans of GSIBs envision a single-point-of entry strategy, under which parent GSIBs would enter resolution while material subsidiaries, including insured depository institutions, continue to operate on a going-concern basis and therefore would not enter FDIC receivership requiring the use of Deposit Insurance Fund resources. Finally, as the tier 1 leverage ratio is included in the pricing methodology for large banks, assessments paid by Category I and II depository institutions may increase if tier 1 capital declines as a result of the proposal, partially offsetting any additional losses to the Fund that might occur. While the combined proposals maintain a strong level of capital in the regulatory framework and the proposed changes are expected to support financial intermediation

by covering banking organizations, these microprudential effects are a potential cost of the combined proposals.

D. Effects on Lending (including credit cards, residential mortgages, and business lending)

Lending is a cornerstone of banking and an essential source of financing to households and businesses through which banking organizations fulfill their fundamental economic role of intermediating between savers and borrowers. For Category I and II banking organizations, lending encompasses a diverse range of products including consumer loans such as credit cards, auto loans, student loans, and personal loans; commercial loans to corporations, small businesses, and financial institutions; as well as residential mortgages, exposures to GSEs, and commercial real estate loans. Lending supports economic growth by enabling capital formation, business expansion, and household wealth-building through homeownership and other forms of credit access. Given the importance of lending to the broader economy, this section analyzes the potential economic effects of the proposal on lending by Category I and II banking organizations.

The agencies provided the overall impact of the proposal on lending activity and the marginal effects of other proposals in section VII.C. In this section, the agencies examine specific lending segments—including credit cards, residential mortgages, and corporate loans to provide additional insights on the costs and benefits of the proposal for these segments.

1. Credit Cards

As explained in section IV.A.3.b, the proposal's impact on credit card exposures varies by borrower repayment history and credit line utilization. The current standardized approach applies a 100 percent risk weight to the drawn, on-balance sheet portion of all credit card exposures, while generally a zero percent credit conversion factor (CCF) would apply to the undrawn

portion of the exposure. The proposal differs in three ways (see sections IV.A.2.d and IV.A.3). First, risk weights would vary by the obligor's repayment history: 45 percent for transactor exposures and 75 percent for non-transactor exposures (revolvers). Second, a 10 percent CCF would apply to the unutilized portion of all credit lines that are unconditionally cancelable commitments. Third, operational risk capital requirements would reflect interest-earning assets, net interest income, fee income, and fee expenses associated with credit cards.[691]

The proposal's differential treatment of credit cards that are retail exposures reflects a more risk-sensitive approach compared with the current standardized approach's uniform 100 percent risk weight:

- **Non-transactor exposures:** The proposal's impact depends on utilization rates. Accounts with lower utilization would generally face higher capital requirements because applying a 10 percent credit conversion factor to the large unused portion of the credit line, combined with operational risk-weighted assets, more than offsets the benefit of the reduced credit risk weight. Accounts with higher utilization may face lower capital requirements, as the reduced credit risk weight (75 percent compared with the current 100 percent) applied to the large drawn portion more than offsets the capitalization of the small unused portion, although operational-risk add-ons would partially offset this reduction.
- **Transactor exposures:** Similarly, the proposal's impact varies significantly by utilization rates. Transactor exposures with lower utilization could still face higher capital

[691] As discussed in detail in section VII.D, operational risk capital requirements would result from interest-earning assets, net interest income, fee income, and fee expenses associated with credit cards. Based on the figures presented in Table VII.6 of section VII.D, the agencies estimate that operational risk capital requirements for credit card exposures, which are a subset of retail lending, would be equivalent to approximately 20 percentage points when expressed as an add-on to credit risk weights. This estimate reflects the ratio of operational risk RWAs to credit risk RWAs for retail exposures ($172 billion / $840 billion).

requirements despite the reduced credit risk weight (45 percent compared with the current 100 percent), primarily because capitalizing their substantial unused commitments dominates the calculation. Accounts with higher utilization would benefit from lower capital requirements, as the substantially reduced credit risk weight more than offsets the capitalization of unused commitments and operational-risk add-ons.

The proposal would align capital requirements more closely with the underlying credit risk across borrower types and usage patterns. This risk-sensitive framework would provide incentives for banking organizations to differentiate among credit card exposures based on repayment behavior, enhancing the risk-responsiveness of regulatory capital requirements for retail exposures.

2. Residential Mortgages

The proposal includes several provisions that may impact mortgage lending activities, such as traditional originate-to-hold lending, originate-to-distribute lending, investing in mortgage-backed securities, funding nonbank mortgage lenders and servicers, and servicing of loans both held in portfolio and in mortgage-backed security pools. In this section, the agencies analyze how the proposal could affect mortgage activities.

The proposal would enhance risk sensitivity in the treatment of residential mortgage loans, whether originated by the banking organization or purchased from another lender. Under the current standardized approach, a prudently underwritten first lien residential mortgage on a property that is either owner-occupied or rented generally receives a 50 percent risk weight; other mortgages receive a 100 percent risk weight. The proposal would assign risk weights to the

former category (generally regulatory residential real estate exposures under the proposal) based on the LTV ratio of the mortgage, among other factors.[692]

To better understand which types of borrowers are more reliant on mortgages with high LTV ratios, the agencies conducted an analysis of Home Mortgage Disclosure Act (HMDA) data collected by the Federal Financial Institutions Examination Council (FFIEC) and the Consumer Financial Protection Bureau.[693] The institutions reporting these data include the universe of depository and non-depository mortgage lenders that extend more than a minimal number of loans in any metro area. The data are at the applicant level, and the analysis focuses on originated first-lien purchase mortgages. The data include information about both the institutions that originated the loans and whether a loan was sold or securitized.[694]

The results of this analysis are presented below in Table VIII.4. The discussion of results to follow focuses mainly on Panel A. Panel B of Table VIII.4 reproduces the analysis using loan dollar volumes as opposed to loan counts, with broadly consistent results. The first column presents the total number of loans originated. The second column shows average LTV ratios at

[692] The proposal would also assign risk weights for residential mortgage exposures based on whether the residential real estate loan is dependent on cash flows from the property for repayment of the loan. For purposes of this analysis, the agencies have restricted the sample to primary residence loans (HMDA occupancy field = 1), excluding any investment properties from the sample.

[693] Data represent the most comprehensive available source of loan-level information on U.S. mortgage market activity. Originally enacted by Congress in 1975 and implemented through Regulation C, HMDA requires many financial institutions to maintain, report, and publicly disclose detailed mortgage lending information. The dataset serves three primary purposes: (1) assessing whether lenders adequately serve their communities' housing needs, (2) providing public officials with data-driven insights for policy decisions, and (3) identifying potentially discriminatory lending patterns. To protect applicant and borrower privacy, the publicly available data are modified before release. *See* Consumer Financial Protection Bureau & FFIEC, "Home Mortgage Disclosure Act: HMDA Data Publication" (downloaded on October 1, 2025; most recent available loan data sets from Jan. to Oct. 2023) ("HMDA Data (2023)"), *https://ffiec.cfpb.gov/data-publication/2023.*

[694] The data also include information on loan size, origination LTV ratio, borrower income and race/ethnicity, and the income and racial composition of the borrower's neighborhood. While a version of the data is public, the analysis utilized a confidential version to better identify which loans were sold. *See* Consumer Financial Protection Bureau & FFIEC, "Home Mortgage Disclosure Act: Public HMDA - LAR Data Fields" (accessed on October 1, 2025), *https://ffiec.cfpb.gov/documentation/publications/loan-level-datasets/lar-data-fields*.

origination by borrower or loan type. Columns three through five present origination market shares by Category I and II banking organizations, other banking organizations (including credit unions solely for this purpose), and nonbank lenders, respectively. Column six shows the share of mortgages held in portfolio, meaning whole loans funded long-term on the balance sheet, by Category I and II banking organizations.[695] The last column applies the proposal's LTV-based risk weights to all originated loans extended to each borrower or loan type, as though they were all held on these banking organizations' balance sheets.[696] These reflect credit risk-weighted assets only. The rows break down results by borrower income and loan type. Below, the agencies make comparisons incorporating implied operational risk-weighted assets.

The rows of the table break out the results by different borrower and loan types. Rows two and three divide mortgages into those taken by low-to-moderate income (LMI) and higher income borrowers. Rows four and five divide mortgages by loan size, specifically into jumbo (that is, those above the loan size limits set by the GSEs for their loan purchases and securitizations) and non-jumbo. Rows six and seven segment conventional loans from non-

[695] The agencies estimated borrower characteristics for loans purchased by Category I and II banking organizations from loan origination records. This was necessary as records of loan purchases by covered banking organizations from other lenders typically do not include borrower demographic data. This allows a breakdown of the share of whole loans held longer term on covered banking organization balance sheets in the second to last column. To estimate demographic data for purchased loans, the agencies sorted both originated and purchased loans into 96 bins based on three characteristics: loan-to-value ratio (LTV), census tract median income relative to the loan's MSA or MD median income, and the percentile of a loan's property value relative to other loans in the same MSA or MD. Specifically, loans were categorized using six LTV tranches (0 to 50 percent, greater than 50 to 60 percent, greater than 60 to 80 percent, greater than 80 to 90 percent, greater than 90 to 100 percent, and greater than 100 to 120 percent); four MSA-based income tranches (census tract income less than 0.5 times MSA/MD median income, 0.5 to less than 0.8 times, 0.8 to less than 1.2 times, and 1.2 times or greater); and four MSA-based home price tranches based on property value percentiles within each MSA or MD (0 to 25th percentile, greater than 25th to 50th percentile, greater than 50th to 75th percentile, and greater than 75th percentile). For originated loans in each bin, the agencies calculated the share that ended up funded as portfolio loans of Category I and II banking organizations. This share was then applied as the probability that purchased loans in the same bin would be funded as portfolio loans by these banking organizations. Additionally, all loans in the sample—both originated and purchased—were limited to first-lien, home-purchase loans for one-unit, owner-occupied, one- to four-family housing (excluding manufactured homes), and excluded open-end lines of credit and reverse mortgages.

[696] This approach implicitly assumes that changes in risk weights affect all issuance, regardless of whether a particular loan will be held on balance sheet.

conventional, where the latter are loans available only to specific borrowers as specified by various sponsor agencies.[697] These mortgages are frequently extended with ultra-low down payments and securitized into Ginnie Mae mortgage-backed securities.[698]

Table VIII.4: First Lien Purchase Mortgages

Panel A: Aggregated by Loan Count

			Origination Share				
	Mortgages Originated (000s) (1)	Avg LTV (2)	Cat I and II Banking Organizations (3)	Other Banking Organizations (4)	Non-banks (5)	Share Funded as Cat I and II Banking Organization Portfolio Loans (6)	Avg Credit Risk Weight under proposal (7)
All borrowers	2,309	85%	4%	30%	65%	3%	41%
LMI borrowers	603	85%	3%	31%	66%	1%	42%
Non-LMI borrowers	1,706	85%	5%	30%	65%	4%	41%
Jumbo loan	100	78%	21%	48%	31%	27%	34%
Non-jumbo loan	2,209	85%	3%	30%	67%	2%	42%
Conventional loan	1,579	80%	6%	36%	58%	4%	37%
Non-conventional loan	730	96%	1%	18%	81%	0%	51%

Panel B: Aggregated by Loan Amount

			Origination Share		

[697] The sponsor agencies are predominantly the Federal Housing Administration, Department of Veterans Affairs, and the United States Department of Agriculture.

[698] *See* Government National Mortgage Association (Ginnie Mae), "Programs and Products," *https://www.ginniemae.gov/about_us/what_we_do/Pages/programs_products.aspx* (accessed [1/6/2026]).

	Mortgage Balance Originated ($, bn)	Avg LTV	Cat I and II Banking Organizations	Other Banking Organizations	Non banks	Share Funded as Cat I and II Banking Organization Portfolio Loans	Avg Credit Risk Weight
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
All borrowers	867	85%	7%	31%	62%	7%	40%
LMI borrowers	130	87%	3%	27%	70%	1%	43%
Non-LMI borrowers	737	84%	8%	31%	61%	8%	40%
Jumbo loan	124	77%	25%	48%	27%	31%	33%
Non jumbo loan	743	86%	4%	28%	68%	3%	42%
Conventional loan	630	80%	9%	36%	55%	9%	36%
Non-conventional loan	238	96%	1%	17%	82%	0%	51%

Note: This table shows first lien purchase mortgages by loan count and loan amount for January to October 2023. Source: HMDA Data Publication from Jan. to Oct. 2023 as collected by the Consumer Financial Protection Bureau and FFIEC.[699]

Although Category I and II banking organizations extend a large number of mortgages, their market share is low both in absolute terms and particularly in comparison to their overall footprint in the banking sector. From Table VIII.4 Panel A, Category I and II banking organizations originate only 4 percent of mortgages and fund only 3 percent of mortgages as portfolio loans (as seen in row one of columns three and six), compared to the 30 percent for the other banking organizations (column four). As seen in row four in Panel A (or 7 percent relative to 31 percent by dollars of loan volume in Panel B), Category I and II banking organizations

[699] *See* HMDA Data Publication, *https://ffiec.cfpb.gov/data-publication*. HMDA data are published with a significant delay. The data used in the analysis are the most recent data available at the time of this analysis.

originate and fund a much larger share of jumbo loans. Comparing column two of rows two and three indicates that higher- and lower-income borrowers obtain mortgages with similar LTV ratios on average.

The last column of Table VIII.4 shows the average credit risk weight that would apply to each segment of loans under the expanded risk-based approach. For example, in Panel A, the 42 percent average risk weight in row two of column seven for low-to-moderate income borrowers is calculated based on the distribution of LTV ratios for all mortgages extended to low-to-moderate income borrowers in the data, whether they were originated by Category I and II banking organizations, other banking organizations, or nonbanks.

To characterize the total impact of the proposal, the agencies also convert the operational risk-weighted assets attributable to these loans into an effective additional risk weight. More specifically, as described in section VII.D, the agencies estimate operational risk-weighted assets based on exposures' contribution to each component of the operational risk business indicator. These estimated operational risk-weighted assets are then divided by the total balance sheet exposures in the residential mortgage market to determine the effective additional risk weight. This methodology yields an implied interest income operational risk weight add-on of around 4 percent on average across Category I and II banking organizations.[700]

In line with the decline in aggregate risk-weighted assets for residential mortgages under the proposal, estimated effective risk weights, inclusive of operational risk, would be stable or falling for almost all types of mortgage borrowers relative to the 50 percent risk weight in the current standardized approach. For instance, for low-to-moderate income borrowers (second

[700] As noted above for credit cards, the operational risk weight add-on does vary across Category I and II banking organizations and over time for the same organization depending on whether recent net interest margins are above or below the 2.25 percent ceiling. When below, the effective operational risk weight depends on the net interest margin of the particular activity, which for mortgages is relatively moderate.

row), the total equivalent risk weight under the proposal would be 46 percent (42 percent from credit risk and 4 percent from operational risk). Therefore, effective risk weights would be lower than the 50 percent risk weight applicable under the current standardized approach for most types of borrowers. Jumbo loans would see the largest reduction, with average risk weights more than 10 percentage points lower than the current standardized approach. Non-conventional loans would see an increase in average risk weights. However, because these loans are for the most part not originated by Category I and II banking organizations, this change would have limited practical impact.

In addition to lowering average risk weights at origination for portfolio mortgages, the expanded risk-based approach would also include additional risk sensitivity relative to the current standardized approach as the LTV-based tables allow further decreases in risk weights over time as mortgages are paid down. That is, the proposal better accounts for amortization through reduced risk weights as mortgages migrate to lower LTV ratio buckets over time. These amortization provisions would support mortgage lending, particularly under the originate-to-hold model.

The agencies supervise banking organizations' mortgage underwriting in accordance with the Interagency Guidelines for Real Estate Lending.[701] These guidelines assist banking organizations in formulating and maintaining a real estate lending policy that satisfies supervisory expectations and is appropriate to the banking organization. For mortgages with an LTV ratio at or above 90 percent at origination, the guidelines recommend that banking organizations require appropriate credit enhancements, including private mortgage insurance or

[701] *See* Interagency Guidelines for Real Estate Lending, 12 CFR part 34 subpart D app. A (OCC); Interagency Guidelines for Real Estate Lending Policies, 12 CFR part 208 app. C (Board); Interagency Guidelines for Real Estate Lending Policies, 12 CFR part 365 subpart A app. A (FDIC).

readily marketable collateral. Under both the current standardized approach and the proposed expanded risk-based approach, mortgages that do not meet the standards in the guidelines receive a 100 percent risk weight, while prudently underwritten mortgages receive lower risk weights, which would vary by LTV ratio under the proposal. Therefore, the proposal would not lower risk weights for higher-risk mortgages.

Many banking organizations that would be subject to the expanded risk-based approach extend mortgages under an originate-to-distribute business model. The introduction of operational risk-weighted assets for these activities under the proposal could lead these banking organizations to reduce this activity if, for example, such requirements lead to higher funding costs and these banking organizations are unable to raise mortgage margins to compensate in what is a competitive market. In the originate-to-distribute business model, the banking organization underwrites a loan following the standards of the GSEs, Ginnie Mae sponsor agencies, or private label mortgage-backed securities issuers and sells the mortgage to a securitizer, holding it on balance sheet for a short period, often only a matter of weeks. Profits in this business line are largely attributable to the prices offered by mortgage-backed security investors, origination fees, and the valuation of the servicing rights generated by the origination and sale of the mortgage. Under the proposal, this noninterest income would generate operational risk-weighted assets. Fuster et al. (2013) develop a methodology to measure average originator profits and use it to produce a monthly series. Over the past 10 years, the measure has averaged 2.75 percent of originate-to-distribute loan volumes.[702] Although a lack of granular data on

[702] *See* Andreas Fuster, Laurie Goodman, David Lucca, Laurel Madar, Linsey Molloy, & Paul Willen, "The Rising Gap Between Primary and Secondary Mortgage Rates," 19 *Federal Reserve Bank of New York Economic Policy Review* 17, 17–39 (Dec. 2013) ("Fuster et al. (2013)"), https://www.newyorkfed.org/research/epr/2013/execsum_fust.html. The Fuster et al. (2013) methodology remains valid under Basel III as it measures originator margins using observable market prices rather than regulatory models.

noninterest expenses prevents a precise quantification, the agencies expect residential real estate lending activities to generate about $100 billion in aggregate operational risk-weighted assets at Category I and II banking organizations, with about $26 billion of that attributable to noninterest income.[703]

Lax underwriting standards in the pre-financial crisis period resulted in the GSEs requiring originating banking organizations to repurchase large quantities of non-performing mortgages.[704] The risks posed to banking organizations by so-called putback requests, along with legal actions, including for potential fair lending violations, are risks of the originate-to-distribute business model. Even though these mortgages are only briefly held on balance sheet, they entail ongoing risk of operational losses throughout their term. Because risk weights on portfolio mortgages under the proposal would tend to be lower than under the current standardized approach while income from mortgage securitization activities would now generate an operational risk requirement, Category I and II banking organizations may tilt their mortgage exposures somewhat towards portfolio lending and away from originate-to-distribute lending, depending on the strength of this incentive.[705]

The authors explicitly tested the framework's robustness to Basel III capital treatment changes (see Fuster et al. 2013, section 4.1, pp. 31-32).

[703] *See* sections VII.C and VII.D for further discussion and detail on the attribution of risk-weighted assets by banking activity and for detail on the methodology, respectively.

[704] *See* Laurie S. Goodman and Jun Zhu, "Reps and Warrants: Lessons from the GSEs Experience," 24 Journal of Fixed Income 29, 29–41 (June 2014) ("Goodman and Zhu (2014)"), *https://www.pm-research.com/content/iijfixinc/24/1/29.*

[705] *See* section VII.D. for a description of how operational risk-weighted assets are attributed across banking activities. Noninterest income associated with mortgage securitization activity is within items 14E through N of FR Y14Q Schedule G.

Banking organizations are significant funders of nonbank mortgage lenders via warehouse lines of credit.[706] The impact of the proposal on warehouse lending depends on several factors, including the application of the securitization framework to the exposures. On the one hand, this lending could be affected by proposed changes to the risk weights for certain corporate borrowers and credit conversion factors for off-balance sheet commitments.[707] To that end, the proposal's effects on warehouse lending could vary depending on the creditworthiness of the nonbank borrowers and the structure of the lending arrangements. If warehouse lending counterparties qualify as investment-grade borrowers, they would receive more favorable risk weights under the proposal compared to non-investment-grade counterparties.

On the other hand, both under the current framework and the proposal, mortgage warehouse lending can be treated as a securitization exposure rather than a corporate exposure when the structure meets the relevant criteria—typically based on the level of overcollateralization and the use of special-purpose entities. Further, the proposed securitization framework would generally require less capital under the credit risk framework and so the proposal would likely continue to incentivize extension of credit by banking organization to mortgage warehouse lenders using such structures.

In a lender's decision to make a mortgage loan, the profitability from a mortgage servicing asset, which is generated when a mortgage is securitized, is part of the economic

[706] *See* Erica Xuewei Jiang, "Financing competitors: Shadow banks' funding and mortgage market competition," The Review of Financial Studies 36, no. 10 (2023): 3861-3905, *https://doi.org/10.1093/rfs/hhad031.*

[707] The expanded risk-based approach would apply lower risk weights, relative to the current standardized approach, for investment grade corporate counterparties (65 percent vs. 100 percent). It would also apply a different treatment to commitments, where the standardized approach applies a 20 percent credit conversion factor to commitments with an original maturity of one year or less that are not unconditionally cancellable by the banking organization and a 50 percent credit conversion factor to commitments with an original maturity of more than one year that are not unconditionally cancellable by the banking organization. The expanded risk-based approach would apply a uniform 40 percent credit conversion factor to these exposures regardless of their maturity.

consideration. With performing loans, mortgage servicers collect borrowers' monthly payments and handle escrow for property tax and insurance payments. For non-performing loans, servicers must both work with borrowers to potentially amend payment plans and continue making tax and insurance payments and, in some cases, continue forwarding expected loan payments to mortgage-backed securities investors that, in the event of foreclosure, may not be recouped for some time.

Under the current standardized approach, Category I and II banking organizations must deduct MSAs from CET1 capital when they exceed 10 percent of CET1 capital individually or 15 percent in aggregate with other threshold items, with any non-deducted portions receiving a 250 percent risk weight. The proposal would eliminate this deduction requirement, instead applying a 250 percent risk weight to all MSAs.

The removal of capital deductions for mortgage servicing rights would incentivize Category I and II banking organizations to expand mortgage servicing activity. Eliminating the deduction requirement would significantly reduce the regulatory disincentives for maintaining such assets, which may contribute to a more active secondary market for mortgage servicing rights as banking organizations face fewer capital constraints when holding these assets.

While maintaining the 250 percent risk weight acknowledges MSAs' inherent risk due to interest rate sensitivity and complexity, the proposed treatment could alter capital allocation decisions. This would create opportunities for deployment of capital that would otherwise be restricted under the current framework; the agencies would continue monitoring MSA concentration and market value volatility during periods of economic stress.[708]

[708] *See* the 2016 agencies report available at: *https://www.federalreserve.gov/publications/other-reports/files/effect-capital-rules-mortgage-servicing-assets-201606.pdf.*

Taken together, the proposal would enhance risk sensitivity in residential mortgage lending by implementing more granular risk weights based on loan characteristics like LTV ratios and credit quality. The proposal is also expected to have a positive impact on the availability of mortgage credit relative to the current standardized approach. In part, the limited expected impact comes from Category I and II banking organizations originating fewer than 10 percent of residential mortgages and holding less than that as portfolio loans. The proposal would decrease funding costs for most portfolio lending operations undertaken by Category I and II banking organizations, by increasing risk sensitivity of capital requirements for mortgages compared to the current standardized approach. Category I and II banking organizations may consider these shifts in incentives among other factors when deciding their future participation in these activities.

3. Corporate Loans

The current standardized approach requires banking organizations to assign a 100 percent risk weight to all corporate loan exposures. Off-balance-sheet exposures, substantially consisting of unutilized portions of credit lines, are subject to requirements through credit conversion factors.

The application of credit conversion factors under the current standardized approach varies based on the nature and duration of the commitment. For commitments that are not unconditionally cancelable, the credit conversion factor depends on the original maturity: those with an original maturity of one year or less are assigned a 20 percent credit conversion factor, while those exceeding one year receive a 50 percent credit conversion factor. Commitments that are unconditionally cancellable receive a zero percent credit conversion factor.

The proposed expanded risk-based approach would enhance risk sensitivity by allowing banking organizations to assign lower risk weights (65 percent versus current 100 percent) to loans to investment-grade corporate borrowers based on internal ratings. Further, the proposal would apply a 10 percent credit conversion factor to unconditionally cancellable commitments, and apply a flat 40 percent credit conversion factor to commitments that are not unconditionally cancellable regardless of maturity. As mentioned above, the proposal would also introduce operational risk-weighted assets attributed to the interest and fee income associated with loans and credit lines.

Applying differentiated risk weights to investment-grade and non-investment-grade exposures increases the risk sensitivity of the framework by distinguishing between varying exposure risks. Banking organizations can leverage their existing risk management frameworks through internal ratings systems for determining investment-grade status. This more granular risk assessment approach could better align capital with actual risk exposures.

Since differentiation would be based on individual organizations' internal credit risk models, there could be variability in requirements for similar risks. The proposal addresses this by setting expectations for investment-grade determinations when applying the 65 percent risk weight. Robust supervisory oversight would help ensure appropriate application of investment-grade criteria and prevent banking organizations from using this framework to grant lower risk weights to riskier loans.

The internal ratings systems used for determining investment-grade status undergo ongoing refinement and validation, helping ensure appropriate capital levels through different economic conditions. The agencies estimate a meaningful reduction in capital requirements for

affected institutions, based on applying a 35 percentage point reduced risk weight to applicable investment-grade exposures.

As described in section VII.D.1.c, based on data from the special data collection, an estimated 53 percent of balance-sheet corporate exposure and 60 percent of off-balance-sheet corporate exposure is classified as investment-grade and would be risk-weighted at 65 percent under the proposal for Category I and II banking organizations. This expanded scope would likely result in a more efficient allocation of capital, with the potential for banks to pass some capital relief to borrowers in the form of reduced borrowing costs or increased credit availability for investment-grade corporations. The more targeted approach to risk weighting may encourage lending to financially sound corporations, supporting productive economic activity while still maintaining appropriate capital buffers against potential losses.

The proposed changes to credit conversion factors present a mixed impact on capital requirements for individual loans. The implementation of a flat 40 percent credit conversion factor for commitments that are not unconditionally cancellable would decrease capital requirements for longer-term commitments (previously at 50 percent) while increasing requirements for shorter-term commitments (previously at 20 percent). This change would likely encourage banks to provide more long-term credit compared with the current framework, potentially benefiting businesses seeking stable, longer-term financing arrangements. The standardization could also simplify regulatory compliance while providing incentives for longer-duration lending that may better match the funding needs of many corporate borrowers. The introduction of a 10 percent credit conversion factor for unconditionally cancellable commitments would increase capital requirements for these exposures, which currently receive a 0 percent factor. While this change better recognizes the inherent risk in such commitments, it

could also lead to adjusted pricing or terms for certain credit products, particularly revolving credit facilities.

In sum, the proposed expanded risk-based approach represents an enhancement to the current standardized approach by improving risk sensitivity through differentiated treatment of corporate exposures based on creditworthiness. It also streamlines the approach to off-balance-sheet exposures and incorporates operational risk requirements. The agencies' analysis suggests that Category I and II banking organizations would experience a decrease in their overall capital requirements for these exposures, potentially leading to increased lending activity. The proposal also creates incentives for longer-term lending by equalizing credit conversion factors across maturity bands. These changes, implemented within the existing supervisory framework, aim to create a more risk-sensitive capital regime that supports economic activity.

E. Effects on Trading

This part of the economic analysis studies the potential effects of the proposal on the trading businesses of banking organizations and the resulting potential effects on end users and markets. On a standalone basis, this proposal would raise the capital required for trading. Taken together with the proposals to change to the GSIB surcharge and supervisory stress test models, the combined impact is estimated to be a 9.2 percent increase in common equity tier 1 capital for Category I and II banking organizations (see table VII.7) and a small impact on non-Category I and II banking organizations (see discussion in section VII.A.1).

Trading activity exposes banking organizations to market risk, counterparty credit risk, CVA risk, and operational risk. This proposal makes changes to how each of these risks are capitalized. There are major revisions to the market risk framework which would affect incentives for banking organizations' hedging strategies and risk modelling methods. Proposed changes to the credit risk framework would somewhat reduce counterparty credit risk-weighted

assets. CVA and operational risk-weighted assets would be required for many banking organizations, whereas these are currently not part of the standardized approach that generally determines capital requirements today.

The proposal would have different impacts on banking organizations depending on their size. Category I and II banking organizations are key participants in the capital markets and conduct the majority of trading among banking organizations. These banking organizations have diversified trading businesses, which can provide substantial diversification benefits even in stress periods. The proposed market risk framework intentionally limits the recognition of diversification across risk classes and adds a layer of conservatism for non-modellable risk factors. Due primarily to these two features, this proposal would increase market risk-weighted assets for Category I and II banking organizations by 20 percent (see table VII.2 in section VII.A). However, the cumulative effect inclusive of the GSIB surcharge proposal and stress test changes is projected to be a 5.8 percent decrease in the common equity tier 1 capital requirements associated with market risk (see table VII.4 in section VII.B.2). The reduction is largely due to changes to the global market shock that would reduce the liquidity horizons used to calibrate risk-factor shocks and offset the increase in market risk-weighted assets. This change to the global market shock would be expected to increase banking organizations' incentives to participate in trading.

This proposal also makes significant changes to the frameworks for CVA and operational risk-weighted assets. These are currently explicitly included in the advanced approaches calculation, but not in the standardized approaches calculation which is most often the binding constraint. Under the proposal, all Category I and II banking organizations would be required to include them. The CVA and operational risk-weighted assets associated with trading activity can

be seen in table VII.6. The impact due to their inclusion is significantly larger than the proposed changes in market risk-weighted assets. Overall risk-weighted assets for trading-related activities of Category I and II banking organizations would rise 30.9 percent (see table VII.5). Despite this significant increase in risk-weighted assets, when considering the other proposals, in particular the proposed changes to the global market shock, the combined impact on capital requirements would be a moderate 9.2 percent.

In contrast, this proposal will have a smaller impact on non-Category I and II banking organizations. Some of these have significant trading activity and must calculate market risk-weighted assets. The proposed changes to the market risk framework would result in a 39 percent decrease in market risk-weighted assets for non-Category I and II banking organizations.[709] This decrease is likely attributable to increased recognition of credit and equity hedges in the proposal relative to the current standardized specific risk charge, which is highly conservative and typically used by relatively smaller banking organizations . However, a few non-Category I and II banking organizations also have substantial exposure to over-the-counter derivatives, and under the proposal they would begin to include CVA risk-weighted assets. Not every banking organization would be subject to both requirements, but in the aggregate they offset each other. Finally, some non-Category I and II banking organizations might elect to use the expanded risk-based approach, in which case they would be required to also calculate operational risk-weighted assets for trading activity.

Under the proposal, total risk-weighted assets related to trading activity by non-Category I and II banking organizations would increase by 0.9 percent (see discussion in section VII.A.1).

[709] These impacts of changes to market and CVA risk-weighted assets for non-Category I and II banking organizations are not stated separately in section VII.A.1, but are calculated using the same underlying bank-specific impacts and methodology.

The proposed change to the GSIB surcharge does not affect these banking organizations. The impact of the proposed revisions to the supervisory stress is expected to be small since most non-Category I and II banking organizations are not subject to the global market shock.

The post-implementation change in trading-related capital requirements could be lower than these estimates as banking organizations could optimize requirements under the proposal, including by changing their trading activities and modeling approaches.

The agencies expect the proposal would increase the resilience of banking organizations by better aligning capital requirements with risk in several ways. Replacing the Value at Risk (VaR)-based measure of market risk with an expected shortfall-based measure better reflects the tail risk of extreme events, especially for portfolios with non-normal return distributions. Replacing the current uniform 10-day liquidity horizon with varying horizons would better account for market illiquidity during stress periods and the risk that difficult-to-trade positions may lose more value as they remain on balance sheets longer. The more conservative recognition of diversification within the proposed framework would aim to capture the risk that historical correlations between risk factors may not hold in stress periods. The inclusion of equities within the default risk capital requirement would account for the possibility of the value of an equity falling to zero.

Finally, the proposed framework would better address model risk relative to the current framework. The proposal would hold the internal models used by banking organizations to a higher standard by introducing new tests of model performance while explicitly recognizing that some risk factors are not modellable. In addition, the proposal's introduction of a standardized approach would offer a conservative alternative for banking organizations that choose not to use internal models and serves as a fallback method when internal models perform poorly.

The agencies expect that capital requirements under the proposed framework would be substantially less procyclical, which would help to preserve the availability of intermediation during periods of financial stress. The current market risk framework is more procyclical because current period VaR is a substantial component of capital requirements and it generally rises during market stress, increasing market risk capital requirements and the cost of intermediation. The proposed market risk framework is calibrated based on historic stressed market conditions and, therefore, will tend to increase less under new stressed conditions, resulting in a less procyclical capital requirements.[710]

The following sections focus on how capital requirements are likely to change on average across different trading activities, and how changes in capital requirements for trading activities would generally affect banking organizations, end users, and markets.

1. Changes in capital requirements across different trading activities

Because banking organizations engage in a broad range of trading activities, this section takes a high-level view of how general categories of trading activities would be affected under the proposal. The agencies expect substantial heterogeneity in the capital impacts across both banking organizations and trading activities. Different products and portfolios receive different treatments, which could lead to capital requirements rising for some banking organizations and falling for others depending on their trading portfolios. Capital impacts would also depend on banking organizations' use of models, both under the current framework and the proposal.

[710] While the structure of the proposed framework avoids direct procyclicality, some components might indirectly contribute a degree of procyclicality for banking organizations using the models-based method. Stressed market conditions could cause these banking organizations to fail backtests or the profit and loss attribution test, which could potentially increase the banking organization's backtesting multiplier or force some modeled desks to revert to the standardized approach (or add a surcharge). Such market conditions might also increase the number of non-modellable risk factors.

Broadly, the agencies expect that capital requirements would be relatively higher for products that are exposed to risk factors that are less liquid, lack transaction data, or have complex payoff structures. Highly liquid and simple products would likely receive relatively lower capital requirements. Portfolios that are diversified across risk classes would receive less recognition of diversification compared to the current framework, which does not limit recognition of diversification between risk classes. Cross-asset-class hedges would also receive less recognition, likely leading to increases in risk-weighted assets for trading strategies that make substantial use of them.

a. Illiquid risk factors

Products with illiquid risk factors would be particularly affected by the proposal's introduction of variable liquidity horizons. Under the current framework, banking organizations estimate their risk over a 10-day horizon, based on the assumption that they can trade or hedge the exposure within that time period (liquidity horizon). The proposal would introduce liquidity horizons that vary across risk factors and assign longer liquidity horizons to less liquid risk factors to better reflect the time needed to sell or hedge the exposure to such risk factors. These liquidity horizons are explicitly in the models-based measure and are implicitly used to calibrate risk weights in the standardized approach. Highly liquid risk factors, such as linear U.S. dollar interest rate risk exposure, would maintain a 10-day liquidity horizon, while less liquid risk factors, such as those reflecting volatility exposures, would have higher liquidity horizons that could reach a maximum of 120 days.

The most liquid risk factors, with 10-day liquidity horizons, are generally interest rates for major currencies, foreign exchange rates for major currency pairs, and large cap equities. Products whose valuations are primarily affected by these risk factors would likely see limited

impact from the proposed liquidity horizon revisions.[711] The least liquid risk factors are implied volatilities, credit spreads, and many commodity prices. Thus, products whose valuations depend heavily on these risk factors, for example volatility swaps, would likely see larger capital requirement increases.

b. Market data availability

Risk factors lacking sufficient reliable data on transaction prices would likely see an increase in capital requirements for banking organizations using the models-based approach due to the non-modellable risk factor framework.

Within the models-based approach, a risk factor is modellable if it passes a qualitative test of data quality and a quantitative test of whether there is sufficient data from traded prices. If a risk factor passes the qualitative test, but fails the quantitative test, it is a Type A non-modellable risk factor. Otherwise, the risk factor is a Type B non-modellable risk factor.

Non-modellable risk factors are capitalized by first computing standalone losses and then aggregating them based on a formula that imposes assumptions about the correlations of those risk factors. Type A non-modellable risk factors are included in the internal model capital charge, but are assumed to have zero correlation in the stressed expected shortfall to capture their inherently higher risks associated with model risk and illiquidity. Type B non-modellable risk factors are only included in the stressed expected shortfall, but are assumed to have a higher correlation of 0.36 with other Type B non-modellable risk factors. In most cases, non-modellable risk factors are expected to contribute to higher capital requirements.

The non-modellable risk factor framework would have the largest impact on asset markets for which there is limited trade data, whether due to market illiquidity or limited access

[711] Examples include vanilla interest rate and foreign exchange swaps as well as cash equities.

to transaction details. The agencies expect that highly liquid products with easily-available data, such as large cap stocks, would not be materially affected. Less liquid products, such as certain fixed income products, would likely see a bigger impact. Products whose values are sensitive to illiquid parts of curves or surfaces, such as implied volatilities that are far away from current implied volatility, would also likely be more affected.

c. Specific risk

The agencies expect that products with substantial exposures to specific risk would have reduced capital requirements, but only for banking organizations that currently use the standardized approach for calculating specific risk capital charges. Such organizations tend to be smaller. Specific risk accounts for risks that are not covered by systematic market factors, such as idiosyncratic equity or credit spread risk. The standardized approach for capturing specific risk in the current framework makes highly conservative assumptions that are not included in the proposed framework. In particular, the current standardized approach only recognizes the netting of idiosyncratic risk from the same issuer if the offsetting positions are in identical instruments. The proposal would recognize offsetting of risks to the same issuer across different issuances based on a correlation parameter that takes into account the issuer name, tenor differences, and curve basis risk. This change in the treatment of specific risk is likely one of the major reasons why non-Category I and II banking organizations that remain subject to market risk are projected to see market risk-weighted assets decrease by 35 percent.[712]

d. Operational risk

[712] However, the proposed inclusion of CVA risk-weighted assets for banking organizations with over $1 trillion in OTC derivatives will offset the reduction in market risk-weighted assets for many of the non-Category I and II banking organizations. As noted above, the impacts of changes to market and CVA risk-weighted assets for non-Category I and II banking organizations are not stated separately in section VII.A.1, but are calculated using the same underlying bank-specific impacts and methodology based on the special collection.

Trading strategies with higher profits would likely see an increase in their capital requirements due to operational risk capital requirements. The noninterest component of operational risk capital requirements would depend on a formula that includes the absolute value of a measure that combines trading profits with profits from other sources. Typically, higher trading profits would increase operational risk capital requirements.

e. Risk class diversification

The reduced recognition of diversification across risk classes under the proposal would likely raise capital requirements for portfolios containing exposures to risk factors from multiple risk classes. Currently, the market risk framework does not restrict recognition of diversification across risk classes, which means that the current market risk capital requirement reflects that banking organization's estimated diversification benefit based on the empirical correlation it uses for different risk classes. The proposal would entirely eliminate recognition of diversification across risk classes in the standardized non-default capital requirement and reduce the diversification benefit in the models-based non-default capital requirement.[713] Reducing the recognition of diversification across risk classes would likely raise risk-weighted assets, which has been noted by Viegas de Carvalho, et al. (2024) for a representative portfolio under the models-based non-default capital requirement.[714] While the models-based non-default capital requirement would recognize greater diversification across risk classes than the standardized non-default capital requirement, both approaches would reduce recognition of diversification

[713] Specifically, in the standardized non-default capital requirement, the sensitivities-based method capital requirements are simply added across risk classes, which implicitly assumes that losses across risk classes are perfectly correlated. In the models-based non-default capital requirement, the internally modelled capital calculation places a weight of 50 percent on a measure that assumes losses are perfectly correlated and 50 percent on a measure that is based on their empirical relationships.

[714] *See* Viegas de Carvalho, Paulo, et al. "The Impact of the Fundamental Review of the Trading Book: Evaluation on a Stylized Portfolio." Journal of Risk, 23 Jan. 2024, *https://doi.org/10.21314/jor.2023.014*.

compared to the current market risk framework. This more conservative treatment of cross-risk-class diversification addresses the possibility that correlations between risk classes change between stress periods; one prominent example is how the correlation between nominal bonds and equities has changed signs over time.[715]

f. Other effects

There are many other changes within the proposal that would affect the market risk capital requirements for particular products. The residual risk add-on within the standardized non-default capital requirement would increase capital requirements associated with exotic positions and those with residual risk not captured by the sensitivities-based method.[716] The inclusion of equities in the default risk capital requirement might raise requirements associated with equities to capture risks associated with companies rapidly failing, although other changes, such as revisions to the treatment of specific risk, may counteract that increase. Within the models-based non-default capital requirement, the switch from VaR, which measures loss at a specific percentile, to expected shortfall, which measures expected loss beyond a specific percentile, would likely raise capital requirements for products with greater tail risk.

Changes to the standardized approach to counterparty credit risk would recognize diversification between derivative transactions and non-cleared repo-style transactions within a netting set when calculating exposure at default. These changes would reduce capital requirements associated with combining both types of transactions within a single netting set, such as engaging in Treasury repo and Treasury futures transactions with the same counterparty.

[715] *For empirical evidence on bond-stock comovements, see* Campbell, John, et al. Bond-Stock Comovements. Working paper. 1 Oct. 2025. Accessible at www.nber.org/papers/w34323.

[716] Examples of exotic positions include those referencing longevity risk, weather, or natural disasters.

There is limited empirical evidence on the magnitude of the change in capital requirements to expect with respect to these changes.

2. Impact on banking organizations

This section considers how changes in capital requirements for trading activities could affect the behavior of covered banking organizations. Because the proposal would better capture certain risks, the agencies expect that covered banking organizations would become more resilient. Banking organizations would also likely reduce the quantity of intermediation and raise fees for trading activities with increased capital requirements, and similarly increase the quantity and reduce the cost for trading activities with reduced capital requirements, although the magnitudes are uncertain. The agencies also expect that banking organizations would likely adjust their trading strategies to reduce capital requirement impacts, such as by hedging more risks or holding fewer positions. The agencies also expect that the reduced procyclicality of the proposed market risk capital requirements would lead to more stable provision of financial intermediation during market stress periods as compared to the current framework.

a. Supply of intermediation services

Increased capital requirements may lead banking organizations to reduce the scale of their trading activities or increase their fees, commissions, or bid-ask spreads – the costs they charge to their customers for intermediation services – although the magnitudes of any potential impact are difficult to estimate. Changes in the volume of trading and to its cost are intimately connected, as suggested by a standard supply-demand framework.

The intersection of supply and demand establishes the equilibrium price and quantity of intermediation for a particular type of trading. An increase in capital requirements would shift the supply curve upward, which would increase the cost of intermediation and reduce the

quantity. A decrease in capital requirements would similarly reduce the cost of intermediation and increase the quantity. The magnitudes of quantity versus price changes would depend on the elasticities of supply and demand (that is, how responsive the quantity of intermediation is to changes in its price). There is limited empirical evidence on the magnitude of the impact of capital requirements on trading activity and it is difficult to obtain such an estimate.

Another consideration is that banking organizations are not the only companies engaging in these trading activities. To the extent that higher costs only apply to banking organizations, intermediation activity may flow outside the banking system. This effect on markets will be considered in section VIII.E.3.

b. Trading and hedging strategies

Another possible effect of the proposal is that banking organizations may switch to trading or modeling strategies that result in lower capital requirements. Some possible approaches include (1) changing hedging strategies, (2) changing the number of positions held directly, (3) improving their models or gathering additional data, and (4) increasing central clearing.

First, banking organizations may adjust hedging strategies in response to the proposed requirements. These adjustments could take many forms. For example, if a banking organization were leaving an exposure unhedged in the current framework and its standalone capital requirements would rise under the proposed framework, then the banking organization might use hedges to reduce the capital impact. To the extent that the proposed framework is more risk sensitive, banking organizations would have greater incentives to hedge economically meaningful risk exposures. Evidence from Lu and Wallen (2024) indicates that large dealer

banking organizations are already hedging most market risk, suggesting that the scope for additional hedging may be limited.[717]

Second, banking organizations may change how many positions they hold directly. For example, one approach to market making is to buy and sell products as needed by customers and to hold a product inventory plus any trade imbalances. Another approach is to directly match buyers and sellers together, which does not require the banking organization to hold any position. If capital requirements associated with holding inventory were to rise, a banking organization might start directly matching buyers and sellers more frequently or decide to limit the size of its inventory. Conversely, if capital requirements were to fall, a banking organization might increase the size of its inventory. Bessembinder et al. (2018) document how bank-affiliated dealers were less likely to hold customer order imbalances on their own balance sheets following the 2008 financial crisis relative to other dealers.[718] The evidence is consistent with post-crisis capital regulations affecting trading inventories, although it is difficult to disentangle other effects.

Third, banking organizations using the models-based approach might respond to the proposed capital framework by gathering additional data to reduce the impacts of non-modellable risk factors. Gathering additional data could help a non-modellable risk factor to become modellable, which would generally reduce capital requirements. However, there are indications that there is reluctance among banking organizations to share data and that

[717] *See* Wallen, Jonathan, and Lina Lu. "What Do Bank Trading Desks Do?" Working paper. November 6, 2024. Available at *https://doi.org/10.2139/ssrn.4898830*.

[718] *See* Bessembinder, Hendrik, et al. "Capital commitment and illiquidity in corporate bonds." The Journal of Finance 73.4 (2018): 1615-1661.

purchasing the data from vendors can be expensive, although greater adoption of internal models by banking organizations could mitigate these problems.[719]

Fourth, banking organizations may centrally clear more of their derivatives. Such exposures are exempt from the CVA framework due to their substantially reduced risk profiles. Evidence from Canada, which has already implemented its version of the new market risk standards, indicates an increase in derivatives clearing.[720] Increased clearing would have the benefit of reducing counterparty-related risks.

c. Stability

Banking organizations would likely provide more stable intermediation during market stress due to the reduced procyclicality of the proposed market risk framework. The inclusion of current period VaR within the current framework means that capital requirements are more likely to increase sharply during market stress, which can lead banking organizations to reduce their intermediation activity.[721] The proposed framework would instead rely on estimates of losses during past stressed conditions, which would reduce the likelihood of spikes in capital requirements. The agencies expect this change to lead to more stable provision of intermediation during market stress.

d. Impacts on end users

[719] *See* Wilkes, S. (2023, November 20). "FRTB managers face hard facts about risk factors". Available at Risk.net. *https://www.risk.net/regulation/7958192/frtb-managers-face-hard-facts-about-risk-factors*.

[720] *See* Migliorato, L. (2024, March 13). "Canada's top dealers boost derivatives clearing as FRTB kicks in". Available at Risk.net. *https://www.risk.net/risk-quantum/7959098/canadas-top-dealers-boost-derivatives-clearing-as-frtb-kicks-in*.

[721] During the COVID-19 crash, banking organizations experienced simultaneous backtesting exceptions that, without intervention, would have increased their backtesting multipliers and raised market risk capital requirements by $3.3 billion. *See* Abboud, Alice, Chris Anderson, Aaron Game, Diana Iercosan, Hulusi Inanoglu, and David Lynch (2021). "Banks' Backtesting Exceptions during the COVID-19 Crash: Causes and Consequences," FEDS Notes. Washington: Board of Governors of the Federal Reserve System, July 08, 2021, *https://doi.org/10.17016/2380-7172.2939*.

The proposal would likely change the cost of financial intermediation for end users, with effects that differ by the type of trading activity. Trading activities with increased capital requirements may become less profitable for banking organizations unless they can increase revenue by charging higher fees and commissions on transactions or by widening bid-ask spreads. Banking organizations often focus on return on equity as an essential measure of profitability.[722] Return on equity for trading is likely to decrease if risk-weighted assets increase, and the proposal is expected to increase overall risk-weighted assets for trading activities for Category I and II banking organizations, unless they adjust their portfolios, which would require changes in either trading or hedging strategies.

Some banking organizations may exit some markets or reduce the variety of their offerings if they cannot maintain an acceptable return on equity. It is widely accepted that banking organizations attempt to shift resources from activities with low capital efficiency towards activities with higher capital efficiency. However, Ding and Sickles (2018) document that return on equity for banking organizations has fluctuated significantly over time.[723] Moreover, a survey conducted by Federal Reserve supervision staff of Category I banking organizations showed significant dispersion in the capital efficiency of different trading activities. This was true when comparing similar business lines at different banking organizations and when comparing different business lines within the same banking organization. The observation that less capital efficient business lines continue to operate

[722] Pennacchi and Santos (2018) document banks' emphasis on return on equity and explore banks' motivation in preferring this metric.

[723] *See* Ding, Dong, and Robin C. Sickles. "Frontier Efficiency, Capital Structure, and Portfolio Risk: An Empirical Analysis of U.S. Banks." BRQ Business Research Quarterly, vol. 21, no. 4, Oct. 2018, pp. 262–277. Ding and Sickles (2018) also find that banking organizations with lower operating costs also hold higher capital buffers above their minimums and take on more risk.

suggests that banking organizations may not entirely abandon low capital efficiency trading activity.

The trading businesses of banking organizations serve a wide variety of clients, including commercial end users, institutional investors such as pension funds and insurance companies, governments, other banking organizations, and nonbank financial organizations such as hedge funds. Banking organizations also serve households indirectly through securitization of loans and by supporting mutual funds and retail brokerages. Each type of trading customer has different intermediation needs. For example, commercial end users may be interested in accessing capital markets, and in hedging the foreign exchange or commodity price risk arising from their business and hedging interest rate risk on their debt. Any change in the cost or availability of these services may have a significant effect on the real economy.

The benefit to society from enabling hedging by commercial end users is difficult to ascertain, so the proposal's impacts from changing hedging behavior are difficult to estimate. Classic finance theory dating back to Modigliani and Miller holds that risk management does not increase firm value because it is irrelevant to a firm's shareholders who can themselves hedge by holding a diversified portfolio.[724] Regardless, commercial firms themselves have a strong demand for hedging instruments. A number of theories have been proposed to explain this behavior. For example, Froot, Scharfstein and Stein (1993) suggest firms that manage risk reduce the chance of not being able to take advantage of growth opportunities.[725] There is some empirical evidence that risk management increases firm value. Allayanis and Weston (2015) find

[724] *See* Modigliani, Franco, and Merton H. Miller. "The Cost of Capital, Corporation Finance and the Theory of Investment." The American Economic Review, vol. 48, no. 3, June 1958, pp. 261–297.

[725] *See* Froot, Kenneth A., David S. Scharfstein, and Jeremy C. Stein. "Risk management: Coordinating corporate investment and financing policies." the Journal of Finance 48.5 (1993): 1629-1658.

that, among nonfinancial firms that are exposed to exchange rate risk from their foreign operations, the use of derivatives to hedge foreign currency risk increases firm value by 4 percent.[726]

The impact of the proposal on end users would differ depending on the type of customer relationships end users have with banking organizations of different sizes. The largest banking organizations offer a broad variety of intermediation services, including some that require sophisticated risk management. Category I and II banking organizations generally have well-hedged and diversified portfolios, but also have the capacity to warehouse the risks that arise from their intermediation and are difficult to hedge. Mixon and Onur (2020) document how commodities swaps dealers, many of which are banking organizations,[727] offer their customers bespoke contracts which they then hedge with standard, liquid instruments, leaving the dealer holding residual basis risk.[728] Category I and II banking organizations tend to optimize their trading and hedging strategies and their risk management, including the models used to calculate required capital, to maximize return on capital while not exceeding their appetite for risk. Category I and II banking organizations serve the entire gamut of investment banking clients and are also market makers, generally in multiple markets.

In contrast, smaller banking organizations (those not in Categories I and II) are more likely to focus on a few lines of trading business. Customers may be commercial end users with whom the banking organization already has a lending relationship and provides other

[726] *See* Allayannis, George, and James P. Weston. "The use of foreign currency derivatives and firm market value." The Review of Financial Studies 14.1 (2001): 243-276.

[727] See list of registered swaps dealers at *https://www.cftc.gov/LawRegulation/DoddFrankAct/registerswapdealer.html.*

[728] *See* Mixon, Scott, and Esen Onur. "Risk appetite and intermediation by swap dealers." Available at SSRN 3566003 (2020).

commercial banking services. For such banking organizations, trading strategy focuses on client facilitation. As a result, non-category I or II banking organizations are less likely to rely on sophisticated risk management and more likely to offer services for which the risks are straightforward to hedge. This also suggests that these banking organizations have generally invested less in risk models, and may intentionally compensate for this by erring on the side of conservatism when calculating required capital.

The introduction of a standardized approach for market risk capital requirements is likely to expand the intermediation services offered by non-Category I or II banking organizations for two reasons. First, the proposed standardized approach for market risk would reduce the regulatory compliance and operational costs of offering new products. The current rule requires banking organizations to receive regulatory approval for the models used in market risk capital calculations prior to trading a new product. This approval process takes time and involves overhead in ensuring that the risk models comply with the rule. Banking organizations that use the proposal's standardized approach would avoid this delay and overhead of regulatory pre-approval and may reduce other costs associated with modelling risk.[729] This may eliminate a current disincentive for accommodating customer requests for particular trading products that a banking organization does not already trade.

Second, the new standardized approach is likely to result in lower capital requirements for some types of trading activity of smaller banking organizations. The current rule requires

[729] Note that it is expected that banking organizations will continue to use internal models for their risk management, regardless of whether those models are used to calculate market risk capital requirements. See § __.203 (c)(4) of the proposal, which requires daily monitoring of risk-management measurements including VaR. However, if banking organizations' internal risk management models are not the same as those used to calculate capital requirements, then banking organizations may invest fewer resources in their internal risk management models, which could mean reducing data quality, computational capacity, or quality of model risk management. For example, the generation of historical risk factor scenarios required for stressed-VaR can be particularly costly for products that a banking organization did not trade or products that did not exist during a banking organization's stress-VaR window.

internal models for general market risk but applies a standardized add-on unless a banking organization receives supervisory approval for their risk model's treatment of specific risk.[730] Modelling specific risk is complex, and supervisors have set a high bar for model approval. As a result, while Category I and II banking organizations often have approved specific risk models, many other banking organizations with significant trading activity do not. The current standardized specific risk add-on is conservative. Moreover, it does not recognize any hedging benefit from offsetting credit exposures to the same obligor unless there is an exact match on the reference obligation.[731] This treatment encourages banking organizations that do not have specific risk approval to focus on agency and riskless principal trading, making back-to-back trades with customers offset by trades with other banking organizations. This allows banking organizations to facilitate access to capital markets for their relationship clients, but it constrains their market offerings to liquid, readily tradable products.

The proposal's standardized approach does not have separate treatments for general and specific risk. Both the sensitivities-based method and the default risk capital requirement would apply risk weights to net exposures at the issuer level. For a banking organization currently applying the specific risk add-on, this recognition of netting at the issuer level rather than the issuance level may result in significantly lower risk-weighted assets for portfolios with risk that is economically small but not perfectly offset. Moreover, both the proposed sensitivities-based method and the default risk capital requirement would recognize some hedge benefit across

[730] Specific risk is the risk that is not attributable to broad market movements and includes event risk, default risk, and idiosyncratic risk.

[731] However, the current rule avoids double counting of the specific risk add-on for an exposure and its credit derivative hedge that does not meet the "same obligation" criterion but in which all or substantially all of the price risk has been hedged.

exposures to different issuers in the same bucket, and the proposed sensitivities-based method would recognize some diversification between buckets.

Lower market risk-weighted assets, and the option to reduce operational and regulatory overhead by choosing the standardized approach for market risk, will likely increase the capital efficiency of non-Category I or II banking organizations, particularly for trading businesses in which the banking organization retains some specific risk. Examples include market making in less liquid corporate bonds and more bespoke customer facilitation. This may reduce a barrier to entry into new markets for some banking organizations. As such, customers of non-Category I or II banking organizations may find more choice of trading products for hedging credit spread risk and equity price risk.

An expected benefit of the proposal is that it would likely reduce costs and increase availability of intermediation during times of financial stress, relative to the current rule. This is for two reasons. First, distressed banking organizations may be unable or unwilling to undertake trading activity that adds risk. The proposal is intended to make banking organizations less likely to become distressed by more accurately reflecting their exposure to losses during extreme stress in their market risk capital requirement. Second, if the capital requirement for a given trading activity fluctuates over time, then banking organizations may be less willing to provide intermediation at times when the capital requirement is high or may charge more for intermediation to maintain an acceptable return on capital. Capital requirements under the proposal are based on through-the-cycle risk measures and should be less pro-cyclical than the current rule, as capital requirements would not increase as much during financial downturns. With less cyclical fluctuation in capital requirements, the costs to end users should also fluctuate less.

3. Impacts on Markets

To understand how the proposal could affect market liquidity, it is informative to understand how markets reacted to the higher capital requirements that were implemented after the 2008 financial crisis.

Literature exploring the impact of post-2008 capital requirements on the corporate bond market generally shows limited impacts on bid-ask spreads, but also that customers waited longer before making transactions. The papers also indicate that dealers reduced their inventory imbalances and charged higher prices for providing immediate liquidity. Broadly, there is evidence that the cost of immediate liquidity rose in the corporate bond market and that bank-affiliated dealers reduced their willingness to bear inventory imbalances, although it is difficult to isolate how much is due to higher capital requirements compared to other factors.[732, 733]

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[732] Dick-Nielsen and Rossi (2018) show that the cost of immediate trades, reflected by index trackers that must trade quickly after a bond falls out of an index, has risen more than twofold and Bao, et al. (2018) show greater costs from trading following bond rating downgrades. Furthermore, Bessembinder (2018) and Dick-Nielsen and Rossi (2018) provide evidence that bank-affiliated dealers reduced the extent of inventory imbalances that they accommodated. In more recent times, Anderson, et al. (2023) and Kargar, et al. (2021) show that dealers did not substantially change their net positions in corporate bonds during the COVID-related market turmoil around March 2020. *See* Trebbi, Francesco, and Kairong Xiao. "Regulation and market liquidity." Management Science 65.5 (2019): 1949-1968; Bessembinder, Hendrik, et al. "Capital commitment and illiquidity in corporate bonds." The Journal of Finance 73.4 (2018): 1615-1661; Dick-Nielsen, Jens, and Marco Rossi. "The cost of immediacy for corporate bonds." The Review of Financial Studies 32.1 (2019): 1-41; Bao, Jack, Maureen O'Hara, and Xing Alex Zhou. "The Volcker Rule and corporate bond market making in times of stress." of Financial Economics 130.1 (2018): 95-113; Anderson, Christopher S., David C. McArthur, and Ke Wang. "Internal risk limits of dealers and corporate bond market making." Journal of Banking & Finance 147 (2023): 106653; and Kargar, Mahyar, et al. "Corporate bond liquidity during the COVID-19 crisis." The Review of Financial Studies 34.11 (2021): 5352-5401. Dick-Nielsen and Rossi (2018) show that the cost of immediate trades, reflected by index trackers that must trade quickly after a bond falls out of an index, has risen more than twofold and Bao, et al. (2018) show greater costs from trading following bond rating downgrades. Furthermore, Bessembinder (2018) and Dick-Nielsen and Rossi (2018) provide evidence that bank-affiliated dealers reduced the extent of inventory imbalances that they accommodated. In more recent times, Anderson, et al. (2023) and Kargar, et al. (2021) show that dealers did not substantially change their net positions in corporate bonds during the COVID-related market turmoil around March 2020. *See* Trebbi, Francesco, and Kairong Xiao. "Regulation and market liquidity." Management Science 65.5 (2019): 1949-1968; Bessembinder, Hendrik, et al. "Capital commitment and illiquidity in corporate bonds." The Journal of Finance 73.4 (2018): 1615-1661; Dick-Nielsen, Jens, and Marco Rossi. "The cost of immediacy for corporate bonds." The Review of Financial Studies 32.1 (2019): 1-41; Bao, Jack, Maureen O'Hara, and Xing Alex Zhou. "The Volcker Rule and corporate bond market making in times of stress." Journal off

[733] Several papers, including Trebbi and Xiao (2017) and Bessembinder (2018), have documented that standard measures of market liquidity, such as bid-ask spreads, did not change substantially following the financial crisis or

Wu (2024) specifically considers the impact of post-crisis capital regulations, which in the case of market risk are informally known as Basel 2.5.[734] The paper argues that the size of the liquidity premium embedded within corporate bonds increased after the 2008 financial crisis.[735] Wu (2024) shows that immediately after the release of the Basel 2.5 NPR in June 2012, there was an abrupt increase in the liquidity premium for more volatile bonds, which would likely receive higher capital requirements under Basel 2.5, compared to less volatile bonds. The paper estimates an approximately 0.3 percentage point difference in yield spreads between the most and least volatile bonds, controlling for other characteristics.

Extrapolating from evidence in the corporate bond market to potential broader impacts, higher capital requirements on certain products would likely incentivize banking organizations to hold smaller inventories and accommodate fewer imbalances, although magnitudes are unclear. There would likely be a reduction in banking organizations providing immediate liquidity (i.e., entering into a trade with a customer immediately rather than waiting), although the magnitude would likely vary across markets. More illiquid products, such as corporate bonds, would likely see larger effects. Additionally, because market risk capital requirements are typically based on end-of-day inventories, accommodating intraday imbalances for more liquid products would likely not be as costly. Similarly, lower capital requirements on other products would likely

even improved relative to before. However, some literature argues that customers have shifted away from demanding immediate liquidity from dealers, which is more expensive, to instead being willing to wait longer before transacting, which is cheaper. In that case, it would be possible for average transaction costs to fall, even if the cost of immediate liquidity would have risen.

[734] *See* Wu, Botao. "Increasing corporate bond liquidity premium and post-crisis regulations." NYU Stern School of Business Working Paper (2020).

[735] The liquidity premium is the component of a corporate bond's yield that compensates investors for difficulty in transacting in that bond.

incentivize banking organizations to accommodate more imbalances and provide greater immediate liquidity to their customers.

Another consideration is the migration of activity to nonbanks. Bessembinder (2018) provides evidence that nonbank-affiliated dealers expanded their intermediation in the corporate bond market as bank-affiliated dealers pulled back.[736] This evidence suggests that nonbank-affiliated dealers might step in to mitigate reduced liquidity provision of bank-affiliated dealers in other markets as well.

There are both benefits and drawbacks to nonbanks potentially increasing intermediation if banking organizations pull back. One clear benefit is that nonbanks could mitigate any potential reductions in market liquidity. Also, given that nonbanks do not benefit from deposit insurance, a shift toward nonbanks might reduce costs to the government. One drawback is that nonbanks may take on excessive leverage or risk, in part due to lack of prudential regulation comparable to bank regulation. If important nonbank intermediaries were to fail during extreme stress, there could be substantial negative effects on financial stability and market liquidity, which could impose costs on the government and the economy.

Some aspects of the proposal could also have impacts on markets beyond the effects of a change in the average level of capital requirements.

First, the reduced procyclicality of capital requirements for banking organizations may encourage relatively more market liquidity during periods of stress. Both the proposed standardized and models-based approaches are substantially less sensitive to changes in current

[736] Bessembinder (2018) show that only bank-affiliated dealers reduced the inventory imbalances they would accommodate, while the nonbank-affiliated dealers took on greater imbalances, although not enough to offset changes by the bank-affiliated dealers. However, it is difficult to disentangle the impacts of capital regulation from those of other regulations. Bao, et. al (2018) find limited difference in the inventory imbalances held by dealers passing the CCAR stress test compared to those not passing, they interpret as evidence of capital requirements not being a likely driver.

market conditions and are calibrated instead to historical periods of stress, in contrast to the current market risk framework that includes VaR based on current market data.

Second, the decrease in capital requirements for non-Category I and II banking organizations could potentially reduce their trading costs, which may encourage market making to be relatively less concentrated among the largest banking organizations. One of the key channels would be the removal of the standardized approach for specific risk, which tends to have a larger impact on smaller banking organizations.

Third, there may be greater use of central clearing for certain derivatives. As central clearing becomes more common, there could possibly be spillover effects whereby other market participants not directly affected by the proposal choose to centrally clear as well, which could potentially enhance the efficiency and stability of markets.

Fourth, if banking organizations hedge more in aggregate due to the proposed capital framework, some nonbank counterparties would likely have to take on that risk instead. While there is uncertainty over exactly how risk is distributed throughout the U.S. financial system, it is possible that entities such as pension funds, insurance companies, or investment funds would step in to purchase more of that risk from banking organizations. These could create new opportunities for such trading counterparties, but also potential avenues for financial instability outside the banking system.

To summarize, there would likely be heterogenous effects on markets, depending on whether capital requirements would rise or fall for products in a given market under the proposal. The markets where the proposal would result in a larger increase in banking organization capital requirements would likely see banking organizations accommodating smaller inventory imbalances. Average transaction costs would not necessarily rise, but the cost of conducting

immediate trades would likely rise. Nonbanks would likely step in to provide more intermediation, although growing reliance on nonbanks for market intermediation raises its own potential concerns. Similarly, the areas in which the proposal would result in a decrease in banking organization capital requirements would likely see larger inventory imbalances, lower costs of immediate trades, and a greater share of activity conducted by banking organizations. Various features of the proposal could also have other impacts on markets, such as reducing the procyclicality of intermediation and encouraging relatively more trading activity by smaller banking organizations.

F. Effect on competitiveness

The proposed changes to risk-based capital requirements of the largest U.S. banking organizations could potentially affect competition of those banking organizations with international peers, smaller banking organizations in the United States, and nonbank financial entities. This section highlights the anticipated potential effects expected to be the most economically important for the United States.

An overall moderate lowering of required capital for Category I and II banking organizations, moving closer in line with the requirements for internationally active foreign banks, could somewhat increase U.S. banking organizations' ability to compete for business internationally. Lower risk weights relative to the current standardized approach in certain lending areas could advantage covered banking organizations in attracting domestic customers, though other changes, like ending capital deduction for excess mortgage servicing assets, could also help them support smaller banking organizations through correspondence lending relationships, growing aggregate lending. At the same time, the concurrent standardized approach proposal and the option available to smaller banking organizations to use the expanded risk-based approach under this proposal would help ensure continued robust competition

between domestic banking organizations. The proposal may induce some lower-risk traditional lending activities to flow back into the banking sector in a way that would enhance competition and financial stability in the United States. Finally, the analysis discusses how key lending areas could see improved pricing and service quality as increased competition reduces applicable interest rates, and how regulatory barriers to entry into the largest bank tiers would be reduced through a shift to lower, less complex, and more certain capital requirements.

1. On internationally active banks

Benefits of the Basel framework include the promotion of global financial stability by strengthening the resilience of the global banking system and preventing a regulatory race-to-the-bottom for internationally active banks. International banking integration can increase competition, boosting productivity and growth, with particular importance for international trade and global liquidity management.[737] The agencies project the combined impact of this proposal and the GSIB surcharge proposal to yield lower required capital levels on average and for most individual banking organizations subject to the rules. As detailed further below, internationally active banks from other jurisdictions are generally bound by capital requirements based on a calculation of risk-weighted assets which rely heavily on internally modelled risk weights. While Category I and II banking organizations currently also compute risk weights for their exposures based on internal models, most of these organizations are bound by the U.S. standardized approach in most quarters, which generally sets higher, fixed risk weights to compensate for the reduced risk sensitivity of the approach.[738] In practice, this means internationally active foreign

[737] *See* Claudia M. Buch & Linda S. Goldberg, "Global banking: Toward an assessment of benefits and costs," *Annual Review of Financial Economics,* 12.1 (2020): 141-175, *available at*: *https://doi.org/10.1146/annurev-financial-021920-112021*.

[738] *See, e.g.,* Joasia E. Popwicz, "All top US banks below Collins floor," *risk.net* (January 2022), *available at: https://www.risk.net/risk-quantum/7922981/all-top-us-banks-below-collins-floor*.

banks are applying lower risk weights and have lower minimum capital requirements than their U.S. counterparts.[739]

The proposed expanded risk-based approach risk weights are generally calibrated at a lower level than the current standardized approach, and are more granular to enhance risk sensitivity, reducing incentives to disengage from relatively lower risk lending activities. While important, lower capital requirements are not the sole determinant of long-run profitability, as illustrated by return on equity at U.S. GSIBs following the 2007–09 global financial crisis which averaged around 5 to 6 percentage points higher than their counterparts in the Euro Area.[740] That said, the lower requirements that proposed revisions to the GSIB surcharge would deliver, and that would remain within the generally accepted optimal level of capital, as discussed in section VIII.C, should promote the global competitiveness of internationally active U.S. banking organizations.

The BIS collects anonymized data on large, internationally active banks in Basel member jurisdictions. These data are analyzed and compiled in a semi-annual monitoring report that describes the average asset holdings and concomitant risk weight density, risk-weighted assets divided by exposure amounts, by exposure category. These reveal that the effective average risk weights used by foreign banks subject to the Basel standards as implemented in other jurisdictions are materially lower than the risk weights that Category I and II banking organizations currently apply across several exposure categories. For example, for internationally

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[739] *See* Online Appendix of Elizabeth Duncan, Akos Horvath, Diana Iercosan, Bert Loudis, Alice Maddrey, Francis Martinez, Timothy Mooney, Ben Ranish, Ke Wang, Missaka Warusawitharana & Carlo Wix, "COVID-19 as a stress test: Assessing the bank regulatory framework," *Journal of Financial Stability*, Volume 61, (2022), *available at: https://doi.org/10.1016/j.jfs.2022.101016*.

[740] *See* Luca Di Vito, Natalia Fuentes, Natalia & Joao Matos Leite*, "*Understanding the profitability gap between euro area and US global systemically important banks*,*" *ECB Occasional Paper, No. 327, (2023), available at: https://doi.org/10.2866/51151.*

active banks in all Basel jurisdictions at the end of 2024, average risk weight density for corporate exposures was around 56 percent and for retail exposures around 29 percent.[741] Category I and II banking organizations, when bound by the current standardized approach as is typically the case, apply 100 percent risk weights to both types of exposures. While the proposed risk weights in those exposure types would still exceed global averages, the downward calibrations would bring them much closer in line, reducing anti-competitive disparities with global competitors while still maintaining the comparatively stronger levels of capital at Category I and II banking organizations that have resulted in greater resilience relative to their global peers.

Increased competition in international banking can lower individual and systemic risk. Faia et al. (2021) develops a model of global banking competition that predicts cross-border expansion of banks into retail activities like lending and deposit-taking can actually lower individual risk taking and systemic risk through a competition driven compression of loan-deposit spreads. They find empirical evidence that supports this prediction using data from 2005 to 2014 on the foreign expansion, profit margins, and market and accounting risk metrics of 15 European G-SIBs headquartered in eight different countries.[742]

This proposal would obviate the need for U.S. banking organizations to internally model credit and operational risk for regulatory capital calculations, which could yield more certainty in capital requirements, which could support investment, lending, and trading activities through the economic cycle. As noted above, Category I and II banking organizations, in recent years, have

[741] *See* Basel Committee on Banking Supervision, "Basel III Monitoring Report," (March 2025), *available at: https://www.bis.org/bcbs/publ/d592.pdf*.

[742] *See* Ester Faia, Sébastien Laffitte, Maximilian Mayer, & Gianmarco Ottaviano, "Global banking: Endogenous competition and risk taking," *European Economic Review*, Volume 133, 2021, *available at: https://doi.org/10.1016/j.euroecorev.2021.103661*.

been predominantly bound by standardized or leverage capital requirements. During the height of the shock from the COVID-19 pandemic beginning in early 2020, a number of these banking organizations became unexpectantly bound by rising modelled capital requirements as expected defaults rose. Behn, Haselmann, and Wachtel (2016) exploit an upward shock to modelled capital requirements at German banks following the failure of Lehman Brothers in 2008 to show how unexpected swings in capital requirements can lead to a procyclical drag on lending.[743] The proposed removal of modelling for credit and operational risk, and proposed changes to the modelling of market risk capital requirements, would reduce uncertainty in future capital requirements, particularly during times of stress, allowing Category I and II banking organizations to continue lending and market making during such periods.[744]

2. On smaller banks

As mentioned previously, Category I and II banking organizations are currently predominantly bound by the standardized approach that also applies to smaller banking organizations, while also being subject to additional buffer requirements. While these proposals are projected to lower aggregate capital requirements at Category I and II banking organizations, these requirements would still exceed those applied to smaller banking organizations. Further, Category I and II banking organizations would continue to have more stringent requirements relative to Category III and IV banking organizations, reflecting the former group's greater size, complexity, and systemic risk. On an exposure-by-exposure basis, the proposed revised capital requirements would sometimes be lower than those in the standardized approach, even inclusive

[743] *See* Markus Behn, Rainer Haselmann, & Paul Wachter, "Procyclical Capital Regulation and Lending," *The Journal of Finance*, Volume 71, Issue 2, April 2016, Pages 919–956, *available at: https://doi.org/10.1111/jofi.12368*.

[744] *See* section VIII.E.2.c for discussion of the expected reduction in the procyclicality of requirements for trading activities resulting from this proposal.

of associated operational risk requirements. A number of factors help though to mitigate any concern that the proposal would create competitive inequity overall between Category I and II banking organizations and smaller banks. These include the companion standardized approach proposal, the proposed option for any banking organization to adopt the expanded risk-based approach as discussed in section II.A, the proposed operational risk requirements included in the expanded risk-based approach, and the differing nature of large and small banking organization business models. Smaller lenders could also benefit from potential enhanced interest from the largest banking organizations in correspondent lending relationships, given the proposed reduction in risk weights in some lending areas under the expanded risk-based approach.

The proposal would address potential concerns around competitive imbalances by allowing banking organizations of any size to elect to use the expanded risk-based approach.

Broader concerns about impacts of the proposal on the competition between large and small banking organizations are diminished more generally by the differences in their typical business models. For one, Category I and II banking organizations tend to have significant trading operations, an area where smaller banking organizations do not participate. Second, smaller banking organizations tend to rely more heavily on relationship lending models that entail the cultivation of qualitative information about their customers' credit-worthiness and monitoring via geographic proximity. The largest banking organizations tend to engage in more transactional lending that relies heavily on data collection and verification for underwriting and that is backed by tangible collateral.[745]

[745] *See* Allen N. Berger & Lamont K. Black, "Bank size, lending technologies, and small business finance," *Journal of Banking & Finance*, no. 35(3) (2011), *https://doi.org/10.1016/j.jbankfin.2010.09.004*.

Aspects of the proposal, as discussed in sections III and IV.A, may also indirectly support smaller banking organizations by increasing the attractiveness of correspondent lending models and other forms of loan participation agreements.[746] Smaller lenders can cultivate customers via their superior local knowledge while turning to larger banking organizations for funding and for their facility with securitization markets.[747] This could allow larger banking organizations to essentially downstream the reduced risk weights under the expanded risk-based approach in areas like real estate, retail, and corporate lending to the smaller banking organizations originating the loans. The proposed removal of the mortgage servicing assets deduction treatment could also make mortgage lending relationships under these types of models more attractive, particularly for Ginnie Mae securitizations where lenders must pool together multiple loans themselves.

3. On nonbank financial intermediaries

The proposal would likely drive expansion in bank lending that could partially reverse the ongoing migration of activity to the nonbank financial sector in a manner that could support financial stability. Heightened capital requirements have been identified as one factor in nonbanks' increased share of financial market activity. The proposal reduces requirements in certain areas, particularly for traditional lending activities such as mortgages and corporate loans, in a way that would support bank competitiveness relative to nonbanks. Given the greater

[746] *See* Michael Poprik, "Loan Participations: Lessons Learned During a Period of Economic Malaise," *Federal Reserve Bank of Richmond Community and Regional Supervision* (2013), *https://www.communitybankingconnections.org/articles/2013/q2/loan-participations*.

[747] *See* Richard Stanton, Johan Walden, & Nancy Wallace, "The Industrial Organization of the US Residential Mortgage Market," *Annual Review of Financial Economics*, no. 6 (2014), *available at*: *https://doi.org/10.1146/annurev-financial-110613-034324* and David Benson, You Suk Kim, & Karen Pence, "Bank Aggregator Exit, Nonbank Entry, and Credit Supply in the Mortgage Industry," *Working Paper* (2023), *https://www.fdic.gov/system/files/2024-07/kim-paper.pdf*.

willingness and capacity for lending that banks demonstrate during periods of stress, this could generate stability benefits.

The migration of activities from banking organizations to nonbanks has been a longstanding trend for the financial system. It can have heterogeneous effects on financial stability. Certain nonbanks operate with very low leverage and are well-positioned to manage large economic downturns.[748] However, many nonbanks rely on fragile, confidence-sensitive sources of funding, partly from banking organizations, making them vulnerable during times of stress. Moreover, more resilient banking organizations are better positioned to lend in the face of economic downturns, in part compensating for the potential reduction in lending from more vulnerable nonbanks. Thus, the impact of migration on financial stability and lending over the business cycle is influenced by numerous factors, including the specific characteristics of the nonbanks that assume these activities and their interdependencies with banks.

a. Effects of capital regulations on migration of activity to nonbanks

Capital regulation has been linked to the migration of activity to nonbanks, though the effects through the entire economic cycle are less certain. On the one hand, tighter regulations, including stricter capital requirements, might induce banking organizations to reduce their lending, creating opportunities for nonbanks to fill the gap. For example, Buchak et al. (2018) found that more stringent capital requirements and tighter regulations pushed mortgage origination to nonbanks, which expanded their mortgage origination market share.[749] On the other hand, well-capitalized banking organizations are better positioned to extend credit,

[748] Anat Admati and Martin Hellwig, "The Bankers' New Clothes: What's Wrong with Banking and What to Do About It" *Princeton University Press* (2024) ("Admati and Hellwig (2024)"), *https://press.princeton.edu/books/paperback/9780691251707/the-bankers-new-clothes*.

[749] Greg Buchak, Gregor Matvos, Tomasz Piskorski & Amit Seru, "Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks," *Journal of Financial Economics*, 130(3), 453–483 (December 2018) ("Buchak et al. (2018)"), *https://doi.org/10.1016/j.jfineco.2018.03.011.*

especially during times of economic stress.[750] Buchak et al. (2018) note that resilient banking organizations, supported by robust regulatory frameworks, can act as stabilizing forces during crises where banking organizations with strong capital buffers can provide essential liquidity, supporting investment and economic recovery.[751]

The differential effects of the proposal across business activities, as well as differences across nonbanks, may contribute to reversing the migration of some activities toward banking organizations. For example, the proposed lower risk weights for most mortgages may encourage banking organizations to hold more of these loans in their portfolios, while the proposed removal of the MSA deduction treatment may lead them to expand their originate-to-distribute lending operations. Conversely, the proposed increase in risk-weighted assets for market risk, as well as an increase in some credit conversion factors and operational risk-weighted assets attributed to the interest and fee income associated with credit lines, may incentivize some liquidity provision in financial markets to shift towards nonbanks.

b. Impact of migration of activity to nonbanks on financial stability

The proposal's contribution to slowing or partially reversing the migration of financial activities toward nonbanks would have implications for financial stability. While some nonbanks are less leveraged than banking organizations, making them better positioned to absorb losses, they often rely on less stable sources of funding compared to banks. [752] Besides, not all nonbank

[750] Allen N. Berger & Christa H.S. Bouwman, "How Does Capital Affect Bank Performance During Financial Crises?" *Journal of Financial Economics*, 109(1), 146–176 (July 2013) ("Berger and Bouwman (2013)"), *https://doi.org/10.1016/j.jfineco.2013.02.008*; Admati and Hellwig (2024).

[751] Buchak et al. (2018).

[752] Gorton and Metrick (2012); Erica Xuewei Jiang, Gregor Matvos, Tomasz Piskorski & Amit Seru, "Monetary Tightening and U.S. Bank Fragility in 2023: Mark-to-Market Losses and Uninsured Depositor Runs?" *Journal of Financial Economics*, 159, 103899 (September 2024) ("Jiang et al. (2024)"), *https://doi.org/10.1016/j.jfineco.2024.103899.*

financial entities are equally prone to runs. Private equity funds manage long-term capital through funding structures that permit less frequent redemption and corporate bond mutual funds operate with little or no leverage. Some studies, though, argue that their fragile funding structures still make them vulnerable.[753] Disorderly withdrawals have forced the closure of corporate bond mutual funds at Credit Suisse and Third Avenue Management,[754] and it is common for private equity funds to face withdrawals when lock-up periods expire.[755]

In aggregate, by encouraging the migration of certain activities back towards banking organizations, the proposal is expected to support financial stability. Nonbanks are typically less regulated and are not subject to the same comprehensive federal prudential regulation and supervision as banking organizations. Gorton and Metrick (2012) argue that the lack of regulatory oversight makes nonbanks more vulnerable to runs and liquidity crises.[756] Some of these risks are discussed further in the Federal Reserve Board's Financial Stability Report of April 2025.[757] Nonbanks do not have access to the same protections as banking organizations through deposit insurance or other central bank facilities. Finally, nonbanks may amplify shocks

[753] Itay Goldstein, Hao Jiang & David T. Ng, "Investor Flows and Fragility in Corporate Bond Funds," *Journal of Financial Economics* 126(3), 592–613 (December 2017) ("Goldstein et al (2017)"), *https://doi.org/10.1016/j.jfineco.2016.11.007.*

[754] Jeffrey Ptak & Sarah Bush, "Third Avenue Focused Credit Abruptly Shuttered," *Morningstar* (December 2015) ("Ptak and Bush (2015)"), *https://www.morningstar.com/funds/third-avenue-focused-credit-abruptly-shuttered*; Tim McLaughlin, Ross Kerber & Svea Herbst-Bayliss, "Hidden in Plain Sight: Big Risks at Failed Third Avenue Fund Were Clear to Some," *Reuters* (December 2015) ("McLaughlin et al. (2015)"), *https://www.reuters.com/article/business/hidden-in-plain-sight-big-risks-at-failed-third-avenue-fund-were-clear-to-some-idUSKBN0U627V.*

[755] As another example of U.S. government support of nonbanks in a period of stress, during the COVID-19 pandemic, the Federal Reserve established the Primary Market Corporate Credit Facility and the Secondary Market Corporate Credit Facility to alleviate stress in the corporate bond market. Before that, the Federal Reserve established several financial crisis era facilities including the Money Market Investor Funding Facility, the Asset-Backed Commercial Paper Money Market Mutual Fund Liquidity Facility, Commercial Paper Funding Facility, and the Term Asset-Backed Securities Loan Facility.

[756] Gorton and Metrick (2012).

[757] "Financial Stability Report," Board of Governors of the Federal Reserve System (April 2025), *https://www.federalreserve.gov/publications/files/financial-stability-report-20250425.pdf.*

during times of stress by reducing lending to a larger extent compared to banking organizations.[758]

4. On consumer welfare and barriers to entry

The proposal would generally lower risk weights, particularly for safer portfolios, while also enhancing the risk sensitivity of capital requirements. Doing so would likely encourage more lending, thereby heightening competition, with end users seeing the benefits in improved pricing and increased consumer surplus. While certain financial markets, like large corporate lending, are already quite competitive, others persist with pricing that includes significant markups above marginal cost.[759] For example, in the mortgage space, Bhutta, Fuster, and Hizmo (2024) combine rate lock and loan offer data and find that borrowers with similar credit profiles see significant dispersion in the prices they pay for loans, which they link to lender market power. Importantly, they demonstrate through lender income and expense data and borrower surveys that more expensive loans are indicative of higher markups rather than better service.[760]

In addition to promoting activity at current Category I and II banking organizations, the proposals could also encourage growth in the number of banking organizations in these categories. More Category I and II banking organizations, rather than just a few that continually get bigger, could constitute a safer and more competitive financial landscape.

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[758] Iñaki Aldasoro, Sebastian Doerr & Haonan Zhou, "Non-Bank Lending During Crises," *Bureau of International Settlements*, Working Paper No. 1074 (August 2025) ("Aldasoro et al. (2025)"), *https://www.bis.org/publ/work1074.pdf.*

[759] S*ee* Thomas Flanagan, "The Value of Bank Lending," *Journal of Finance*, 80: 2017-2061 (May 2025), *available at https://doi.org/10.1111/jofi.13465*.

[760] *See* Neil Bhutta, Andreas Fuster, & Aurel Hizmo, "Paying Too Much? Borrower Sophistication and Overpayment in the US Mortgage Market," *Federal Reserve Bank of Philadelphia Working Paper*, no. 24-11 (June 2024), *available at: https://doi.org/10.21799/frbp.wp.2024.11*.

Besides dampening lending in general, overly complex, or uncertain, capital requirements can introduce barriers to entry that enshrine incumbents, reducing overall competition and incentivizing banking organizations that may pose systemic risk to bunch below the regulatory thresholds at which they would be formally recognized as such. While other jurisdictions have seen some churn in which institutions are systemically important enough to be deemed GSIBs, the eight U.S. bank holding companies identified as GSIBs by the Financial Stability Board in 2012 remain the only U.S. GSIBs today, and no additional Category II banking organizations have emerged following the creation of the current tier definitions.[761] The proposed rules, through a potential reduction in the overall level of required capital, removal of complexity and burden from the requirement to simultaneously internally model credit and operational risk, and increased certainty from a single set of risk-based requirements, should lessen the extent to which becoming a Category I or II banking organization may be seen as undesirable. While somewhat paradoxical, the growth and consolidation of some large regional banks into Category I or II banking organizations could actually provide more competition in the lending and trading markets that can only be contended by banking organizations of the largest scale.

Larger banking organizations can also reduce risk in some dimensions and temper local economic shocks through greater depositor base diversification.[762] Indicatively, Caglio, Dlugosz, and Rezende (2025) found, using confidential data on bank balance sheets, that during the period

[761] *See* "2025 List of Global Systemically Important Banks (G-SIBs)," (November 2025), *available at: https://www.fsb.org/2025/11/2025-list-of-global-systemically-important-banks-g-sibs/#g-sibs-2012-2025*. Some Category III banking organizations are approaching the Category II thresholds for either Total Assets or Cross-Jurisdictional Activity.

[762] *See* Sebastian Doerr, "Deposit Diversification and Funding Stability," (September 2025), *available at: http://dx.doi.org/10.2139/ssrn.4788627*. They leverage a gravity model of firm expansion trends away from their headquarters, along with the staggered repeal of interstate branching limitations across states, to assess the impact of exogenous increases in a bank's deposit-base geographical diversification. They find that it increases a bank's funding stability, through a greater reliance on insured demand deposits, and empowers banks to increase liquidity creation and better continue lending when exposed to a negative localized shock like a natural disaster.

of heightened stress following the regional banking organizations failures of March 2023, GSIBs saw notable upticks in uninsured deposit flows, even relative to other large non-GSIB banks.[763] That highlights the benefits to financial market stability of promoting the emergence of competitors to the current Category I and II banking organizations. Importantly, should the proposed rule changes in these proposals lead more Category I or II banking organizations to emerge, they would become subject to key provisions around capital, augmented liquidity, detailed resolution planning, and enhanced supervisory oversight to formally allay concerns over whether such institutions were too big to fail.

Question 197: What, if any, alternative approaches should the agencies consider for assessing the proposal's effect on competitiveness, and why?

G. Conclusion

The agencies have conducted a thorough economic analysis of the proposal, examining its potential effects on the U.S. banking system and the broader economy. This assessment encompassed proposed changes in risk-weighted assets, capital requirements and their potential effects on lending and trading activities, market liquidity, and competition among financial institutions. The analysis suggests that the proposal would improve the measurement of various risks faced by banking organizations, increasing the risk sensitivity of the regulatory capital framework. Furthermore, the proposed changes to risk weights are broadly expected to support enhanced financial intermediation by covered banking organizations. The analysis also suggests that the cumulative change in capital under the combined proposals (or of each proposal on a

[763] *See* Cecilia Caglio, Jennifer Dlugosz, & Marcelo Rezende, "Flight to Safety in the Regional Bank Stress of 2023," *SSRN Working Paper* (February 25, 2025), *available at:* https://doi.org/10.2139/ssrn.4457140.

standalone basis) is expected to maintain a level of capital that is within range of estimates for optimal capital in the U.S. banking system, and thus reasonable.

Furthermore, by aligning more closely with international standards, the proposed revisions to risk weights aim to enhance Category I and II banking organizations' global competitiveness without compromising their strong capital positions. Based on this economic analysis, the agencies conclude that the benefits of the proposal justify its costs. The agencies invite comment on all aspects of this economic analysis.

IX. Technical amendments to the capital rule

The proposal would make certain technical corrections and clarifications to several provisions of the capital rule, as described below. Most of these proposed corrections or technical changes are self-explanatory, such as updates to terminology to align with the proposal, and would apply only to banking organizations that would be subject to subpart E. In addition, there are several transition provisions and temporary provisions that have expired or no longer apply that the proposal would remove from the capital rule. The proposal would also make technical updates to various aspects of the capital rule to account for the proposed changes to subparts E and F of the capital rule related to the removal and replacement of the current internal model-based approaches for credit risk, operational risk, and market risk. Also, the proposal would make certain technical corrections to the rule to address errors, such as updating the numbering of footnotes in certain sections and correcting the definition of qualifying master netting agreement to include criteria that were originally included and inadvertently deleted. These revisions are not all applicable to each agency and would only apply to a given agency as appropriate.

In § __.1, the proposal would clarify the application of notice and response procedures for reservation of authority actions, would clean up expired effective date provisions, and would clarify the when standards apply to banking organizations that change from one category to another. The proposal would introduce a severability provision to clarify the agencies' intent with respect to the ongoing effectiveness of the proposal in the event that any particular provision or application of the rule is stayed or determined to be invalid. The proposed severability provision reflects the agencies' view that invalidation of a particular provision or application of the capital rule would not render the entire regulation or regulatory scheme unworkable.

In §__.2, the proposal would remove references to subpart E for purposes of the internal models approach in the definition of residential mortgage exposure and the treatment of residential mortgages managed as part of a segment of exposures with homogenous risk characteristics.

In §__.2 of the Board's and the OCC's capital rule, the proposal would correct the definition of qualifying master netting agreement to put back certain paragraphs related to a walkaway clause. Under the 2013 capital rule,[764] the definition of qualifying master netting agreement required that the agreement not contain a walkaway clause and that a banking organization must comply with certain operational requirements with respect to the agreement. When the Board and OCC finalized the restrictions in the qualified financial contracts stay rule[765] and made conforming amendments to the capital rule, certain paragraphs related to a

[764] *See* 78 FR 62018 (Oct. 11, 2013).

[765] *See* 82 FR 42882 (Sept. 12, 2017).

walkaway clause in the definition of qualifying master netting agreement were removed in error. The Board and OCC propose to correct the error by inserting back these paragraphs.

In §__.10(c)(2)(i) of the capital rule, the proposal would clarify in the definition of total leverage exposure that total leverage exposure amount could be reduced by any AACL for on-balance sheet assets. The capital rule defines total leverage exposure to include the carrying value of on-balance sheet assets without any adjustment for AACL. The definition of carrying value does not allow for the reduction in the on-balance sheet amount by any credit loss allowances, except for allowances related to AFS securities and purchased credit deteriorated assets. In the numerator of the supplementary leverage ratio, the AACL flows through earnings and is reflected in Tier 1 capital. To align the numerator and the denominator of the SLR, the proposed change would allow banking organizations to net the AACL from the denominator of the SLR.

The proposal would make a technical correction to §__.10(c)(2)(ix) of the capital rule to clarify the treatment of a guarantee by a clearing member banking organization of the performance of a clearing member client on repo-style transaction that the clearing member client has with a central counterparty. Consistent with the treatment of such exposures under the risk-based framework, the proposal would require the clearing member banking organization to treat the guarantee of client performance on a repo-style transaction as a repo-style style transaction, just as it must treat such a guarantee of client performance on a derivative contract as a derivative contract.

Under the capital rule, §__.300(a) covers the 2016 to 2018 transition for the capital conservation buffer and countercyclical capital buffer. §__.300(c) covers the transition for non-

qualifying capital instruments that expired in calendar year 2022. §__.300(e) covers the transition for prompt corrective action. §__.300(f) covers simplifications early adoption and has expired by its terms.[766] §__.300(g) of the capital rule covers SA-CCR transition and §__.300(h) covers the default fund contribution transition, both of which expired on January 1, 2022. The proposal would update the terminology in §__.300(a) and (c) of the capital rule and would remove §__.300(f) to (h).

§__.303 of the capital rule covers a temporary exclusion from total leverage exposure that ended March 31, 2021. Consistent with the community bank leverage ratio proposed rule, the proposal would remove §__.304 of the capital rule, which covers temporary changes to the community bank leverage ratio framework that applied until December 31, 2021.[767] The proposal would remove §__.303 and §__.304 of the capital rule. Similarly, §__.12(a)(4) of the capital rule covers temporary relief for the community bank leverage ratio that applied until December 31, 2021, and would therefore be removed from the capital rule.

On November 12, 2025, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2025-08, "Financial Instruments—Credit Losses (Topic 326): Purchased Loans," which amends the guidance on accounting for purchased loans. Upon adoption of ASU 2025-08, the population of acquired financial assets subject to the "gross-up approach" will be expanded to include purchased seasoned loans. The "gross-up approach" under U.S. GAAP requires a banking organization to record an allowance for credit losses on

[766] *See* 84 FR 61804 (Nov. 13, 2019).

[767] *See* 90 FR 55048 (Dec. 1, 2025).

purchased credit deteriorated assets[768] as well as purchased seasoned loans as of the date of acquisition with an offsetting gross-up adjustment to the purchase price of the assets or loans.

In the agencies' final rule implementing the current expected credit losses (CECL) methodology in 2019 (CECL final rule), the agencies amended the capital rule to identify which allowance for credit losses under the new CECL accounting standard would be eligible for inclusion in a banking organization's tier 2 capital.[769] The CECL final rule addressed the treatment of allowance for credit losses related to purchase credit deteriorated assets. As ASU 2025-08 requires banking organizations to apply the gross approach to both purchase credit deteriorated assets and purchased seasoned loans, the agencies are proposing to apply the capital rule's treatment of allowance for credit losses on purchase credit deteriorated assets to allowance for credit losses on purchased seasoned loans. In particular, the proposal would modify the term adjusted allowance for credit losses (AACL) adopted in the CECL final rule to exclude credit loss allowances on purchased seasoned loans in addition to those on purchase credit deteriorated assets and available-for-sale (AFS) debt securities. A banking organization would continue to be able to include AACL in its tier 2 capital up to 1.25 percent of the banking organization's total credit risk weighted assets. The proposal would also amend the definition of carrying value to require the carrying value of purchased seasoned loans to be calculated net of ACLs like the capital rule's current treatment of PCD assets.

In defining AACL, the agencies intend to include only those ACLs that have been fully charged against earnings or retained earnings. Including in tier 2 capital ACLs that have not

[768] Purchase credit deteriorated assets are acquired individual financial assets (or acquired groups of financial assets with shared risk characteristics) that, as of the date of acquisition and as determined by an acquirer's assessment, have experienced a more-than-insignificant deterioration in credit quality since origination.

[769] *See* 86 FR 4224 (Feb. 14, 2019).

been charged against earnings would diminish the quality of regulatory capital. Since the initial ACL amount for a PSL recorded on a banking organization's balance sheet would not be established through a charge to earnings, the agencies believe the treatment currently applied to the initial ACL for purchase credit deteriorated assets also would be appropriate for the ACL on purchased seasoned loans. Due to concerns of undue complexity and burden on banking organizations, the agencies are not proposing a bifurcated approach for the treatment of purchased seasoned loans whereby a banking organization could include post-acquisition ACLs on PSLs in tier 2 capital when the banking organization's purchased seasoned loan balances exceed a materiality threshold. The agencies believe that requiring banking organizations to calculate the carrying value of purchased seasoned loans net of ACLs appropriately offsets the effects of excluding post-acquisition ACLs on PSLs in the calculation of regulatory capital. Therefore, the agencies are proposing to exclude the entire ACL on PSLs from AACL, even though post-acquisition increases in ACLs for PSLs would be established through a charge against earnings.

In addition, the agencies are proposing to amend the definitions of AACL and carrying value to provide the same treatment as purchase credit deteriorated assets to other assets that may in the future become subject to the gross approach following a change to GAAP by FASB.

The agencies are also proposing a technical amendment to the current capital rule to remove the definition of allowance for loan and lease losses (ALLL) from section _.2 of the capital rule. The definition of ALLL in the current capital rule is no longer meaningful given the introduction and adoption of the current expected credit loss (CECL) methodology by the FSAB under ASU 2016-13, "Financial Instruments – Credit Losses (Topic 326)."

A. Additional OCC technical amendments

Definition of Financial Collateral

In §__.2 of the OCC's capital rule, the proposed rule would correct an error in the definition of financial collateral by changing the word "and" in paragraph (2) "in which the national bank *and* Federal Savings association has a perfected… [emphasis added]" to "or." The proposed correction would clarify that this requirement in the definition of financial collateral applies to national banks or Federal Savings associations, as relevant.

B. Additional FDIC technical amendments

In addition to the joint technical amendments described above, the FDIC is proposing technical amendments to certain provisions of the capital rule in part 324 of the FDIC's regulations. Specifically, the FDIC proposes to correct a spelling error in the definition of "financial institution" in §324.2. The FDIC also proposes to merge the definition of "bank" into the definition of "FDIC-supervised institution" and to remove "bank" as a defined term in the FDIC's capital rule. Additionally, the FDIC proposes to correct the footnote numbering in part 324 so that each section with any footnote would begin with footnote 1. This would affect the footnotes in §§324.2, 324.4, 324.11, 324.20, and 324.22.

The FDIC also proposes removing expired or obsolete provisions from various sections in part 324, including section 324.1(f), footnote 10 in §324.4, §324.10(b)(5), and §324.10(d)(4).

Finally, the FDIC proposes amending §§324.401 and 324.403 of the prompt corrective action provisions of subpart H to remove outdated transitions and obsolete references to part 325, and to replace references to the advanced approaches consistent with the proposal.

X. Related proposals and proposed amendments to related rules

A. Related proposals

The agencies are also issuing a proposal that would modify certain aspects of the capital requirements applicable to banking organizations not covered by the expanded risk-based approach. That proposal would revise the risk-based capital treatment of certain exposure categories under the standardized approach, focusing on improving the calibration and risk sensitivity of risk weights that are particularly material to lending activities. Consistent with this proposal, the standardized approach proposal would modify the definition of regulatory capital by removing the threshold-based deduction for mortgage servicing assets, including for banking organizations subject to the community bank leverage ratio framework. In addition, the standardized approach proposal would require Category III and IV banking organizations to recognize most elements of accumulated other comprehensive income in their regulatory capital.

The Board is separately issuing the GSIB surcharge proposal that would amend the Board's framework under the capital rule for identifying and establishing risk-based surcharges for global systemically important bank holding companies (GSIBs). The GSIB surcharge proposal would also amend the FR Y-15, which is the source of inputs to the implementation of the GSIB framework under the capital rule. The proposal would modify certain coefficients used to calculate GSIB surcharges under method 2 of the GSIB surcharge framework and provide for annual adjustments of these coefficients going forward. The proposal would modify the measurement and weighting of the weighted short-term wholesale funding systemic indicator in method 2. For certain systemic indicators currently measured only as of a single date each year, the proposal would change to reporting of average values to reduce the effects of temporary changes to indicator values around measurement dates. The proposal would reduce cliff effects and enhance the sensitivity of the surcharge to changes in the method 2 score by calculating surcharges based on narrower score band ranges. To improve risk capture, the proposal would

also make improvements to the measurement of some systemic indicators used in the GSIB surcharge framework and the framework for determining prudential standards for large banking organizations. The proposal would also make several additional amendments to the FR Y-15 to improve the consistency of data reporting and streamline the reporting process.

As discussed in section IV.A.3. of this **SUPPLEMENTARY INFORMATION**, the proposal would modify the credit conversion factors applicable to large banking organizations. The proposal would introduce a 40 percent conversion factor for all conditional equity and credit commitments regardless of maturity, which would replace the current capital rule's 20 percent and 50 percent conversion factors for conditional equity and credit commitments. The proposal would also introduce a 5 percent credit conversion for certain low-utilization retail exposures and a treatment for retail commitments with no pre-set limit. To account for this aspect of the proposal with the agencies supplementary leverage ratio framework, the supplementary leverage ratio framework would incorporate these conversion factors for banking organizations that are subject to the expanded risk-based approach to ensure alignment between the two frameworks.

Question 198: What modifications, if any, should the agencies consider to this proposal due to related proposals and why?

B. OCC amendments

Lending Limits Rule

The OCC's lending limit rule[770] includes a definition of eligible credit derivative, which references the definition of eligible guarantee in the capital rule.[771] This proposed rule would revise the definition of eligible guarantee in 12 CFR part 3 to add a requirement that an eligible

[770] 12 CFR part 32.

[771] *See* 12 CFR 32.2(m)(1).

guarantee must be provided by an eligible guarantor, also as defined in 12 CFR part 3. To avoid imposing this additional requirement of an eligible guarantor for eligible credit derivatives, as defined for lending limit purposes, the OCC is proposing to revise the definition of eligible credit derivative in 12 CFR part 32 to scope out the new proposed requirement of an eligible guarantor.

C. Board amendments

In connection with this proposal, the Board is proposing amendments to various regulations that reference the capital rule in order to make appropriate conforming amendments to reflect this proposal. For example, references to advanced approaches risk-weighted assets would be removed and replaced with expanded total risk-weighted assets, consistent with the proposal. Such conforming changes would be made to Regulation H (12 CFR part 208), Regulation Y (12 CFR part 225), Regulation LL (12 CFR part 238), and Regulation YY (12 CFR part 252). To the extent that other Board rules rely on items determined under the capital rule, changes to the capital rule could impact the effective requirements of such other Board rules. In addition to these proposed amendments, as discussed elsewhere in this document, the proposal would amend Regulation Y, Regulation LL, and Regulation YY as appropriate to reflect the proposed stress capital buffer framework.

Question 199: What modifications, if any, should the Board consider to this proposal or to other Board rules indirectly affected by this proposal?

XI. Administrative law matters

A. Paperwork Reduction Act

Certain provisions of the proposal contain "collections of information" within the meaning of the Paperwork Reduction Act of 1995 (PRA). In accordance with the requirements of the PRA, the agencies may not conduct or sponsor, and a respondent is not required to respond to, an

information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. The information collection requirements contained in this joint proposal have been submitted to OMB for review and approval by the OCC and FDIC under section 3507(d) of the PRA (44 U.S.C. 3507(d)) and section 1320.11 of OMB's implementing regulations (5 CFR Part 1320). The Board reviewed the proposal under the authority delegated to the Board by OMB.

The proposal contains revisions to current information collections subject to the PRA. To implement these requirements, the agencies would revise and extend for three years the (1) Reporting, Recordkeeping, and Disclosure Requirements Associated with Regulatory Capital Rules (OMB Nos. 1557-0318, 3064-0153, and 7100-0313) and (2) Reporting, Recordkeeping, and Disclosure Requirements Associated with Market Risk Capital Rules (OMB Nos. 1557-0247, 3064-0178, and 7100-0314). These information collections are also being revised by the standardized approach proposal. For ease of reference, the proposed revisions to these information collections by this proposal as well as the standardized approach proposal will be addressed in a separate Federal Register notice.

The Board would also revise and extend for three years the (1) Financial Statements for Holding Companies (FR Y-9; OMB No. 7100-0128), (2) the Capital Assessments and Stress Testing (FR Y-14A/Q/M; OMB No. 7100-0341), and (3) the Systemic Risk Report (FR Y-15; OMB No. 7100-0352). The proposed revisions to these Board reports will be addressed in one or more separate Federal Register notices.

Finally, the agencies, under the auspices of the FFIEC, would also propose related revisions to (1) all versions of the Consolidated Reports of Condition and Income (Call Reports) (FFIEC 031, FFIEC 041, and FFIEC 051; OMB Nos. 1557-0081; 3064-0052, and 7100-0036),

(2) the Regulatory Capital Reporting for Institutions Subject to the Advanced Capital Adequacy Framework (FFIEC 101; OMB Nos. 1557-0239, 3064-0159, and 7100-0319), and (3) the Market Risk Regulatory Report for Institutions Subject to the Market Risk Capital Rule (FFIEC 102; OMB Nos. 1557-0325, 3064-0199, and 7100-0365). The proposed revisions to these FFIEC reports will be addressed in one or more separate Federal Register notices.

B. Regulatory Flexibility Act

OCC:

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601 et seq., requires an agency, in connection with a proposed rule, to prepare an Initial Regulatory Flexibility Analysis describing the impact of the rule on small entities (defined by the Small Business Administration (SBA) for purposes of the RFA to include commercial banks and savings institutions with total assets of $850 million or less (NAICS Code: 522110) and $47 million for trust companies (NAICS Code: 523991)) or to certify that the proposed rule would not have a significant economic impact on a substantial number of small entities. The OCC currently supervises approximately 609 small entities.[772]

The OCC estimates that the proposed rule would impact none of these small entities, as the scope of the rule only applies to large national banks and FSAs and their subsidiaries. Therefore, the OCC certifies that the proposed rule would not have a significant economic impact on a substantial number of small entities.

Board:

[772] Consistent with the General Principles of Affiliation 13 CFR 121.103(a), OCC staff count the assets of affiliated financial institutions when determining whether to classify an OCC-supervised institution as a small entity. OCC staff use December 31, 2024, to determine size because a "financial institution's assets are determined by averaging the assets reported on its four quarterly financial statements for the preceding year." See footnote 8 of the U.S. Small Business Administration's *Table of Size Standards*.

The Board is providing an initial regulatory flexibility analysis with respect to this proposed rule. The Regulatory Flexibility Act[773] (RFA) requires an agency to consider whether the rule it proposes will have a significant economic impact on a substantial number of small entities.[774] In connection with a proposed rule, the RFA requires an agency to prepare and invite public comment on an initial regulatory flexibility analysis describing the impact of the rule on small entities, unless the agency certifies that the proposed rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. An initial regulatory flexibility analysis must contain (1) a description of the reasons why action by the agency is being considered; (2) a succinct statement of the objectives of, and legal basis for, the proposed rule; (3) a description of, and, where feasible, an estimate of the number of small entities to which the proposed rule will apply; (4) a description of the projected reporting, recordkeeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirement and the type of professional skills necessary for preparation of the report or record; (5) an identification, to the extent practicable, of all relevant Federal rules which may duplicate, overlap with, or conflict with the proposed rule; and (6) a description of any significant alternatives to the proposed rule which accomplish the stated objectives of applicable statutes and minimize any significant economic impact of the proposed rule on small entities.[775]

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[773] 5 U.S.C. 601 *et seq.*

[774] Under regulations issued by the U.S. Small Business Administration (SBA), a small entity includes a depository institution, bank holding company, or savings and loan holding company with total assets of $850 million or less. *See* 13 CFR 121.201. Consistent with the SBA's General Principles of Affiliation, the Board includes the assets of all domestic and foreign affiliates toward the applicable size threshold when determining whether to classify a particular entity as a small entity. *See* 13 CFR 121.103. As of the second quarter of 2025, there were approximately 2,796 small bank holding companies and approximately 157 small savings and loan holding companies, and approximately 443 small state member banks.

[775] 5 U.S.C. 603(b)-(c).

The Board has considered the potential impact of the proposed rule on small entities in accordance with the RFA. Based on its analysis and for the reasons stated below, the Board believes that this proposed rule will not have a significant economic impact on a substantial number of small entities. Nevertheless, the Board is publishing and inviting comment on this initial regulatory flexibility analysis. The proposal would also make corresponding changes to the Board's reporting forms.

As discussed in detail in sections I through X of this **SUPPLEMENTARY INFORMATION**, the proposed rule would substantially revise the capital requirements applicable to large banking organizations and to banking organizations with significant trading activity. The revisions set forth in the proposal would improve the calculation of risk-based capital requirements to better reflect the risks of these banking organizations' exposures, reduce the complexity of the framework, enhance the consistency of requirements across these banking organizations, change the definition of capital, amend certain dollar-based regulatory thresholds, and facilitate more effective supervisory and market assessments of capital adequacy. The revisions would include replacing current requirements that include the use of banking organizations' internal models for credit risk and operational risk with standardized approaches and replacing the current market risk and credit valuation adjustment risk requirements with revised approaches. Requirements under the proposal would generally be consistent with international capital standards issued by the Basel Committee.

Congress has authorized the agencies to establish risk-based capital requirements and standards for banking organizations subject to this proposal. Section 165 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act),[776] as amended by

[776] Dodd-Frank Wall Street Reform and Consumer Protection Act, Public Law 111-203, 124 Stat. 1376 (2010).

section 401 of the Economic Growth, Regulatory Relief, and Consumer Protection Act,[777] requires the Board to establish enhanced prudential standards that include risk-based capital requirements for bank holding companies with $250 billion or more in total consolidated assets.[778] The prompt corrective action framework in section 38 of the Federal Deposit Insurance Act (FDI Act) requires the agencies to prescribe capital standards for insured depository institutions that include a risk-based capital requirement and provides that the agencies may establish any additional relevant capital measures to carry out the purpose of that section.[779] Various other statutory authorities provide the agencies with broad discretionary authority to set capital requirements and standards for banking organizations supervised by the agencies, including national banking associations, state-chartered banks, savings associations, and depository institution holding companies.[780]

As discussed in more detail in section II of this **SUPPLEMENTARY INFORMATION**, the proposed rule would apply to Category I and II banking organizations, as well as to banking organizations with significant trading activity. Under the proposed rule, a banking organization

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[777] Economic Growth, Regulatory Relief, and Consumer Protection Act, Public Law 115-174, 132 Stat. 1296 (2018).

[778] *See* 12 U.S.C. 5365(a)(1), (b)(1)(A)(i). Section 165 of the Dodd-Frank Act also provides that the Board may apply any prudential standard established under section 165 to any bank holding company with $100 billion or more in total consolidated assets to which the prudential standard does not otherwise apply, under certain circumstances. 12 U.S.C. 5365(a)(2)(C). Section 165, in relevant part, also applies to foreign banks or companies that are treated as a bank holding company for purposes of the Bank Holding Company Act. *See* 12 U.S.C. 3106(a), 5311(a)(1). *See also* section 401(g) of the Economic Growth, Regulatory Relief, and Consumer Protection Act (regarding the Board's authority to establish enhanced prudential standards for foreign banking organizations with total consolidated assets of $100 billion or more). 12 U.S.C. 5365 note.

[779] *See* 12 U.S.C. 1831o(c)(1)(A), (c)(1)(B)(i).

[780] *See* 12 U.S.C. 93a (national banking associations); 12 U.S.C. 248(i), 324, 327, 329 (state member banks); 12 U.S.C. 1463 (savings associations); 12 U.S.C. 1467a(g)(1) (savings and loan holding companies); 12 U.S.C. 1844(b) (bank holding companies); 12 U.S.C. 3106 (certain U.S. operations of foreign banking organizations); 12 U.S.C. 3902(1)-(2), 3907(a), 3909(a), (c)(1)-(2) (depository institutions; affiliates of depository institutions, including holding companies; and certain U.S. operations of foreign banking organizations); 12 U.S.C. 5371 (insured depository institutions, depository institution holding companies, and nonbank financial companies supervised by the Board). Additional statutory authorities relevant to the agencies' capital rule can be found in the authority citations in the capital rule. *See* 12 CFR part 3 (OCC); 12 CFR part 217 (Board); 12 CFR part 324 (FDIC).

with significant trading activity would include any banking organization with average aggregate trading assets and trading liabilities, excluding customer and proprietary broker-dealer reserve bank accounts, over the previous four calendar quarters equal to $5 billion or more, or equal to 10 percent or more of total consolidated assets at quarter end as reported on the most recent quarterly regulatory report. Additionally, the proposal would allow other banking organizations to opt into the expanded risk-based approach. Banking organizations that choose this option would also be subject to the definition of capital that applies to Category I and II banking organizations. Accordingly, essentially all banking organizations to which the proposed rule would apply exceed the SBA's $850 million total asset threshold, except for small entities that opt into the framework set out in the proposed rule. A small entity could choose not to opt into the framework set out in this proposal and would not be required to make any changes to its current reporting, recordkeeping, or compliance systems in order to elect not to adopt this framework; the proposed rule, therefore, would not impose mandatory requirements or costs on any small entities.

As discussed in more detail in the Paperwork Reduction Act section, the proposed rule, once final, would require changes to the Consolidated Financial Statements for Holding Companies report (FR Y-9C) and the Capital Assessments and Stress Testing reports (FR Y-14A and FR Y-14Q).

The Board is aware of no other Federal rules that duplicate, overlap, or conflict with the proposed changes to the capital rule. The Board also is aware of no significant alternatives to the proposed rule that would accomplish the stated objectives of applicable statutes. Because the proposed rule generally would not apply to any small entities supervised by the Board, there are no alternatives that could minimize the impact of the proposed rule on small entities.

Therefore, the Board believes that the proposed rule would not have a significant economic impact on a substantial number of small entities supervised by the Board.

The Board welcomes comment on all aspects of its analysis. In particular, the Board requests that commenters describe the nature of any impact on small entities and provide empirical data to illustrate and support the extent of the impact.

FDIC:

The Regulatory Flexibility Act (RFA) generally requires an agency, in connection with a proposed rulemaking, to prepare and make available for public comment an initial regulatory flexibility analysis that describes the impact of the proposed rule on small entities.[781] However, an initial regulatory flexibility analysis is not required if the agency certifies that the proposed rule will not, if promulgated, have a significant economic impact on a substantial number of small entities. The Small Business Administration (SBA) has defined "small entities" to include banking organizations with total assets of less than or equal to $850 million.[782] For the reasons described below, the FDIC certifies that the proposed rule would not have a significant economic impact on a substantial number of small entities.

As discussed in section IV, the proposed rule, if enacted, would revise the risk-based capital requirements applicable to Category I and II holding companies and their subsidiary Depository Institutions (DIs).[783] Specifically, these banking organizations would be subject to a

[781] 5 U.S.C. 601 et seq.

[782] The SBA defines a small banking organization as having $850 million or less in assets, where an organization's ''assets are determined by averaging the assets reported on its four quarterly financial statements for the preceding year.'' *See* 86 FR 69118 which amends 13 CFR 121.201, (effective December 19, 2022.). In its determination, the ''SBA counts the receipts, employees, or other measure of size of the concern whose size is at issue and all of its domestic and foreign affiliates.'' *See* 13 CFR 121.103. Following these regulations, the FDIC uses a covered entity's affiliated and acquired assets, averaged over the preceding four quarters, to determine whether the covered entity is ''small'' for the purposes of RFA.

[783] Covered banking organizations surpassing certain trading asset thresholds would also be subject to the proposal.

single set of risk-based capital ratio requirements based on the expanded risk-based approach, as defined in section III. According to Call Reports, there are 2,802 FDIC-supervised DIs that report risk-based capital.[784] Of these, approximately 2,085 would be considered small entities for the purposes of the RFA.[785] As of June 30, 2025, there were 9 top-tier U.S. depository institution holding companies and 22 U.S.-based depository institutions that report risk-based capital figures and are subject to Category I or II standards.[786] As of June 30, 2025, the FDIC supervised one DI that is a subsidiary of a holding company subject to the Category I capital standards and no DIs that are subsidiaries of holding companies subject to the Category II capital standards.[787] This FDIC-supervised DI is not considered a small entity for the purposes of the RFA because it is a subsidiary of a holding company with over $850 million in total assets. Therefore, no FDIC-supervised small entities would be subject to the expanded risk-based approach should the proposed rule be enacted.

As discussed in section II.A, the proposed rule would allow any non-Category I or II covered banking organization to elect to use the expanded risk-based approach. Electing the expanded risk-based approach would entail compliance with other requirements, notably the need to capitalize separately for operational risk and ineligibility to elect the AOCI filter for banking organizations below the Category IV threshold. Banking organizations electing to use the expanded risk-based approach would be required to fully implement its applicable

[784] Call Reports data, June 30, 2025. The count of potential covered entities excludes six insured, domestic branches of foreign banks.

[785] Call Reports data, June 30, 2025.

[786] On November 1, 2019, the banking agencies established four risk-based categories in order to tailor requirements under the agencies' regulatory capital and liquidity rules to banking organizations with assets of $100 billion or more (84 FR 59230). These Tailored Categories are defined in 12 CFR part 252 (84 FR 59032). The tailored holding company and depository institutions counts are based on June 2025 Call Reports, FR Y-9C data, and FR Y-15 data.

[787] Counts are based on June 30, 2025 Call Reports, FR Y-9C data, and FR Y-15 data.

provisions, including the capital, operational risk, recordkeeping, reporting, and disclosure elements. Further, they would be required to reflect most elements of AOCI in regulatory capital even if they subsequently change to the standardized approach.

Banking organizations that qualify as small entities have simpler business models with risk management and reporting systems designed for their size and activities. If they elect the requirements under the proposal, they may be required to set up, operate, maintain, and keep records on more granular systems that would not likely yield benefits that would warrant the additional costs to these small entities.

As mentioned, the agencies are concurrently publishing a separate proposal that revises the standardized approach risk-based capital requirements. Small entities that use the proposed standardized approach or elect to use the CBLR framework would avoid the expanded risk-based approach requirements designed for larger, more complex banking organizations.[788]

Under the scenario in which all three frameworks are finalized as proposed, the agencies believe that FDIC-supervised small entities are most likely to choose as their required capital framework either 1) the concurrently proposed revised standardized approach or 2) the recently proposed revised CBLR, as these two frameworks are better suited to the size and complexity of small entities than is the proposed expanded risk-based approach. For eligible small entities, the

[788] The CBLR criteria currently require a banking organization to have less than $10 billion in total assets, meet a minimum required ratio of tangible equity capital to its average total consolidated assets of 9 percent, hold off-balance sheet exposures of 25 percent or less of total consolidated assets, and hold total trading assets plus trading liabilities of 5 percent or less of total consolidated assets. As of June 30, 2025, over 1,000 FDIC-supervised DI elect to use the CBLR framework. A recent proposal would reduce the required leverage ratio from 9 percent to 8 percent, and extend the grace period for an eligible banking organization that fails to meet the qualifying criteria after opting into the CBLR framework. 90 FR 55048 (Dec. 1, 2025).

two options present a basic tradeoff between lower required capital under the proposed revised standardized approach and simpler reporting requirements under proposed revised CBLR.[789]

For these reasons, the FDIC does not expect a substantial number of small entities to elect to use the proposed expanded risk-based approach.

Some effects of the proposal on small entities would occur regardless of whether the entities adopt the expanded-risk based approach. First, aspects of the proposal discussed in sections III and IV.A may indirectly support small entities by increasing the attractiveness of correspondent lending models and other forms of loan participation agreements.[790] Smaller lenders can cultivate customers via their superior local knowledge while turning to larger banking organizations for funding and for their facility with securitization markets.[791] The proposed removal of the mortgage servicing assets deduction treatment would also make mortgage lending relationships under these types of models more attractive, particularly for Ginnie Mae securitizations where lenders must pool together multiple loans themselves. Second, the proposed reduction in capital requirements in the expanded risk-based approach, in principle, could have competitiveness impacts in certain lending markets that may indirectly affect small entities. However, the agencies designed this proposal and the standardized approach proposal concurrently, in part to mitigate potential competitiveness impacts on smaller banking

[789] *See* the Economic Impact section of the Regulatory Capital and Standardized Approach for Risk-weighted Assets Notice of Proposed Rulemaking for more information on small banking organizations' incentives to select between the standardized approach and the CBLR.

[790] *See* Michael Poprik, "Loan Participations: Lessons Learned During a Period of Economic Malaise," *Federal Reserve Bank of Richmond Community and Regional Supervision* (2013), *https://www.communitybankingconnections.org/articles/2013/q2/loan-participations*.

[791] *See* Richard Stanton, Johan Walden, & Nancy Wallace, "The Industrial Organization of the US Residential Mortgage Market," *Annual Review of Financial Economics*, no. 6 (2014), *available at*: *https://doi.org/10.1146/annurev-financial-110613-034324 and David Benson, You Suk Kim, & Karen Pence, "Bank Aggregator Exit, Nonbank Entry, and Credit Supply in the Mortgage Industry," Working Paper (2023), https://www.fdic.gov/system/files/2024-07/kim-paper.pdf*.

organizations. Several changes in proposed risk weights applicable to Category I and II banking organizations through the expanded risk-based approach have corresponding changes to proposed risk weights applicable to smaller banking organizations (including small entities) through the standardized approach proposal. Therefore, the agencies believe indirect competitiveness effects on small entities generally would be small. The agencies do not have the data necessary to estimate the magnitudes of these additional effects on small entities, but believe that these effects do not rise to a significant level for a substantial number of small entities.

For the reasons outlined above, the FDIC certifies that the proposed rule, if adopted, would not have a significant economic effect on a substantial number of small entities.

C. Plain language

Section 722 of the Gramm-Leach Bliley Act[792] requires the Federal banking agencies[793] to use plain language in all proposed and final rules published after January 1, 2000. The agencies have sought to present the proposal in a simple and straightforward manner and invite comments on the use of plain language and whether any part of the proposal could be more clearly stated. For example:

- Have the agencies presented the material in an organized manner that meets your needs? If not, how could this material be better organized?
- Are the requirements in the notice of proposed rulemaking clearly stated? If not, how could the proposed rule be more clearly stated?

[792] Pub. L. 106-102, section 722, 113 Stat. 1338, 1471 (1999).

[793] The Federal banking agencies are the OCC, Board, and FDIC.

- Does the proposed rule contain language that is not clear? If so, which language requires clarification?
- Would a different format (grouping and order of sections, use of headings, paragraphing) make the proposed rule easier to understand? If so, what changes to the format would make the proposed rule easier to understand?
- What else could the agencies do to make the proposed rule easier to understand?

D. Riegle Community Development and Regulatory Improvement Act of 1994

Pursuant to section 302(a) of the Riegle Community Development and Regulatory Improvement Act (RCDRIA), [794] in determining the effective date and administrative compliance requirements for new regulations that impose additional reporting, disclosure, or other requirements on insured depository institutions, each Federal banking agency must consider, consistent with principles of safety and soundness and the public interest, any administrative burdens that such regulations would place on depository institutions, including small depository institutions, and customers of depository institutions, as well as the benefits of such regulations. In addition, section 302(b) of RCDRIA requires new regulations and amendments to regulations that impose additional reporting, disclosures, or other new requirements on insured depository institutions generally to take effect on the first day of a calendar quarter that begins on or after the date on which the regulations are published in final form, with certain exceptions, including for good cause. [795]

The agencies note that comment on these matters has been solicited in other sections of this **SUPPLEMENTARY INFORMATION** section, and that the requirements of RCDRIA

[794] 12 U.S.C. 4802(a).

[795] 12 U.S.C. 4802.

will be considered as part of the overall rulemaking process. In addition, the agencies also invite any other comments that further will inform the agencies' consideration of RCDRIA.

E. OCC Unfunded Mandates Reform Act of 1995 determination

The OCC has analyzed the proposed rule under the factors in the Unfunded Mandates Reform Act of 1995 (UMRA) (2 U.S.C. 1532). Under this analysis, the OCC considered whether the proposed rule includes a Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year, adjusted annually for inflation (currently $187 million[796]).

To estimate the compliance costs of the proposal, OCC staff reviewed the new mandates that affect OCC-supervised banks, and then considered costs that may arise from compliance with these mandates, including the total hours needed per bank, on average, for systems development, data acquisition, data aggregation and reporting, calculation and verification, training, and risk management. Based on internal discussions with OCC subject matter experts, OCC staff estimate a one-time implementation cost of approximately $110 million.[797] Thus, the OCC concludes that the expenditures imposed by the rule will be less than $187 million. Accordingly, the UMRA does not require that a written statement accompany this rule.

F. Executive Orders 12866, 13563 and 14192

[796] OCC staff estimate the UMRA inflation adjustment using the change in the annual average of the U.S. GDP Implicit Price Deflator between 1995 and 2024, which are the most recent annual data available. According to Bureau of Economic Analysis data released on March 27, 2025, the deflator was 66.939 in 1995 and 125.230 in 2024, resulting in an inflation adjustment factor of 1.87 (125.230/66.939 = 1.87 rounded to the nearest hundredth, and $100 million x 1.87 = $187 million).

[797] These compliance cost estimates are subject to considerable uncertainty. They should be interpreted as approximate, order-of-magnitude estimates rather than precise measures of the actual costs individual banks will incur.

Executive Order 12866 (Regulatory Planning and Review)[798] and Executive Order 13563 (Improving Regulation and Regulatory Review)[799] direct agencies to assess the costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits. This proposed rule was drafted and reviewed in accordance with Executive Order 12866 and Executive Order 13563. Within OMB, the Office of Information and Regulatory Affairs (OIRA) has determined that this rulemaking is 'an economically significant regulatory action' under section 3(f)(1) of Executive Order 12866. Accordingly, the draft rule was submitted to OIRA for review. As noted in other sections of the SUPPLEMENTARY INFORMATION of this document, the agencies have assessed the costs and benefits of this rulemaking and has made a reasoned determination that the benefits of this rulemaking justify its costs. The proposal, if finalized as proposed, is not expected to be an Executive Order 14192 regulatory action.

G. Providing Accountability Through Transparency Act of 2023

The Providing Accountability Through Transparency Act of 2023 (5 U.S.C. 553(b)(4)) requires that a notice of proposed rulemaking include the internet address of a summary of not more than 100 words in length of the proposed rule, in plain language, that shall be posted on the internet website under section 206(d) of the E-Government Act of 2002 (44 U.S.C. 3501 note).

In summary, the bank regulatory agencies request comment on a proposal to revise the risk-based capital requirements that apply to the largest, most internationally active firms to substantially simplify the framework, better align minimum requirements with risk, improve the consistency of requirements across U.S. firms, consider overlaps with the stress capital buffer

[798] E.O. 12866, 58 FR 51735 (Oct. 4, 1993).

[799] E.O. 13563, 76 FR 3821 (Jan. 21, 2011).

requirement, and align requirements with international standards while ensuring the framework accounts for specific features of U.S. markets.

The proposal and such a summary can be found at *https://www.regulations.gov*, *https://www.federalreserve.gov/supervisionreg/reglisting.htm*, *https://www.fdic.gov/federal-register-publications*, and *https://occ.gov/topics/laws-and-regulations/occ-regulations/proposed-issuances/index-proposed-issuances.html*.

Text of Common Rule

Subpart E—Risk-Weighted Assets—Expanded Risk-Based Approach

§ __.100 Purpose and applicability.

(a) *Purpose.* This subpart sets forth methodologies for determining expanded total risk-weighted assets for purposes of the expanded capital ratio calculations.

(b) *Applicability.*

(1) This subpart applies to any Category I [BANKING ORGANIZATION], any Category II [BANKING ORGANIZATION], and any [BANKING ORGANIZATION] that elects to use this subpart under § __.10(b).

(2) The [AGENCY] may apply this subpart to any [BANKING ORGANIZATION] if the [AGENCY] deems it necessary or appropriate to ensure safe and sound banking practices.

(c) Notwithstanding any other provision of this section, a market risk [BANKING ORGANIZATION] must exclude from its calculation of risk-weighted assets under this subpart the risk-weighted asset amounts of all market risk covered positions, as defined in subpart F of this part (except foreign exchange positions that are not trading positions, OTC derivative positions, cleared transactions, and unsettled transactions).

§ __.101 Definitions.

(a) Terms that are set forth in § __.2 and used in this subpart have the definitions assigned thereto in § __.2 unless otherwise defined in paragraph (b) of this section.

(b) For purposes of this subpart, the following terms are defined as follows:

Acquisition, development, or construction (ADC) exposure means a loan secured by real estate for the purpose of acquiring, developing, or constructing residential or commercial real estate properties, as well as all land development loans, and all other land loans.

Bank exposure means an exposure to a depository institution, foreign bank, or credit union.

Dependent on the cash flows generated by the real estate means, for a real estate exposure, that the underwriting, at the time of origination, considers the cash flows generated by lease, rental, or sale of the real estate securing the loan as a source of repayment. For purposes of this definition, a residential mortgage exposure that is secured by the borrower's principal residence is deemed not dependent on the cash flows generated by the real estate.

Dividend income means all dividends received on securities not consolidated in the [BANKING ORGANIZATION]'s financial statements.

Grade A bank exposure means:

(1) A bank exposure for which the depository institution, foreign bank, or credit union is investment grade and whose most recent capital ratios meet or exceed the higher of:

(i) The minimum capital requirements and any additional amounts necessary to not be subject to limitations on distributions and discretionary bonus payments under capital rules established by the prudential supervisor of the depository institution, foreign bank, or credit union; and

(ii) If applicable, the capital ratio requirements for the well capitalized capital category

under the regulations of the appropriate Federal banking agency implementing 12 U.S.C. 1831o or under similar regulations of the National Credit Union Administration.

(2) Notwithstanding paragraph (1) of this definition, an exposure is not a Grade A bank exposure if:

(i) The capital ratios for the depository institution, foreign bank, or credit union have not been publicly disclosed within the previous 6 months;

(ii) The external auditor of the depository institution, foreign bank, or credit union has issued an adverse audit opinion or has expressed substantial doubt about the ability of the depository institution, foreign bank, or credit union to continue as a going concern within the previous 12 months; or

(iii) For a foreign bank, the capital standards imposed by the home country supervisor on the foreign bank are not broadly consistent with the Capital Accord of the Basel Committee on Banking Supervision.

Grade B bank exposure means:

(1) A bank exposure that is not a Grade A bank exposure and for which the depository institution, foreign bank, or credit union is speculative grade or investment grade and whose most recent capital ratios meet or exceed the higher of:

(i) The minimum capital requirements under capital rules established by the prudential supervisor of the depository institution, foreign bank, or credit union; and

(ii) If applicable, the capital ratio requirements for the adequately capitalized category under the regulations of the appropriate Federal banking agency implementing 12 U.S.C. 1831o or under similar regulations of the National Credit Union Administration.

(2) Notwithstanding paragraph (1) of this definition, an exposure to a depository institution, foreign bank, or credit union is not a Grade B bank exposure if:

(i) The capital ratios for the depository institution, foreign bank, or credit union have not been publicly disclosed within the previous 6 months;

(ii) The external auditor of the depository institution, foreign bank, or credit union has issued an adverse audit opinion or has expressed substantial doubt about the ability of the depository institution, foreign bank, or credit union to continue as a going concern within the previous 12 months; or

(iii) For a foreign bank, the capital standards imposed by the home country supervisor on the foreign bank are not broadly consistent with the Capital Accord of the Basel Committee on Banking Supervision.

Grade C bank exposure means a bank exposure for which the depository institution, foreign bank, or credit union does not qualify as a Grade A bank exposure or a Grade B bank exposure.

Interest-earning assets means the sum of all gross outstanding loans and leases, securities that pay interest, interest-bearing balances, Federal funds sold, and securities purchased under agreement to resell.

Investment management means asset management, wealth management and private banking, including professional management of mutual funds and institutional accounts, and professional portfolio management and advisory services for individuals.

Investment services means asset servicing (which include custody, fund services, securities lending, liquidity services, collateral management, and other asset servicing; as well as recording keeping services for 401K and employee benefit plans, but exclude funding or

guarantee products offered to such clients), issuer services (which include corporate trust, shareowner services, depository receipts, and other issuer services), and other investment services (which include clearing and other investment services).

Noninterest expense for BI means other noninterest expense, based on the consolidated financial statements of the [BANKING ORGANIZATION], excluding expenses that relate to non-financial services received by the [BANKING ORGANIZATION] and operational losses. Noninterest expense for BI does not include salaries and employee benefits, expenses of premises and fixed assets, goodwill impairment losses, or amortization expense and impairment losses for other intangible assets.

Non-lending treasury services means cash management, global payments, and deposit services (and excludes any lending or card activities).

Operational loss means all losses (excluding insurance or tax effects) resulting from an operational loss event, including any reduction in previously reported capital levels attributable to restatements or corrections of financial statements. Operational loss includes all expenses associated with an operational loss event except for opportunity costs, forgone revenue, and costs related to risk management and control enhancements implemented to prevent future operational losses. Operational loss does not include losses that are also credit losses and are related to exposures within the scope of the credit risk-weighted assets framework (except for retail credit card losses arising from non-contractual, third-party-initiated fraud, which are operational losses).

Operational loss event means an event that results in loss due to inadequate or failed internal processes, people, and systems or from external events. This includes legal loss events and restatements or corrections of financial statements that result in a reduction of capital relative

to amounts previously reported. Losses with a common underlying trigger must be grouped into a single operational loss event. Operational loss events are classified according to the following seven operational loss event types:

(1) Internal fraud, which means the operational loss event type that comprises operational losses resulting from an act involving at least one internal party of a type intended to defraud, misappropriate property, or circumvent regulations, the law, or company policy excluding diversity and discrimination noncompliance events.

(2) External fraud, which means the operational loss event type that comprises operational losses resulting from an act by a third party of a type intended to defraud, misappropriate property, or circumvent the law. Retail credit card losses arising from non-contractual, third-party-initiated fraud (for example, identity theft) are external fraud operational losses.

(3) Employment practices and workplace safety, which means the operational loss event type that comprises operational losses resulting from an act inconsistent with employment, health, or safety laws or agreements, payment of personal injury claims, or payment arising from diversity and discrimination noncompliance events.

(4) Clients, products, and business practices, which means the operational loss event type that comprises operational losses resulting from the nature or design of a product or from an unintentional or negligent failure to meet a professional obligation to specific clients (including fiduciary and suitability requirements).

(5) Damage to physical assets, which means the operational loss event type that comprises operational losses resulting from the loss of or damage to physical assets from natural disaster or other events.

(6) Business disruption and system failures, which means the operational loss event type that comprises operational losses resulting from disruption of business or system failures, including hardware, software, telecommunications, utility outage or disruptions.

(7) Execution, delivery, and process management, which means the operational loss event type that comprises operational losses resulting from failed transaction processing or process management or losses arising from relations with trade counterparties and vendors.

Operational risk means the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (including legal risk but excluding strategic risk).

Other real estate exposure means a real estate exposure that is not a regulatory commercial real estate exposure, a regulatory residential real estate exposure, a pre-sold construction loan, a statutory multifamily mortgage, an HVCRE exposure, or an ADC exposure.

Project finance exposure means a corporate exposure:

(1) For which the [BANKING ORGANIZATION] relies on the revenues generated by a single project, both as the source of repayment and as security for the loan;

(2) The exposure is to an entity that was created specifically to finance the project, operate the physical assets of the project, or do both; and

(3) The borrowing entity has an immaterial amount of assets, activities, or sources of income, apart from those related to the project being financed.

Project finance operational phase exposure means a project finance exposure where the project has positive net cash flow that is sufficient to support the debt service and expenses of the project and any other remaining contractual obligation, in accordance with the [BANKING

ORGANIZATION]'s applicable loan underwriting criteria for permanent financings, and where the outstanding long-term debt on the project is declining.

Real estate exposure means an exposure that is neither a sovereign exposure nor an exposure to a PSE and that is:

(1) A residential mortgage exposure;

(2) An exposure that is primarily secured by collateral in the form of real estate;

(3) A pre-sold construction loan;

(4) A statutory multifamily mortgage;

(5) An HVCRE exposure; or

(6) An ADC exposure.

Regulatory commercial real estate exposure means a real estate exposure that is not a regulatory residential real estate exposure, an ADC exposure, a pre-sold construction loan, a statutory multifamily mortgage, or an HVCRE exposure, and that meets the following criteria:

(1) The exposure must be primarily secured by fully completed real estate;

(2) The [BANKING ORGANIZATION] holds a first priority security interest in the property that is legally enforceable in all relevant jurisdictions; provided that when the [BANKING ORGANIZATION] also holds a junior security interest in the same property and no other party holds an intervening security interest, the [BANKING ORGANIZATION] must treat the exposures as a single regulatory commercial real estate exposure;

(3) The exposure is made in accordance with prudent underwriting standards, including standards relating to the loan amount as a percent of the value of the property;

(4) During underwriting of the loan, the [BANKING ORGANIZATION] must have applied underwriting policies that took into account the ability of the borrower to repay in a

timely manner based on clear and measurable underwriting standards that enable the [BANKING ORGANIZATION] to evaluate relevant credit factors;

(5) The property must be valued in accordance with § __.5; and

(6) Involves a loan that has not been restructured or modified.

Regulatory residential real estate exposure means a real estate exposure that is a first-lien residential mortgage exposure, that is not an ADC exposure, a pre-sold construction loan, a statutory multifamily mortgage, or an HVCRE exposure, and that meets the following criteria:

(1) The exposure:

(i) Is secured by a property that is either owner-occupied or rented;

(ii) Is made in accordance with prudent underwriting standards, including standards relating to the loan amount as a percent of the value of the property;

(iii) Involves a loan, for which the [BANKING ORGANIZATION] applied underwriting policies that took into account the ability of the borrower to repay in a timely manner based on clear and measurable underwriting standards that enable the [BANKING ORGANIZATION] to evaluate these credit factors, during underwriting of the loan;

(iv) Is secured by property that is valued in accordance with § __.5; and

(v) Involves a loan that has not been restructured or modified, provided that a loan modified or restructured solely pursuant to the U.S. Treasury's Home Affordable Mortgage Program is not modified or restructured for purposes of this section.

(2) When a [BANKING ORGANIZATION] holds the first-lien and junior-lien(s) mortgage exposure, and no other party holds an intervening lien, the [BANKING ORGANIZATION] must treat the exposures as a single regulatory residential real estate exposure.

Regulatory retail exposure means a retail exposure that meets both of the following criteria:

(1) *Product criterion.* The exposure is a revolving credit or line of credit or a term loan or lease; and

(2) *Aggregate limit*. The sum of the notional amount of the exposure and the notional amounts of all other retail exposures to the obligor and to its affiliates does not exceed $1 million, as adjusted pursuant to § ___.4.

Retail exposure means an exposure that is not a real estate exposure and that meets the following criteria:

(1) The exposure is to a natural person or persons, or

(2) The exposure is to an SME and satisfies the criteria in paragraphs (1) through (2) of the definition of *regulatory retail exposure*.

Senior securitization exposure means a securitization exposure that has a first-priority claim on the cash flows from the underlying exposures. When determining whether a securitization exposure has a first-priority claim on the cash flows from the underlying exposures, a [BANKING ORGANIZATION] is not required to consider amounts due under interest rate derivative, currency derivative, and servicer cash advance facility contracts; fees due; and other similar payments. Both the most senior commercial paper issued by an ABCP program and a liquidity facility that supports the ABCP program may be senior securitization exposures if the liquidity facility provider's right to reimbursement of the drawn amounts is senior to all claims on the cash flows from the underlying exposures except amounts due under interest rate derivative, currency derivative, and servicer cash advance facility contracts; fees due; and other similar payments.

Small or medium-sized entity (SME) means an entity in which the reported annual revenues or sales for the consolidated group of which the entity is a part are less than or equal to $50 million, as adjusted pursuant to § __.4, for the most recent fiscal year.

Subordinated exposure means an exposure that is a corporate exposure, a bank exposure, or an exposure to a GSE that is subordinated by its terms or separate intercreditor agreement to the general creditors of the obligor, including an exposure to preferred stock that is not an equity exposure.

Transactor exposure means a regulatory retail exposure that is a credit facility where the balance has been repaid in full at each scheduled repayment date for the previous 12 months or an overdraft facility where there has been no drawdown over the previous 12 months.

Total interest expense means interest expenses related to all financial liabilities and other interest expenses.

Total interest income means interest income from all financial assets and other interest income.

Risk-Weighted Assets for Credit Risk

§ __.110 Calculation of total risk-weighted assets for general credit risk.

(a) *General risk-weighting requirements*. A [BANKING ORGANIZATION] must apply risk weights to its exposures as follows:

(1) A [BANKING ORGANIZATION] must determine the exposure amount of each on-balance sheet exposure, each derivative contract, and each off-balance sheet commitment, trade and transaction-related contingency, guarantee, repo-style transaction, financial standby letter of credit, forward agreement, or other similar transaction that is not:

(i) An unsettled transaction subject to § __.117;

(ii) A cleared transaction subject to § __.116;

(iii) A default fund contribution subject to § __.116;

(iv) A securitization exposure subject to §§ __.130 through __.134;

(v) An equity exposure (other than an equity derivative contract) subject to §§ __.140 through __.142.

(2) The [BANKING ORGANIZATION] must multiply each exposure amount by the risk weight appropriate to the exposure based on the exposure type or counterparty, eligible guarantor, or financial collateral to determine the risk-weighted asset amount for each exposure.

(b) *Total risk-weighted assets for general credit risk.* Total credit risk-weighted assets equals the sum of the risk-weighted asset amounts calculated under this section.

§ __.111 General risk weights.

(a) *Sovereign exposures*—(1) *Exposures to the U.S. government*. (i) Notwithstanding any other requirement in this subpart, a [BANKING ORGANIZATION] must assign a zero percent risk weight to:

(A) An exposure to the U.S. government, its central bank, or a U.S. government agency; and

(B) The portion of an exposure that is directly and unconditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency. This includes a deposit or other exposure, or the portion of a deposit or other exposure, that is insured or otherwise unconditionally guaranteed by the FDIC or the National Credit Union Administration.

(ii) A [BANKING ORGANIZATION] must assign a 20 percent risk weight to the portion of an exposure that is conditionally guaranteed by the U.S. government, its central bank, or a U.S. government agency. This includes an exposure, or the portion of an exposure, that is conditionally guaranteed by the FDIC or the National Credit Union Administration.

(iii) A [BANKING ORGANIZATION] must assign a zero percent risk weight to a Paycheck Protection Program covered loan as defined in section 7(a)(36) of the Small Business Act (15 U.S.C. 636(a)(36)).

(2) *Other sovereign exposures*. In accordance with Table 1 to§ __.111, a [BANKING ORGANIZATION] must assign a risk weight to a sovereign exposure based on the CRC applicable to the sovereign or the sovereign's OECD membership status if there is no CRC applicable to the sovereign.

Table 1 to § __.111—Risk Weights for Sovereign Exposures

		Risk Weight (in percent)
CRC	0-1	0
	2	20
	3	50
	4-6	100
	7	150
OECD Member with No CRC		0
Non-OECD Member with No CRC		100
Sovereign Default		150

(3) *Certain sovereign exposures*. Notwithstanding paragraph (a)(2) of this section, a [BANKING ORGANIZATION] may assign to a sovereign exposure a risk weight that is lower than the applicable risk weight in Table 1 to § __.111 if:

(i) The exposure is denominated in the sovereign's currency;

(ii) The [BANKING ORGANIZATION] has at least an equivalent amount of liabilities in that currency; and

(iii) The risk weight is not lower than the risk weight that the home country supervisor allows an organization engaged in the business of banking under its jurisdiction to assign to the same exposures to the sovereign.

(4) *Exposures to a non-OECD member sovereign with no CRC*. Except as provided in paragraphs (a)(3), (5) and (6) of this section, a [BANKING ORGANIZATION] must assign a 100 percent risk weight to an exposure to a sovereign if the sovereign does not have a CRC.

(5) *Exposures to an OECD member sovereign with no CRC*. Except as provided in paragraph (a)(6) of this section, a [BANKING ORGANIZATION] must assign a 0 percent risk weight to an exposure to a sovereign that is a member of the OECD if the sovereign does not have a CRC.

(6) *Sovereign default*. A [BANKING ORGANIZATION] must assign a 150 percent risk weight to a sovereign exposure immediately upon determining that an event of sovereign default has occurred, or if an event of sovereign default has occurred during the previous five years.

(b) *Specified supranational entities and multilateral development banks (MDBs)*. A [BANKING ORGANIZATION] must assign a zero percent risk weight to exposures to a specified supranational entity or an MDB.

(c) *Exposures to GSEs.* (1) A [BANKING ORGANIZATION] must assign a 20 percent risk weight to an exposure to a GSE that is not:

(i) An equity exposure; or

(ii) A subordinated exposure.

(2) A [BANKING ORGANIZATION] must assign a 150 percent risk weight to a subordinated exposure to a GSE, unless a different risk weight is provided under paragraph (c)(3) of this section.

(3) A [BANKING ORGANIZATION] must assign a 20 percent risk weight to a subordinated exposure to a Federal Home Loan Bank or the Federal Agricultural Mortgage Corporation (Farmer Mac).

(d) *Exposures to a depository institution, a foreign bank, or a credit union.* (1) A [BANKING ORGANIZATION] must assign a risk weight to a bank exposure in accordance with Table 2 of this section, unless otherwise provided under paragraph (d)(3) or (d)(4) of this section.

Table 2 to § __.111—Bank Exposures

Category of Bank Exposure	Grade A Bank Exposure		Grade B Bank Exposure	Grade C Bank Exposure
	Meeting the criteria in (d)(2)	Otherwise		
Base risk weight	30%	40%	75%	150%
Risk weight for a foreign bank exposure that is a self-liquidating, trade-related contingent item that arises from the movement of goods and that has a maturity of three months or less	20%	20%	50%	150%

(2) A [BANKING ORGANIZATION] must assign a 30 percent risk weight to a Grade A bank exposure for which the obligor is:

(i) A qualifying community banking organization (as defined in 12 CFR 3.12, 12 CFR 217.12, or 12 CFR 324.12, as applicable) that is subject to the community bank leverage ratio framework (as defined in 12 CFR 3.12, 12 CFR 217.12, or 12 CFR 324.12, as applicable); or

(ii) A depository institution, foreign bank, or credit union not described in paragraph (d)(2)(i) of this section and whose most recent capital ratios or net worth ratio, as applicable, meet or exceed the following:

(A) For a depository institution that is a Category I, II, or III banking organization, a common equity tier 1 capital ratio of 14 percent and a supplementary leverage ratio of 5 percent;

(B) For a depository institution not described in paragraph (d)(2)(ii)(A) of this section, a common equity tier 1 capital ratio of 14 percent and a tier 1 leverage ratio of 5 percent;

(C) For a credit union, a net worth ratio of 9 percent; or

(D) For a foreign bank, a common equity tier 1 capital ratio of 14 percent and a leverage ratio of 5 percent, each under the capital requirements imposed by the home country supervisor on that foreign bank.

(3) Notwithstanding paragraphs (d)(1) and (2) of this section, a [BANKING ORGANIZATION] must not assign a risk weight to an exposure to a foreign bank lower than the risk weight applicable to a sovereign exposure of the home country of the foreign bank unless:

(i) The exposure is in the local currency of the home country of the foreign bank;

(ii) For an exposure to a branch of the foreign bank in a foreign jurisdiction that is not the home country of the foreign bank, the exposure is in the local currency of the jurisdiction in which the foreign branch operates; or

(iii) The exposure is a self-liquidating, trade-related contingent item that arises from the movement of goods and that has a maturity of three months or less.

(4) Notwithstanding paragraph (d)(1), (d)(2), or (d)(3) of this section, a [BANKING ORGANIZATION] must assign:

(i) A risk weight under § __.141 to a bank exposure that is an equity exposure; and

(ii) A 150 percent risk weight to a bank exposure that is a subordinated exposure or an exposure to a covered debt instrument.

(e) *Exposures to public sector entities (PSEs)*—(1) *Exposures to U.S. PSEs*. (i) A

[BANKING ORGANIZATION] must assign a 20 percent risk weight to a general obligation exposure of a PSE that is organized under the laws of the United States or any state or political subdivision thereof.

(ii) A [BANKING ORGANIZATION] must assign a 50 percent risk weight to a revenue obligation exposure of a PSE that is organized under the laws of the United States or any state or political subdivision thereof.

(2) *Exposures to foreign PSEs.* (i) Except as provided in paragraphs (e)(1) and (3) of this section, a [BANKING ORGANIZATION] must assign a risk weight to a general obligation exposure to a PSE, in accordance with Table 3 to § __.111, based on the CRC that corresponds to the PSE's home country or the OECD membership status of the PSE's home country if there is no CRC applicable to the PSE's home country.

(ii) Except as provided in paragraphs (e)(1) and (e)(3) of this section, a [BANKING ORGANIZATION] must assign a risk weight to a revenue obligation exposure of a PSE, in accordance with Table 4 to § __.111, based on the CRC that corresponds to the PSE's home country; or the OECD membership status of the PSE's home country if there is no CRC applicable to the PSE's home country.

(3) A [BANKING ORGANIZATION] may assign a lower risk weight than would otherwise apply under Tables 3 or 4 to § __.111 to an exposure to a foreign PSE if:

(i) The PSE's home country supervisor allows banks under its jurisdiction to assign a lower risk weight to such exposures; and

(ii) The risk weight is not lower than the risk weight that corresponds to the PSE's home country in accordance with Table 1 to § __.111.

Table 3 to § __.111—Risk Weights for Non-U.S. PSE General Obligations

		Risk Weight (in percent)
CRC	0-1	20
	2	50
	3	100
	4-7	150
OECD Member with No CRC		20
Non-OECD Member with No CRC		100
Sovereign Default		150

Table 4 to § __.111—Risk Weights for non-U.S. PSE Revenue Obligations

		Risk Weight (in percent)
CRC	0-1	50
	2-3	100
	4-7	150
OECD Member with No CRC	.....	50
Non-OECD Member with No CRC	.....	100
Sovereign Default	.....	150

(4) *Exposures to PSEs from an OECD member sovereign with no CRC*. (i) A [BANKING ORGANIZATION] must assign a 20 percent risk weight to a general obligation exposure to a PSE whose home country is an OECD member sovereign with no CRC.

(ii) A [BANKING ORGANIZATION] must assign a 50 percent risk weight to a revenue obligation exposure to a PSE whose home country is an OECD member sovereign with no CRC.

(5) *Exposures to PSEs whose home country is not an OECD member sovereign with no CRC.* A [BANKING ORGANIZATION] must assign a 100 percent risk weight to an exposure to a PSE whose home country is not a member of the OECD and does not have a CRC.

(6) A [BANKING ORGANIZATION] must assign a 150 percent risk weight to a PSE exposure immediately upon determining that an event of sovereign default has occurred in a PSE's home country or if an event of sovereign default has occurred in the PSE's home country during the previous five years.

(f) *Real estate exposures*—(1) *Statutory multifamily mortgages.* A [BANKING ORGANIZATION] must assign a 50 percent risk weight to a statutory multifamily mortgage.

(2) *Pre-sold construction loans.* A [BANKING ORGANIZATION] must assign a 50 percent risk weight to a pre-sold construction loan, unless the purchase contract is cancelled, in which case a [BANKING ORGANIZATION] must assign a 100 percent risk weight.

(3) *High-volatility commercial real estate (HVCRE) exposures.* A [BANKING ORGANIZATION] must assign a 150 percent risk weight to an HVCRE exposure.

(4) *ADC exposures that are not HVCRE exposures.* A [BANKING ORGANIZATION] must assign a 100 percent risk weight to an ADC exposure that is not an HVCRE exposure.

(5) *Regulatory residential real estate exposure.* (i) A [BANKING ORGANIZATION] must assign a risk weight to a regulatory residential real estate exposure that is not dependent on the cash flows generated by the real estate based on the exposure's LTV ratio in accordance with Table 5 to § __.111.

(ii) A [BANKING ORGANIZATION] must assign a risk weight to a regulatory residential real estate exposure that is dependent on the cash flows generated by the real estate based on the exposure's LTV ratio in accordance with Table 6 to § __.111.

Table 5 to § __.111—Risk Weights for Regulatory Residential Real Estate Exposures Not Dependent on Real Estate Cash Flows

Risk weights for regulatory residential real estate exposures that are not dependent on the cash flows generated by the real estate						
	LTV ratio ≤ 50%	50% < LTV ratio ≤ 60%	60% < LTV ratio ≤ 80%	80% < LTV ratio ≤ 90%	90% < LTV ratio ≤ 100%	LTV ratio > 100%
Risk weight	20%	25%	30%	40%	50%	70%

Table 6 to § __.111—Risk Weights for Regulatory Residential Real Estate Exposures Dependent on Real Estate Cash Flows

Risk weights for regulatory residential real estate exposures that are dependent on the cash flows generated by the real estate						
	LTV ratio ≤ 50%	50% < LTV ratio ≤ 60%	60% < LTV ratio ≤ 80%	80% < LTV ratio ≤ 90%	90% < LTV ratio ≤ 100%	LTV ratio > 100%
Risk weight	30%	35%	45%	60%	75%	105%

(6) *Regulatory commercial real estate exposure.* (i) A [BANKING ORGANIZATION] must assign a risk weight to a regulatory commercial real estate exposure that is not dependent on the cash flows generated by the real estate based on the exposure's LTV and the risk weight applicable to the borrower under this section, in accordance with Table 7 to § __.111, provided that if the [BANKING ORGANIZATION] cannot determine the risk weight applicable to the borrower under this section, the risk weight of the borrower is 100 percent.

(ii) A [BANKING ORGANIZATION] must assign a risk weight to a regulatory commercial real estate exposure that is dependent on the cash flows generated by the real estate based on the exposure's LTV in accordance with Table 8 to § __.111.

TABLE 7 TO § __.111—RISK WEIGHTS FOR REGULATORY COMMERCIAL REAL ESTATE EXPOSURES NOT DEPENDENT ON REAL ESTATE CASH FLOWS

	LTV ratio ≤ 60%	LTV ratio > 60%
Risk weight	Lesser of 60% or the risk-weight applicable to the borrower under this section	Risk weight applicable to the borrower under this section

Table 8 to § __.111—Risk Weights for Regulatory Commercial Real Estate Exposures Dependent on Real Estate Cash Flows

	LTV ratio ≤ 60%	60% < LTV ratio ≤ 80%	LTV ratio > 80%
Risk weight	70%	90%	110%

(7) *Other real estate exposures*. A [BANKING ORGANIZATION] must assign an other real estate exposure a 150 percent risk weight, unless the exposure is a residential mortgage

exposure that is not dependent on the cash flows generated by the real estate, which must be assigned a 100 percent risk weight.

(8) *Past due real estate exposures.* Notwithstanding any other provision of this subpart, a [BANKING ORGANIZATION] must assign a 150 percent risk weight to a real estate exposure that is 90 days past due or on nonaccrual, unless the exposure is a residential mortgage exposure that is not dependent on the cash flows generated by the real estate, which must be assigned a 100 percent risk weight.

(g) *Retail exposures.* A [BANKING ORGANIZATION] must assign a risk weight to a retail exposure according to the following:

(1) *Regulatory retail exposures*—(i) *Regulatory retail exposures that are not transactor exposures*. A [BANKING ORGANIZATION] must assign a 75 percent risk weight to a regulatory retail exposure that is not a transactor exposure.

(ii) *Transactor exposures.* A [BANKING ORGANIZATION] must assign a 45 percent risk weight to a transactor exposure.

(2) *Other retail exposures.* A [BANKING ORGANIZATION] must assign a 100 percent risk weight to retail exposures that are not regulatory retail exposures.

(h) *Corporate exposures.* A [BANKING ORGANIZATION] must assign a 100 percent risk weight to a corporate exposure unless the corporate exposure receives a different risk weight under paragraphs (h)(1) through (5) of this section.

(1) Unless the corporate exposure receives a different risk weight under paragraphs (h)(2) through (5) of this section, a [BANKING ORGANIZATION] may assign a 65 percent risk weight to a corporate exposure to a company that is investment grade, if the exposure is not a subordinated exposure. For the purposes of this paragraph (h)(1), a [BANKING

ORGANIZATION] may determine that a company is investment grade only by relying on one or more internal credit risk rating systems that meet the requirements in paragraphs (h)(1)(i) through (v) of this section.

(i) The internal credit risk rating system must be used to inform material business and risk management decisions of the [BANKING ORGANIZATION], such as those related to accounting, regulatory reporting, risk management and measurement, loan loss reserve estimation, capital planning, loan pricing, or board decision making.

(ii) The internal credit risk rating system must define which obligor rating grades resulting from that system are considered to be investment grade, as that term is defined in § __.2.

(iii) The internal credit risk rating system must:

(A) Assign accurate and timely obligor rating grades based on clearly defined criteria; and

(B) Assign a rating grade for each obligor at least annually and whenever the [BANKING ORGANIZATION] receives new material information regarding the creditworthiness of the obligor.

(iv) The internal credit risk rating system does not solely rely on third-party assessments of credit risk and incorporates quantitative and qualitative factors relating to the historical and projected patterns of payment behaviors of similar obligors or products, financial situation and performance of each obligor, and any relevant developments that affect the investment grade determination.

(v) At least annually, the [BANKING ORGANIZATION] must validate the robustness, consistency, and reliability of the internal credit risk rating system, using data from at least one

full credit cycle, and update the internal credit risk rating system to address any deficiencies exposed as part of the validation. As part of the validation required by this paragraph (h)(1)(v), the [BANKING ORGANIZATION] must:

(A) Evaluate whether the performance of obligors identified by the internal credit risk rating system as investment grade is consistent with the definition of investment grade in § __.2, including by benchmarking the ratings resulting from the internal credit risk rating system with external information relating to the creditworthiness of obligors;

(B) Assess the reliability, accuracy, completeness, timeliness, and appropriateness of the data sources and other information used as part of the investment grade determinations;

(C) Incorporate available information, including information regarding the performance of companies that have ceased operations or that have been sold to a third party, that is reasonably expected to support a robust evaluation of the internal credit risk rating system;

(D) Ensure the validation process is independent of the internal credit risk rating system's development, implementation, and operation, or subject the validation process to an independent review of its adequacy and effectiveness;

(E) Incorporate default data covering at least the preceding five years, or a longer period as necessary to reflect at least one period of economic downturn conditions, provided that if the [BANKING ORGANIZATION] has relevant and material reference data that span a longer period of time, the [BANKING ORGANIZATION] must incorporate such data in its validation; and

(F) Not place undue weight on data from periods of favorable or benign economic conditions relative to periods of economic downturn conditions.

(2) Unless the corporate exposure receives a different risk weight under paragraphs (h)(3) through (5) of this section, a [BANKING ORGANIZATION] must assign a 100 percent risk weight to a corporate exposure that is for the purpose of acquiring or financing equipment or physical commodities where repayment of the exposure is dependent on the physical assets being financed or acquired.

(3) Unless the corporate exposure receives a different risk weight under paragraphs (h)(4) through (5) of this section, a [BANKING ORGANIZATION] must assign risk weights to certain project finance exposures as follows:

(i) A [BANKING ORGANIZATION] must assign a 100 percent risk weight to a project finance operational phase exposure, and

(ii) A [BANKING ORGANIZATION] must assign a 130 percent risk weight to a project finance exposure that is not a project finance operational phase exposure.

(4) Unless the corporate exposure receives a different risk weight under paragraph (h)(5) of this section, a [BANKING ORGANIZATION] must assign risk weights to certain exposures to a QCCP as follows:

(i) A [BANKING ORGANIZATION] must assign a 2 percent risk weight to an exposure to a QCCP arising from the [BANKING ORGANIZATION] posting cash collateral to the QCCP in connection with a cleared transaction that meets the requirements of § __.116(b)(3)(i)(A) and a 4 percent risk weight to an exposure to a QCCP arising from the [BANKING ORGANIZATION] posting cash collateral to the QCCP in connection with a cleared transaction that meets the requirements of § __.116(b)(3)(i)(B); and

(ii) A [BANKING ORGANIZATION] must assign a 2 percent risk weight to an exposure

to a QCCP arising from the [BANKING ORGANIZATION] posting cash collateral to the QCCP in connection with a cleared transaction that meets the requirements of § __.116(c)(3)(i).

(5) A [BANKING ORGANIZATION] must assign a 150 percent risk weight to a corporate exposure that is a subordinated exposure or an exposure to a covered debt instrument.

(i) *Past due exposures.* Notwithstanding any other provision of this subpart, a [BANKING ORGANIZATION] must assign a 150 percent risk weight to any exposure that is not a sovereign exposure or a real estate exposure and that is 90 days past due or on nonaccrual, provided that:

(1) A [BANKING ORGANIZATION] may assign a risk weight to the guaranteed portion of a past due exposure based on the risk weight that applies under § __.120 if the guarantee or credit derivative meets the requirements of that section; and

(2) A [BANKING ORGANIZATION] may assign a risk weight to the collateralized portion of a past due exposure or the protected portion of a past due exposure covered by a prepaid credit protection arrangement based on the risk weight that applies under § __.121 if the collateral or prepaid credit protection arrangement meets the requirements of that section.

(j) *Other assets.* (1)(i) A bank holding company or savings and loan holding company must assign a zero percent risk weight to cash owned and held in all offices of subsidiary depository institutions or in transit, and to gold bullion held in a subsidiary depository institution's own vaults, or held in another depository institution's vaults on an allocated basis, to the extent the gold bullion assets are offset by gold bullion liabilities.

(ii) A [BANKING ORGANIZATION] must assign a zero percent risk weight to cash owned and held in all offices of the [BANKING ORGANIZATION] or in transit; to gold bullion held in the [BANKING ORGANIZATION]’s own vaults or held in another depository

institution's vaults on an allocated basis, to the extent the gold bullion assets are offset by gold bullion liabilities; and to exposures that arise from the settlement of cash transactions (such as equities, fixed income, spot foreign exchange and spot commodities) with a central counterparty where there is no assumption of ongoing counterparty credit risk by the central counterparty after settlement of the trade and associated default fund contributions.

(2) A [BANKING ORGANIZATION] must assign a 20 percent risk weight to cash items in the process of collection.

(3) A [BANKING ORGANIZATION] must assign a 100 percent risk weight to DTAs arising from temporary differences that the [BANKING ORGANIZATION] could realize through net operating loss carrybacks.

(4) A [BANKING ORGANIZATION] must assign a 250 percent risk weight to:

(i) MSAs; and

(ii) The portion of DTAs arising from temporary differences that the [BANKING ORGANIZATION] could not realize through net operating loss carrybacks to the extent such DTAs are not deducted from common equity tier 1 capital pursuant to § __.22(d).

(5) A [BANKING ORGANIZATION] must assign a 100 percent risk weight to all assets not specifically assigned a different risk weight under this subpart and that are not deducted from tier 1 or tier 2 capital pursuant to § __.22.

(6) Notwithstanding the requirements of this section, a [BANKING ORGANIZATION] may assign an asset that is not included in one of the categories provided in this section to the risk weight category applicable under the capital rules applicable to bank holding companies and savings and loan holding companies at 12 CFR part 217, provided that all of the following conditions apply:

(i) The [BANKING ORGANIZATION] is not authorized to hold the asset under applicable law other than debt previously contracted or similar authority; and

(ii) The risks associated with the asset are substantially similar to the risks of assets that are otherwise assigned to a risk weight category of less than 100 percent under this subpart.

(k) *Insurance assets*—(1) *Assets held in a separate account.* (i) A bank holding company or savings and loan holding company must risk-weight the individual assets held in a separate account that does not qualify as a non-guaranteed separate account as if the individual assets were held directly by the bank holding company or savings and loan holding company.

(ii) A bank holding company or savings and loan holding company must assign a zero percent risk weight to an asset that is held in a non-guaranteed separate account.

(2) *Policy loans.* A bank holding company or savings and loan holding company must assign a 20 percent risk weight to a policy loan.

§ __.112 Off-balance sheet exposures.

(a) *General*. (1) A [BANKING ORGANIZATION] must calculate the exposure amount of an off-balance sheet exposure using the credit conversion factors (CCFs) in paragraph (b) of this section. In the case of commitments, a [BANKING ORGANIZATION] must calculate the exposure amount by multiplying the committed but undrawn amount of the commitment by the applicable CCF.

(2) Where a [BANKING ORGANIZATION] commits to provide a commitment, the [BANKING ORGANIZATION] may apply the lower of the two applicable CCFs.

(3) Where a [BANKING ORGANIZATION] provides a commitment structured as a syndication or participation, the [BANKING ORGANIZATION] is only required to calculate the exposure amount for its pro rata share of the commitment.

(4) Where a [BANKING ORGANIZATION] provides a commitment, enters into a repurchase agreement, or provides a credit-enhancing representation and warranty, and such commitment, repurchase agreement, or credit-enhancing representation and warranty is not a securitization exposure, the exposure amount shall be no greater than the maximum contractual amount of the commitment, repurchase agreement, or credit-enhancing representation and warranty, as applicable.

(5) For purposes of this section, if a commitment that is a retail exposure does not have an express contractual maximum amount that can be drawn, the committed but undrawn amount of the commitment is equal to the highest total drawn amount over the period since the commitment was created or the prior 24 months, whichever period is shorter, minus the current drawn amount.

(6) For purposes of this subpart, with respect to a repurchase or reverse repurchase transaction, or a securities borrowing or securities lending transaction, a [BANKING ORGANIZATION] must reflect in expanded total risk-weighted assets either:

(i) The exposure amount under this section and the risk-weighted asset amount for securities or posted collateral, where the credit risk of the securities lent or posted as collateral remains with the [BANKING ORGANIZATION]; or

(ii) The exposure for counterparty credit risk according to §§ __.113 through __.115.

(b) *Credit conversion factors—*

(1) *10 percent CCF*. A [BANKING ORGANIZATION] must apply a 10 percent CCF to the unused portion of a commitment that is unconditionally cancelable by the [BANKING ORGANIZATION].

(2) *20 percent CCF*. A [BANKING ORGANIZATION] must apply a 20 percent CCF to the amount of self-liquidating trade-related contingent items that arise from the movement of goods, with an original maturity of one year or less.

(3) *40 percent CCF.* A [BANKING ORGANIZATION] must apply a 40 percent CCF to commitments, regardless of the maturity of the facility, unless they qualify for a lower or higher CCF.

(4) *50 percent CCF*. A [BANKING ORGANIZATION] must apply a 50 percent CCF to the amount of the following off-balance-sheet items and other similar transactions, regardless of whether a lower CCF would otherwise apply under paragraphs (b)(1) through (3) of this section:

(i) Transaction-related contingent items, including performance bonds, bid bonds, warranties, and performance standby letters of credit; and

(ii) Note issuance facilities and revolving underwriting facilities.

(5) *100 percent CCF*. A [BANKING ORGANIZATION] must apply a 100 percent CCF to the amount of the following off-balance-sheet items and other similar transactions:

(i) Guarantees;

(ii) Repurchase agreements (the off-balance sheet component of which equals the sum of the current fair values of all positions the [BANKING ORGANIZATION] has sold subject to repurchase);

(iii) Credit-enhancing representations and warranties that are not securitization exposures;

(iv) Off-balance sheet securities lending transactions (the off-balance sheet component of which equals the sum of the current fair values of all positions the [BANKING ORGANIZATION] has lent under the transaction);

(v) Off-balance sheet securities borrowing transactions (the off-balance sheet component of which equals the sum of the current fair values of all non-cash positions the [BANKING ORGANIZATION] has posted as collateral under the transaction);

(vi) Financial standby letters of credit; and

(vii) Forward agreements.

§ __.113 Counterparty credit risk.

(a) *General*. (1) To determine the exposure amount for transactions with counterparty credit risk, a [BANKING ORGANIZATION]:

(i) Must use the standardized approach for counterparty credit risk (SA-CCR) in § __.114 for a derivative contract or netting set that only includes derivative contracts;

(ii) May use SA-CCR in § __.114 for a netting set of transactions that are not cleared transactions and that are subject to a qualifying cross-product master netting agreement that includes one or more derivative contracts and one or more repo-style transactions, subject to paragraph (b) of this section; and

(iii) May use the collateral haircut approach in § __.115 for a repo-style transaction, eligible margin loan, or a netting set of repo-style transactions or eligible margin loans.

(b) *Qualifying cross-product master netting agreements*. (1) For purposes of determining the exposure amount for a netting set of transactions subject to a qualifying cross-product master netting agreement under § __.114, a [BANKING ORGANIZATION] may elect to treat any repo-style transaction that is not a cleared transaction subject to the qualifying cross-product master netting agreement as a derivative contract.

(2) The exposure amount of a set of transactions subject to a qualifying cross-product master netting agreement for purposes of (b)(1), $Exposure\ Amount_{NS_{CP}}$, must be calculated as follows:

$$Exposure\ Amount_{NS_{CP}} = \left(1 - MR_{NS_{CP}}\right) * \left(Exposure\ Amount_{repo-style\ transactions} + Exposure\ Amount_{derivatives}\right) + MR_{NS_{CP}} * Extended\ SA - CCR\ Exposure\ Amount$$

Where:

(i) $Exposure\ Amount_{repo-style\ transactions}$ is the exposure amount for repo-style transactions in the netting set that is subject to a qualifying cross-product master netting agreement, calculated using the collateral haircut approach, under § __.115;

(ii) $Exposure\ Amount_{derivatives}$ is the exposure amount for derivatives in the netting set that is subject to a qualifying cross-product master netting agreement, calculated using the standardized approach for counterparty credit risk, under § __.114;

(iii) $Extended\ SA - CCR\ Exposure\ Amount$ is the exposure amount for both repo-style transactions and derivatives that are in the netting set that is subject to a qualifying cross-product master netting agreement, calculated using the standardized approach for counterparty credit risk, under § __.114; and

(iv) $MR_{NS_{CP}}$ is the Maturity Ratio for a given netting set that is subject to a qualifying cross-product master netting agreement, calculated as follows:

$$MR_{NS_{CP}} = \frac{\sum NAWM\ of\ the\ \ repo - style\ transactions_i}{\max\left(\sum NAWM\ of\ the\ \ repo - style\ transactions_i, \sum NAWM\ of\ the\ derivative\ transactions_i\right)}$$

Where:

(A) $\sum NAWM\ of\ the\ \ repo - style\ transactions_i$ is the notional average weighted maturity of all *i* repo-style transactions subject to the qualifying cross-product master netting agreement, subject to a minimum maturity of 10 business days and a maximum maturity of one year for purposes of this calculation.

(B) $\sum NAWM\ of\ the\ \ derivative\ transactions_i$ is the notional average weighted maturity of all *i* derivative transactions subject to the qualifying cross-product master netting agreement subject to a minimum maturity of 10 business days and a maximum maturity of one year for purposes of this calculation.

§ __.114 Derivative contracts: Standardized approach.

(a)(1) *Exposure amount for derivative contracts*. A [BANKING ORGANIZATION] must determine the exposure amount for a derivative contract using the standardized approach for counterparty credit risk (SA–CCR) under this section. A [BANKING ORGANIZATION] may reduce the exposure amount calculated according to this section by the credit valuation adjustment that the [BANKING ORGANIZATION] has recognized in its balance sheet valuation of any derivative contracts in the netting set. For purposes of paragraph (a) of this section, the credit valuation adjustment does not include any adjustments to common equity tier 1 capital attributable to changes in the fair value of the [BANKING ORGANIZATION]'s liabilities that are due to changes in its own credit risk since the inception of the transaction with the counterparty. A [BANKING ORGANIZATION] may determine the exposure amount for a repo-style transaction using the SA-CCR under this section, as provided in § __.113(b), subject to paragraph (a)(2) of this section.

(2) *Exposure amount for repo-style transactions*. If a [BANKING ORGANIZATION] is using the SA-CCR for a repo-style transaction as described in § __.113(b), the [BANKING ORGANIZATION] must make the adjustments described in paragraphs (a)(2)(i) through (iii) of this section.

(i) For purposes of this section, the [BANKING ORGANIZATION] must:

(A) Treat a repo-style transaction that has multiple underlying instruments as separate repo-style transactions for each distinct underlying instrument;

(B) Treat a repo-style transaction with a debt instrument as the underlying instrument as either a credit derivative that references the underlying debt instrument or an interest rate derivative that references the interest rate of the underlying debt instrument, based on the primary risk factor of the repo-style transaction;

(C) Treat a repo-style transaction with an equity instrument as the underlying instrument as an equity derivative that references the underlying equity instrument;

(D) Not apply paragraph (d) of this section to a repo-style transaction with an equity instrument as the underlying instrument; and

(E) Treat a repo-style transaction as a client-facing derivative transaction where the [BANKING ORGANIZATION] is either acting as a financial intermediary and enters into an offsetting transaction with a qualifying central counterparty (QCCP) or where the [BANKING ORGANIZATION] provides a guarantee on the performance of a client on a transaction between the client and a QCCP.

(ii) For purposes of the supervisory delta under paragraph (i)(3) of this section, a [BANKING ORGANIZATION] must use a supervisory delta of 1 for a repurchase transaction or a securities lending transaction, and must use a supervisory delta of -1 for a reverse repurchase transaction or a securities borrowing transaction;

(iii) For purposes of the maturity factor under paragraph (i)(4) of this section, MPOR cannot be less than five business days plus the periodicity of re-margining expressed in business days minus one business day.

(b) *Definitions*. For purposes of this section, the following definitions apply:

End date means the last date of the period referenced by an interest rate or credit derivative contract or, if the derivative contract references another instrument, by the underlying instrument, except as otherwise provided in this section.

Start date means the first date of the period referenced by an interest rate or credit derivative contract or, if the derivative contract references the value of another instrument, by underlying instrument, except as otherwise provided in this section.

Hedging set means:

(i) With respect to interest rate derivative contracts, all such contracts within a netting set that reference the same reference currency;

(ii) With respect to exchange rate derivative contracts, all such contracts within a netting set that reference the same currency pair;

(iii) With respect to credit derivative contract, all such contracts within a netting set;

(iv) With respect to equity derivative contracts, all such contracts within a netting set;

(v) With respect to a commodity derivative contract, all such contracts within a netting set that reference one of the following commodity categories: Energy, metal, agricultural, or other commodities;

(vi) With respect to basis derivative contracts, all such contracts within a netting set that reference the same pair of risk factors and are denominated in the same currency; or

(vii) With respect to volatility derivative contracts, all such contracts within a netting set that reference one of interest rate, exchange rate, credit, equity, or commodity risk factors, separated according to the requirements under paragraphs (i) through (v) of this definition.

(viii) If the risk of a derivative contract materially depends on more than one of interest rate, exchange rate, credit, equity, or commodity risk factors, the [AGENCY] may require a

[BANKING ORGANIZATION] to include the derivative contract in each appropriate hedging set under paragraphs (i) through (v) of this definition.

(c) *Credit derivatives*. Notwithstanding paragraphs (a) and (b) of this section:

(1) A [BANKING ORGANIZATION] that purchases a credit derivative that is recognized under § __.120 as a credit risk mitigant for an exposure that is not a market risk covered position under subpart F of this part is not required to calculate a separate counterparty credit risk capital requirement under this section so long as the [BANKING ORGANIZATION] does so consistently for all such credit derivatives and either includes all or excludes all such credit derivatives that are subject to a master netting agreement from any measure used to determine counterparty credit risk exposure to all relevant counterparties for risk-based capital purposes.

(2) A [BANKING ORGANIZATION] that is the protection provider in a credit derivative must treat the credit derivative as an exposure to the reference obligor and is not required to calculate a counterparty credit risk capital requirement for the credit derivative under this section, so long as it does so consistently for all such credit derivatives and either includes all or excludes all such credit derivatives that are subject to a master netting agreement from any measure used to determine counterparty credit risk exposure to all relevant counterparties for risk-based capital purposes (unless the [BANKING ORGANIZATION] is treating the credit derivative as a market risk covered position under subpart F of this part, in which case the [BANKING ORGANIZATION] must calculate a counterparty credit risk capital requirement under this section).

(d) *Equity derivatives*. A [BANKING ORGANIZATION] must treat an equity derivative contract as an equity exposure and compute a risk-weighted asset amount for the equity

derivative contract under §§ __.140 through __.142 (unless the [BANKING ORGANIZATION] is treating the contract as a market risk covered position under subpart F of this part). In addition, if the [BANKING ORGANIZATION] is treating the contract as a market risk covered position under subpart F of this part, the [BANKING ORGANIZATION] must also calculate a risk-based capital requirement for the counterparty credit risk of an equity derivative contract under this section. If the [BANKING ORGANIZATION] risk weights an equity derivative contract under §§ __.140 through __.142, the [BANKING ORGANIZATION] may choose not to hold risk-based capital against the counterparty credit risk of the equity derivative contract, as long as it does so for all such contracts. Where an equity derivative contract is subject to a qualified master netting agreement, a [BANKING ORGANIZATION] using §§ __.140 through __.142 must either include all or exclude all of the contracts from any measure used to determine counterparty credit risk exposure.

(e) *Exposure amount.* (1) The exposure amount of a netting set, as calculated under this section, is equal to 1.4 multiplied by the sum of the replacement cost of the netting set, as calculated under paragraph (f) of this section, and the potential future exposure of the netting set, as calculated under paragraph (g) of this section.

(2) Notwithstanding the requirements of paragraph (e)(1) of this section, the exposure amount of a netting set subject to a variation margin agreement, excluding a netting set that is subject to a variation margin agreement under which the counterparty to the variation margin agreement is not required to post variation margin, is equal to the lesser of the exposure amount of the netting set calculated under paragraph (e)(1) of this section and the exposure amount of the netting set calculated under paragraph (e)(1) of this section as if the netting set were not subject to a variation margin agreement.

(3) Notwithstanding the requirements of paragraph (e)(1) of this section, the exposure amount of a netting set that consists of only sold options in which the premiums have been fully paid by the counterparty to the options and where the options are not subject to a variation margin agreement is zero.

(4) Notwithstanding the requirements of paragraph (e)(1) of this section, the exposure amount of a netting set in which the counterparty is a commercial end-user is equal to the sum of replacement cost, as calculated under paragraph (f) of this section, and the potential future exposure of the netting set, as calculated under paragraph (g) of this section.

(5) For purposes of the exposure amount calculated under paragraph (e)(1) of this section and all calculations that are part of that exposure amount, a [BANKING ORGANIZATION] may elect to treat a derivative contract that is a cleared transaction or a client-facing derivative transaction and that is not subject to a variation margin agreement as one that is subject to a variation margin agreement, if the derivative contract is subject to a requirement that the counterparties make daily cash payments to each other to account for changes in the fair value of the derivative contract and to reduce the net position of the contract to zero. If a [BANKING ORGANIZATION] makes an election under this paragraph (e)(5) for one derivative contract, it must treat all other derivative contracts within the same netting set that are eligible for an election under this paragraph (e)(5) as derivative contracts that are subject to a variation margin agreement.

(6) For purposes of the exposure amount calculated under paragraph (e)(1) of this section and all calculations that are part of that exposure amount, a [BANKING ORGANIZATION] may elect to treat a credit derivative contract, equity derivative contract, or commodity derivative

contract that references an index as if it were multiple derivative contracts each referencing one component of the index, provided that the derivative contract is not an option or a CDO tranche.

(7) For purposes of the exposure amount calculated under paragraph (e)(1) of this section and all calculations that are part of that exposure amount, with respect to a client-facing derivative transaction or netting set of client-facing derivative transactions, a clearing member [BANKING ORGANIZATION] may multiply the standard supervisory haircuts applied for purposes of the net independent collateral amount and variation margin amount by the scaling factor of the square root of 1⁄2 (which equals 0.707107). If the [BANKING ORGANIZATION] determines that a longer period is appropriate, the [BANKING ORGANIZATION] must use a larger scaling factor to adjust for a longer holding period as provided below by the formula in this paragraph. In addition, the [AGENCY] may require the [BANKING ORGANIZATION] to set a longer holding period if the [AGENCY] determines that a longer period is appropriate due to the nature, structure, or characteristics of the transaction or is commensurate with the risks associated with the transaction.

$$Scaling\ factor = \sqrt{H/10}$$

Where H = the holding period greater than or equal to five days

(f) *Replacement cost of a netting set*—(1) *Netting set subject to a variation margin agreement under which the counterparty must post variation margin*. The replacement cost of a netting set subject to a variation margin agreement, excluding a netting set that is subject to a variation margin agreement under which the counterparty is not required to post variation margin, is the greater of:

(i) The sum of the fair values (after excluding any valuation adjustments) of the derivative contracts within the netting set less the sum of the net independent collateral amount and the variation margin amount applicable to such derivative contracts;

(ii) The sum of the variation margin threshold and the minimum transfer amount applicable to the derivative contracts within the netting set less the net independent collateral amount applicable to such derivative contracts; or

(iii) Zero.

(2) *Netting sets not subject to a variation margin agreement under which the counterparty must post variation margin*. The replacement cost of a netting set that is not subject to a variation margin agreement under which the counterparty must post variation margin to the [BANKING ORGANIZATION] is the greater of:

(i) The sum of the fair values (after excluding any valuation adjustments) of the derivative contracts within the netting set less the sum of the net independent collateral amount and variation margin amount applicable to such derivative contracts; or

(ii) Zero.

(3) *Multiple netting sets subject to a single variation margin agreement*. Notwithstanding paragraphs (f)(1) and (2) of this section, the replacement cost for multiple netting sets subject to a single variation margin agreement must be calculated according to paragraph (j)(1) of this section.

(4) *Netting set subject to multiple variation margin agreements or a hybrid netting set*. Notwithstanding paragraphs (f)(1) and (2) of this section, the replacement cost for a netting set subject to multiple variation margin agreements or a hybrid netting set must be calculated according to paragraph (k)(1) of this section.

(g) *Potential future exposure of a netting set*. The potential future exposure of a netting set is the product of the PFE multiplier and the aggregated amount.

(1) *PFE multiplier*. The PFE multiplier is calculated according to the following formula:

$$PFE\ multiplier = min\left\{1; 0.05 + 0.95 * e^{\left(\frac{V-C}{1.9*A}\right)}\right\}$$

Where:

V is the sum of the fair values (after excluding any valuation adjustments) of the derivative contracts within the netting set;

C is the sum of the net independent collateral amount and the variation margin amount applicable to the derivative contracts within the netting set; and

A is the aggregated amount of the netting set.

(2) *Aggregated amount*. The aggregated amount is the sum of all hedging set amounts, as calculated under paragraph (h) of this section, within a netting set.

(3) *Multiple netting sets subject to a single variation margin agreement*. Notwithstanding paragraphs (g)(1) and (2) of this section and when calculating the potential future exposure for purposes of total leverage exposure under § __.10(c)(2)(ii), the potential future exposure for multiple netting sets subject to a single variation margin agreement must be calculated according to paragraph (j)(2) of this section.

(4) *Netting set subject to multiple variation margin agreements or a hybrid netting set*. Notwithstanding paragraphs (g)(1) and (2) of this section and when calculating the potential future exposure for purposes of total leverage exposure under § __.10(c)(2)(ii), the potential future exposure for a netting set subject to multiple variation margin agreements or a hybrid netting set must be calculated according to paragraph (k)(2) of this section.

(h) *Hedging set amount*—(1) *Interest rate derivative contracts*. To calculate the hedging set amount of an interest rate derivative contract hedging set, a [BANKING ORGANIZATION] may use either of the formulas provided in paragraphs (h)(1)(i) and (ii) of this section:

(i) Formula 1 is as follows:

$$Hedging\ set\ amount = [(AddOn_{TB1}^{IR})^2 + (AddOn_{TB2}^{IR})^2 + (AddOn_{TB3}^{IR})^2 + 1.4 * AddOn_{TB1}^{IR} * AddOn_{TB2}^{IR} + 1.4 * AddOn_{TB2}^{IR} * AddOn_{TB3}^{IR} + 0.6 * AddOn_{TB1}^{IR} * AddOn_{TB3}^{IR})]^{\frac{1}{2}}$$

(ii) Formula 2 is as follows:

$$Hedging\ set\ amount = |AddOn_{TB1}^{IR}| + |AddOn_{TB2}^{IR}| + |AddOn_{TB3}^{IR}|$$

Where in paragraphs (h)(1)(i) and (ii) of this section:

$AddOn_{TB1}^{IR}$ is the sum of the adjusted derivative contract amounts, as calculated under paragraph (i) of this section, within the hedging set with an end date of less than one year from the present date;

$AddOn_{TB2}^{IR}$ is the sum of the adjusted derivative contract amounts, as calculated under paragraph (i) of this section, within the hedging set with an end date of one to five years from the present date; and

$AddOn_{TB3}^{IR}$ is the sum of the adjusted derivative contract amounts, as calculated under paragraph (i) of this section, within the hedging set with an end date of more than five years from the present date.

(2) *Exchange rate derivative contracts*. For an exchange rate derivative contract hedging set, the hedging set amount equals the absolute value of the sum of the adjusted derivative contract amounts, as calculated under paragraph (i) of this section, within the hedging set.

(3) *Credit derivative contracts and equity derivative contracts*. The hedging set amount of a credit derivative contract hedging set or equity derivative contract hedging set within a netting set is calculated according to the following formula:

$$Hedging\ set\ amount = \left[\left(\sum_{k=1}^{K} \rho_k * AddOn(Ref_k)\right)^2 + \sum_{k=1}^{K} (1 - (\rho_k)^2) * (AddOn(Ref_k))^2\right]^{\frac{1}{2}}$$

Where:

k is each reference entity within the hedging set.

K is the number of reference entities within the hedging set.

AddOn (Ref_k) equals the sum of the adjusted derivative contract amounts, as determined under paragraph (i) of this section, for all derivative contracts within the hedging set that reference entity k.

ρ_k equals the applicable supervisory correlation factor, as provided in Table 2 to § __.114.

(4) *Commodity derivative contracts*. The hedging set amount of a commodity derivative contract hedging set within a netting set is calculated according to the following formula:

$$Hedging\ set\ amount = \left[\left(\rho * \sum_{k=1}^{K} AddOn(Type_k)\right)^2 + (1 - (\rho)^2) * \sum_{k=1}^{K} (AddOn(Type_k))^2\right]^{\frac{1}{2}}$$

Where:

k is each commodity type within the hedging set.

K is the number of commodity types within the hedging set.

AddOn ($Type_k$) equals the sum of the adjusted derivative contract amounts, as determined under paragraph (i) of this section, for all derivative contracts within the hedging set that reference commodity type.

ρ equals the applicable supervisory correlation factor, as provided in Table 2 to § __.114.

(5) *Basis derivative contracts and volatility derivative contracts*. Notwithstanding paragraphs (h)(1) through (4) of this section, a [BANKING ORGANIZATION] must calculate a separate hedging set amount for each basis derivative contract hedging set and each volatility derivative contract hedging set. A [BANKING ORGANIZATION] must calculate such hedging set amounts using one of the formulas under paragraphs (h)(1) through (4) of this section that corresponds to the primary risk factor of the hedging set being calculated.

(i) *Adjusted derivative contract amount*—(1) *Summary*. To calculate the adjusted derivative contract amount of a derivative contract, a [BANKING ORGANIZATION] must determine the adjusted notional amount of the derivative contract, pursuant to paragraph (i)(2) of this section, and multiply the adjusted notional amount by each of the supervisory delta adjustment, pursuant to paragraph (i)(3) of this section, the maturity factor, pursuant to paragraph (i)(4) of this section, and the applicable supervisory factor, as provided in Table 2 to § __.114.

(2) *Adjusted notional amount.* (i)(A) For an interest rate derivative contract or a credit derivative contract, the adjusted notional amount equals the product of the notional amount of the derivative contract, as measured in U.S. dollars using the exchange rate on the date of the calculation, and the supervisory duration, as calculated by the following formula:

$$\text{Supervisory duration} = max\left\{\frac{e^{-0.05*\left(\frac{S}{250}\right)} - e^{-0.05*\left(\frac{E}{250}\right)}}{0.05}, 0.04\right\}$$

Where:

S is the number of business days from the present day until the start date of the derivative contract, or zero if the start date has already passed; and

E is the number of business days from the present day until the end date of the derivative contract.

(B) For purposes of paragraph (i)(2)(i)(A) of this section:

(*1*) For an interest rate derivative contract or credit derivative contract that is a variable notional swap, the notional amount is equal to the time-weighted average of the contractual notional amounts of such a swap over the remaining life of the swap; and

(*2*) For an interest rate derivative contract or a credit derivative contract that is a leveraged swap, in which the notional amount of all legs of the derivative contract are divided by a factor and all rates of the derivative contract are multiplied by the same factor, the notional amount is equal to the notional amount of an equivalent unleveraged swap.

(ii)(A) For an exchange rate derivative contract, the adjusted notional amount is the notional amount of the non-U.S. denominated currency leg of the derivative contract, as measured in U.S. dollars using the exchange rate on the date of the calculation. If both legs of the exchange rate derivative contract are denominated in currencies other than U.S. dollars, the adjusted notional amount of the derivative contract is the largest leg of the derivative contract, as measured in U.S. dollars using the exchange rate on the date of the calculation.

(B) Notwithstanding paragraph (i)(2)(ii)(A) of this section, for an exchange rate derivative contract with multiple exchanges of principal, the [BANKING ORGANIZATION]

must set the adjusted notional amount of the derivative contract equal to the notional amount of the derivative contract multiplied by the number of exchanges of principal under the derivative contract.

(iii)(A) For an equity derivative contract or a commodity derivative contract, the adjusted notional amount is the product of the fair value of one unit of the reference instrument underlying the derivative contract and the number of such units referenced by the derivative contract.

(B) Notwithstanding paragraph (i)(2)(iii)(A) of this section, when calculating the adjusted notional amount for an equity derivative contract or a commodity derivative contract that is a volatility derivative contract, the [BANKING ORGANIZATION] must replace the unit price with the underlying volatility referenced by the volatility derivative contract and replace the number of units with the notional amount of the volatility derivative contract.

(3) *Supervisory delta adjustment.* (i) For a derivative contract that is not an option contract or collateralized debt obligation tranche, the supervisory delta adjustment is 1 if the fair value of the derivative contract increases when the value of the primary risk factor increases and −1 if the fair value of the derivative contract decreases when the value of the primary risk factor increases.

(ii)(A) For a derivative contract that is an option contract, the supervisory delta adjustment is determined by the formulas in Table 1 to § __.114, as applicable:

Table 1 to § __.114—Supervisory Delta Adjustment for Options Contracts

	Bought	Sold
Call Options	$\Phi\left(\frac{\ln\left(\frac{P+\lambda}{K+\lambda}\right)+0.5*\sigma^2*T/250}{\sigma*\sqrt{T/250}}\right)$	$-\Phi\left(\frac{\ln\left(\frac{P+\lambda}{K+\lambda}\right)+0.5*\sigma^2*T/250}{\sigma*\sqrt{T/250}}\right)$
Put Options	$-\Phi\left(-\frac{\ln\left(\frac{P+\lambda}{K+\lambda}\right)+0.5*\sigma^2*T/250}{\sigma*\sqrt{T/250}}\right)$	$\Phi\left(-\frac{\ln\left(\frac{P+\lambda}{K+\lambda}\right)+0.5*\sigma^2*T/250}{\sigma*\sqrt{T/250}}\right)$

(B) As used in the formulas in Table 1 § __.114:

(*1*) Φ is the standard normal cumulative distribution function;

(*2*) P equals the current fair value of the instrument or risk factor, as applicable, underlying the option;

(*3*) K equals the strike price of the option;

(*4*) T equals the number of business days until the latest contractual exercise date of the option;

(*5*) The same value of λ must be used for all option contracts that reference the same underlying risk factor or instrument or, in the case of interest rate option contracts, all interest rate option contracts that are denominated in the same currency. λ equals zero for all derivative contracts except those option contracts where it is possible for P to have negative values. For option contracts where it is possible for P to have negative values, to determine the value of λ for a given risk factor or instrument, a [BANKING ORGANIZATION] must find the lowest value, L, of P and K of all option contracts that reference this risk factor or instrument or, in the case of interest rate option contracts, the lowest value, L, of P and K of all interest rate option contracts in a given currency, that the [BANKING ORGANIZATION] has with all counterparties. Then, λ

is set as follows: when the underlying risk factor is an interest rate, $\lambda=\max\{-L+0.1\%,0\}$; otherwise, $\lambda=\max\{-1.1\cdot L,0\}$; and

(*6*) σ equals the supervisory option volatility, as provided in Table 2 to § __.114.

(C) Notwithstanding paragraph (i)(3)(ii)(B)*(5)* of this section, a [BANKING ORGANIZATION] may, with the prior approval of the [AGENCY], specify a value for λ in accordance with this paragraph for an option contract, other than an interest rate option contract described in paragraph (i)(3)(ii)(B)*(5)* of this section, if a different value for λ would be appropriate considering the range of values for the instrument or risk factor, as appropriate, underlying the option contract. A [BANKING ORGANIZATION] that specifies a value for λ in accordance with this paragraph for an option contract must assign the same value for λ to all option contracts with the same instrument or risk factor, as applicable, underlying the option that the [BANKING ORGANIZATION] has with all counterparties.

(iii)(A) For a derivative contract that is a collateralized debt obligation tranche, the supervisory delta adjustment is determined by the following formula:

$$\text{Supervisory delta adjustment} = \frac{15}{(1 + 14 * \text{A}) * (1 + 14 * \text{D})}$$

(B) As used in the formula in paragraph (i)(3)(iii)(A) of this section:

(*1*) A is the attachment point, which equals the ratio of the notional amounts of all underlying exposures that are subordinated to the [BANKING ORGANIZATION]'s exposure to the total notional amount of all underlying exposures, expressed as a decimal value between zero and one; [1]

(*2*) D is the detachment point, which equals one minus the ratio of the notional amounts of all underlying exposures that are senior to the [BANKING ORGANIZATION]'s exposure to

the total notional amount of all underlying exposures, expressed as a decimal value between zero and one; and

(*3*) The resulting amount is designated with a positive sign if the collateralized debt obligation tranche was used by the [BANKING ORGANIZATION] to purchase credit protection and is designated with a negative sign if the collateralized debt obligation tranche was used by the [BANKING ORGANIZATION] to sell credit protection.

(4) *Maturity factor.* (i)(A) The maturity factor of a derivative contract that is subject to a variation margin agreement, excluding derivative contracts that are subject to a variation margin agreement under which the counterparty is not required to post variation margin, is determined by the following formula:

$$\text{Maturity factor} = \frac{3}{2}\sqrt{\frac{MPOR}{250}}$$

Where MPOR refers to the period from the most recent exchange of collateral covering a netting set of derivative contracts with a defaulting counterparty until the derivative contracts are closed out and the resulting market risk is re-hedged.

(B) Notwithstanding paragraph (i)(4)(i)(A) of this section:

(*1*) For a derivative contract that is not a client-facing derivative transaction, MPOR cannot be less than ten business days plus the periodicity of re-margining expressed in business days minus one business day;

(*2*) For a derivative contract that is a client-facing derivative transaction, MPOR cannot be less than five business days plus the periodicity of re-margining expressed in business days minus one business day; and

(*3*) For a derivative contract that is within a netting set that is composed of more than 5,000 derivative contracts that are not cleared transactions, or a netting set that contains one or

more trades involving illiquid collateral or a derivative contract that cannot be easily replaced, MPOR cannot be less than twenty business days.

(*4*) Notwithstanding paragraphs (i)(4)(i)(A) and (B) of this section, for a netting set subject to more than two outstanding disputes over margin that lasted longer than the MPOR over the previous two quarters, the applicable floor is twice the amount provided in paragraphs (i)(4)(i)(A) and (B) of this section.

(ii) The maturity factor of a derivative contract that is not subject to a variation margin agreement, or derivative contracts under which the counterparty is not required to post variation margin, is determined by the following formula:

$$\text{Maturity factor} = \sqrt{\frac{\min\{M; 250\}}{250}}$$

Where M equals the greater of 10 business days and the remaining maturity of the contract, as measured in business days.

(iii) For purposes of paragraph (i)(4) of this section, if a [BANKING ORGANIZATION] has elected pursuant to paragraph (e)(5) of this section to treat a derivative contract that is a cleared transaction that is not subject to a variation margin agreement as one that is subject to a variation margin agreement, the [BANKING ORGANIZATION] must treat the derivative contract as subject to a variation margin agreement with maturity factor as determined according to paragraph (i)(4)(i) of this section, and daily settlement does not change the end date of the period referenced by the derivative contract.

(5) *Derivative contract as multiple effective derivative contracts*. A [BANKING ORGANIZATION] must separate a derivative contract into separate derivative contracts, according to the following rules:

(i) For an option where the counterparty pays a predetermined amount if the value of the underlying asset is above or below the strike price and nothing otherwise (binary option), the option must be treated as two separate options. For purposes of paragraph (i)(3)(ii) of this section, a binary option with strike price K must be represented as the combination of one bought European option and one sold European option of the same type as the original option (put or call) with the strike prices set equal to 0.95 * K and 1.05 * K so that the payoff of the binary option is reproduced exactly outside the region between the two strike prices. The absolute value of the sum of the adjusted derivative contract amounts of the bought and sold options is capped at the payoff amount of the binary option.

(ii) For a derivative contract that can be represented as a combination of standard option payoffs (such as collar, butterfly spread, calendar spread, straddle, and strangle), a [BANKING ORGANIZATION] must treat each standard option component as a separate derivative contract.

(iii) For a derivative contract that includes multiple-payment options, (such as interest rate caps and floors), a [BANKING ORGANIZATION] may represent each payment option as a combination of effective single-payment options (such as interest rate caplets and floorlets).

(iv) A [BANKING ORGANIZATION] may not decompose linear derivative contracts (such as swaps) into components.

(j) *Multiple netting sets subject to a single variation margin agreement*—(1) *Calculating replacement cost.* Notwithstanding paragraph (f) of this section, a [BANKING ORGANIZATION] must assign a single replacement cost to multiple netting sets that are subject to a single variation margin agreement under which the counterparty must post variation margin, calculated according to the following formula:

$$Replacement\ Cost$$
$$= max\left\{\sum_{NS} max\{V_{NS}; 0\} - max\{C_{MA}; 0\}; 0\right\}$$
$$+ max\left\{\sum_{NS} min\{V_{NS}; 0\} - min\{C_{MA}; 0\}; 0\right\}$$

Where:

NS is each netting set subject to the variation margin agreement MA;

V_{NS} is the sum of the fair values (after excluding any valuation adjustments) of the derivative contracts within the netting set NS; and

C_{MA} is the sum of the net independent collateral amount and the variation margin amount applicable to the derivative contracts within the netting sets subject to the single variation margin agreement.

(2) *Calculating potential future exposure*. Notwithstanding paragraph (g) of this section, a [BANKING ORGANIZATION] must assign a single potential future exposure to multiple netting sets that are subject to a single variation margin agreement under which the counterparty must post variation margin equal to the sum of the potential future exposure of each such netting set, each calculated according to paragraph (g) of this section as if such nettings sets were not subject to a variation margin agreement.

(k) *Netting set subject to multiple variation margin agreements or a hybrid netting set*—(1) *Calculating replacement cost*. To calculate replacement cost for either a netting set subject to multiple variation margin agreements under which the counterparty to each variation margin agreement must post variation margin, or a netting set composed of at least one derivative contract subject to variation margin agreement under which the counterparty must post variation margin and at least one derivative contract that is not subject to such a variation margin

agreement, the calculation for replacement cost is provided under paragraph (f)(1) of this section, except that the variation margin threshold equals the sum of the variation margin thresholds of all variation margin agreements within the netting set and the minimum transfer amount equals the sum of the minimum transfer amounts of all the variation margin agreements within the netting set.

(2) *Calculating potential future exposure.* (i) To calculate potential future exposure for a netting set subject to multiple variation margin agreements under which the counterparty to each variation margin agreement must post variation margin, or a netting set composed of at least one derivative contract subject to a variation margin agreement under which the counterparty to the derivative contract must post variation margin and at least one derivative contract that is not subject to such a variation margin agreement, a [BANKING ORGANIZATION] must divide the netting set into sub-netting sets (as described in paragraph (k)(2)(ii) of this section) and calculate the aggregated amount for each sub-netting set. The aggregated amount for the netting set is calculated as the sum of the aggregated amounts for the sub-netting sets. The multiplier is calculated for the entire netting set.

(ii) For purposes of paragraph (k)(2)(i) of this section, the netting set must be divided into sub-netting sets as follows:

(A) All derivative contracts within the netting set that are not subject to a variation margin agreement or that are subject to a variation margin agreement under which the counterparty is not required to post variation margin form a single sub-netting set. The aggregated amount for this sub-netting set is calculated as if the netting set is not subject to a variation margin agreement.

(B) All derivative contracts within the netting set that are subject to variation margin agreements in which the counterparty must post variation margin and that share the same value of the MPOR form a single sub-netting set. The aggregated amount for this sub-netting set is calculated as if the netting set is subject to a variation margin agreement, using the MPOR value shared by the derivative contracts within the netting set.

Table 2 to § __.114—Supervisory Option Volatility, Supervisory Correlation Parameters, and Supervisory Factors for Derivative Contracts

Asset Class	Category	Type	Supervisory Option Volatility (Percent)	Supervisory Correlation Factor (Percent)	Supervisory Factor[1] (Percent)
Interest rate	N/A	N/A	50	N/A	0.50
Exchange rate	N/A	N/A	15	N/A	4.0
Credit, single name	Investment grade	N/A	100	50	0.46
	Speculative grade	N/A	100	50	1.3
	Sub-speculative grade	N/A	100	50	6.0
Credit, index	Investment Grade	N/A	80	80	0.38
	Speculative Grade	N/A	80	80	1.06
Equity, single name	N/A	N/A	120	50	32
Equity, index	N/A	N/A	75	80	20
Commodity	Energy	Electricity	150	40	40
		Other	70	40	18
	Metals	N/A	70	40	18
	Agricultural	N/A	70	40	18
	Other	N/A	70	40	18

[1] The applicable supervisory factor for basis derivative contract hedging sets is equal to one-half of the supervisory factor provided in this table 2, and the applicable supervisory factor for volatility derivative contract hedging sets is equal to 5 times the supervisory factor provided in this table 2.

[1] In the case of a first-to-default credit derivative, there are no underlying exposures that are subordinated to the [BANKING ORGANIZATION]'s exposure. In the case of a second-or-subsequent-to-default credit derivative, the smallest (n−1) notional amounts of the underlying exposures are subordinated to the [BANKING ORGANIZATION]'s exposure.

§ __.115 Collateral haircut approach for repo-style transactions and eligible margin loans

(a) *Collateral haircut approach—Exposure amount for eligible margin loans and repo-style transactions*. A [BANKING ORGANIZATION] may recognize the credit risk mitigation

benefits of financial collateral that secures an eligible margin loan, repo-style transaction, or netting set of eligible margin loans or repo-style transactions, and of any collateral that secures a repo-style transaction that is included in the [BANKING ORGANIZATION]'s measure for market risk under subpart F of this part, by using the collateral haircut approach covered in paragraph (b) of this section.

(b) *Exposure amount calculation*. For purposes of the collateral haircut approach, a [BANKING ORGANIZATION] must determine the exposure amount for an eligible margin loan, repo-style transaction, or netting set of eligible margin loans or repo-style transactions according to the following formula:

$$E^* = max\left\{0; (\sum_i E_i - \sum_i C_i) + \left(0.4 \times net_{exposure}\right) + \left(0.6 \times \frac{gross_{exposure}}{\sqrt{N}}\right) + \left(\sum_{fx}\left(E_{fx} \times H_{fx}\right)\right)\right\}$$ where:

(1) E^* is the exposure amount of the eligible margin loan, repo-style transaction, or netting set after credit risk mitigation;

(2) E_i is the current fair value of the instrument, cash, or gold the [BANKING ORGANIZATION] has lent, sold subject to repurchase, or posted as collateral to the counterparty;

(3) C_i is the current fair value of the instrument, cash, or gold the banking organization has borrowed, purchased subject to resale, or taken as collateral from the counterparty;

(4) $net_{exposure} = |\sum_s E_s H_s|$;

(5) $gross_{exposure} = \sum_s E_s|H_s|$;

(6) E_s is the absolute value of the net position in a given instrument or in gold, where the net position in a given instrument or gold equals the sum of the current fair values of the instrument or gold the [BANKING ORGANIZATION] has lent, sold subject to repurchase, or posted as collateral to the counterparty, minus the sum of the current fair values of that same instrument or gold the [BANKING ORGANIZATION] has borrowed, purchased subject to resale, or taken as collateral from the counterparty;

(7) H_s is the haircut appropriate to E_s as described in Table 1 to § __.115, as applicable. H_s has a positive sign if the instrument or gold is net lent, sold subject to repurchase, or posted as collateral to the counterparty; H_s has a negative sign if the instrument or gold is net borrowed, purchased subject to resale, or taken as collateral from the counterparty;

(8) N is the number of instruments with a unique Committee on Uniform Securities Identification Procedures (CUSIP) designation or foreign equivalent that the [BANKING ORGANIZATION] lends, sells subject to repurchase, posts as collateral, borrows, purchases subject to resale, or takes as collateral in the eligible margin loan, repo-style transaction, or netting set, including all collateral that the [BANKING ORGANIZATION] elects to include within the credit risk mitigation framework, except that instruments where the value E_s is less than one tenth of the value of the largest E_s in the eligible margin loan, repo-style transaction, or netting set are not included in the count or gold, with any amount of gold given a value of one;

(9) E_{fx} is the absolute value of the net position in each currency f_x different from the settlement currency;

(10) H_{fx} is the haircut appropriate for currency mismatch of currency f_x.

(c) *Market price volatility and currency mismatch haircuts.* (1) A [BANKING ORGANIZATION] must use the haircuts for market price volatility (H_S) in Table 1 to § __.115, as adjusted in certain circumstances as provided in paragraphs (c)(3) through (5) of this section.

Table 1 to § __.115—Market Price Volatility Haircuts

Residual Maturity		Securities issued by a sovereign or an issuer described in *§__.111(b)*[1] (percent)				Other investment-grade securities (percent)	
		Issuer risk weight of 0%	Issuer risk weight of 20% or 50%	Issuer risk weight of 100%	GSE exposures	Exposures other than GSE exposures or securitization exposures	Senior securitization exposures with risk weight <100%
Debt Securities	Less than or equal to 1 year	0.5	1.0	15.0	1.0	2.0	4.0
	Greater than 1 year and less than or equal to 3 years	2.0	3.0	15.0	4.0	4.0	12.0
	Greater than 3 years and less than or equal to 5 years					6.0	
	Greater than 5 years and less than or equal to 10 years	4.0	6.0	15.0	8.0	12.0	24.0
	Greater than 10 years					20.0	
Main index equities (including convertible bonds) and gold						20.0	

Other publicly traded equities and convertible bonds	30.0
Mutual funds and exchange traded funds	Highest haircut applicable to any security in which the fund can invest, unless the banking organization can apply the full look-through approach for equity investments in funds §__.142(b), in which case the banking organization may use a weighted average of haircuts applicable to the securities held by the fund.
Cash on deposit	0.0
Other exposure types[2]	30.0

[1] Includes a foreign PSE that receives a zero percent risk weight.

[2] Includes senior securitization exposures with a risk weight greater than or equal to 100 percent and sovereign exposures with a risk weight greater than 100 percent.

(2) For currency mismatches, a [BANKING ORGANIZATION] must use a haircut for foreign exchange rate volatility (H_{fx}) of 8 percent, as adjusted in certain circumstances under paragraphs (b)(3) and (4) of this section.

(3) For repo-style transactions, a [BANKING ORGANIZATION] may multiply the haircuts provided in paragraphs (b)(1) and (2) of this section by the square root of $1/2$ (which equals 0.707107).

(4) A [BANKING ORGANIZATION] must adjust the haircuts provided in paragraphs (c)(1) and (2) of this section upward on the basis of a holding period longer than ten business days for eligible margin loans or a holding period longer than five business days for repo-style transactions that are not cleared transactions under the following conditions. If the number of trades in a netting set exceeds 5,000 at any time during a quarter, a [BANKING ORGANIZATION] must adjust the haircuts provided in paragraphs (c)(1) and (2) of this section upward on the basis of a holding period of twenty business days for the following quarter except

in the calculation of exposure amount for purposes of § __.116. If a netting set contains one or more trades involving illiquid collateral, a [BANKING ORGANIZATION] must adjust the haircuts provided in paragraphs (c)(1) and (2) of this section upward on the basis of a holding period of twenty business days. If over the two previous quarters more than two margin disputes on a netting set have occurred that lasted longer than the holding period, then the [BANKING ORGANIZATION] must adjust the haircuts provided in paragraphs (c)(1) and (2) of this section upward for that netting set on the basis of a holding period that is at least two times the minimum holding period for that netting set. The [BANKING ORGANIZATION] must adjust the haircuts upward using the following formula:

$$H_a = H_s\sqrt{T_m/T_s}$$

Where:

(i) T_m equals a holding period of longer than 10 business days for eligible margin loans or longer than 5 business days for repo-style transactions;

(ii) H_s equals the market price volatility haircut provided in Table 1 to § __.115 or to the foreign exchange rate volatility haircut provided in paragraph (c)(2) of this section; and

(iii) T_s equals 10 business days for eligible margin loans or 5 business days for repo-style transactions.

(5) If the instruments a [BANKING ORGANIZATION] has lent, sold subject to repurchase, or posted as collateral do not meet the definition of financial collateral, the [BANKING ORGANIZATION] must use a 30 percent haircut for market price volatility (H_s).

§ __.116 Cleared transactions.

(a) *General requirements*—(1) *Clearing member clients.* A [BANKING ORGANIZATION] that is a clearing member client must use the methodologies described in paragraph (b) of this section to calculate risk-weighted assets for a cleared transaction.

(2) *Clearing members*. A [BANKING ORGANIZATION] that is a clearing member must use the methodologies described in paragraph (c) of this section to calculate its risk-weighted assets for a cleared transaction and paragraph (d) of this section to calculate its risk-weighted assets for its default fund contribution to a CCP.

(b) *Clearing member client [BANKING ORGANIZATIONS]*—(1) *Risk-weighted assets for cleared transactions.* (i) To determine the risk-weighted asset amount for a cleared transaction, a [BANKING ORGANIZATION] that is a clearing member client must multiply the trade exposure amount for the cleared transaction, calculated in accordance with paragraph (b)(2) of this section, by the risk weight appropriate for the cleared transaction, determined in accordance with paragraph (b)(3) of this section.

(ii) A clearing member client [BANKING ORGANIZATION]'s total risk-weighted assets for cleared transactions is the sum of the risk-weighted asset amounts for all of its cleared transactions.

(2) *Trade exposure amount.* (i) For a cleared transaction that is a derivative contract or a netting set of derivative contracts, trade exposure amount equals the exposure amount for the derivative contract or netting set of derivative contracts calculated using § __.114, plus the fair value of the collateral posted by the clearing member client [BANKING ORGANIZATION] and held by the CCP, clearing member, or custodian in a manner that is not bankruptcy remote.

(ii) For a cleared transaction that is a repo-style transaction or netting set of repo-style transactions, trade exposure amount equals the exposure amount for the repo-style transaction calculated using § __.115, plus the fair value of the collateral posted by the clearing member client [BANKING ORGANIZATION] and held by the CCP, clearing member, or custodian in a manner that is not bankruptcy remote.

(3) *Cleared transaction risk weights.* (i) For a cleared transaction with a QCCP, a clearing member client [BANKING ORGANIZATION] must apply a risk weight of:

(A) Two percent if the collateral posted by the [BANKING ORGANIZATION] to the QCCP or clearing member is subject to an arrangement that prevents any loss to the clearing member client [BANKING ORGANIZATION] due to the joint default or a concurrent insolvency, liquidation, or receivership proceeding of the clearing member and any other clearing member clients of the clearing member; and the clearing member client [BANKING ORGANIZATION] has conducted sufficient legal review to conclude with a well-founded basis (and maintains sufficient written documentation of that legal review) that in the event of a legal challenge (including one resulting from an event of default or from liquidation, insolvency, or receivership proceedings) the relevant court and administrative authorities would find the arrangements to be legal, valid, binding, and enforceable under the law of the relevant jurisdictions; or

(B) Four percent, if the requirements of paragraph (b)(3)(i)(A) of this section are not met.

(ii) For a cleared transaction with a CCP that is not a QCCP, a clearing member client [BANKING ORGANIZATION] must apply the risk weight applicable to the CCP under § __.111.

(4) *Collateral.* (i) Notwithstanding any other requirement of this section, collateral posted by a clearing member client [BANKING ORGANIZATION] that is held by a custodian (in its capacity as a custodian) in a manner that is bankruptcy remote from the CCP, clearing member, and other clearing member clients of the clearing member, is not subject to a capital requirement under this section.

(ii) A clearing member client [BANKING ORGANIZATION] must calculate a risk-weighted asset amount for any collateral provided to a CCP, clearing member or a custodian in connection with a cleared transaction in accordance with requirements under subpart E or F of this part, as applicable.

(c) *Clearing member [BANKING ORGANIZATION]*—(1) *Risk-weighted assets for cleared transactions.* (i) To determine the risk-weighted asset amount for a cleared transaction, a clearing member [BANKING ORGANIZATION] must multiply the trade exposure amount for the cleared transaction, calculated in accordance with paragraph (c)(2) of this section by the risk weight appropriate for the cleared transaction, determined in accordance with paragraph (c)(3) of this section.

(ii) A clearing member [BANKING ORGANIZATION]'s total risk-weighted assets for cleared transactions is the sum of the risk-weighted asset amounts for all of its cleared transactions.

(2) *Trade exposure amount*. A clearing member [BANKING ORGANIZATION] must calculate its trade exposure amount for a cleared transaction as follows:

(i) For a cleared transaction that is a derivative contract or a netting set of derivative contracts, trade exposure amount equals the exposure amount for the derivative contract or

netting set of derivative contracts calculated using § __.114, plus the fair value of the collateral posted by the clearing member [BANKING ORGANIZATION] and held by the CCP in a manner that is not bankruptcy remote.

(ii) For a cleared transaction that is a repo-style transaction or netting set of repo-style transactions, trade exposure amount equals the exposure amount for the repo-style transaction calculated using the methodology set forth in § __.115, plus the fair value of the collateral posted by the clearing member [BANKING ORGANIZATION] and held by the CCP in a manner that is not bankruptcy remote.

(3) *Cleared transaction risk weights.* (i) A clearing member [BANKING ORGANIZATION] must apply a risk weight of 2 percent to the trade exposure amount for a cleared transaction with a QCCP.

(ii) For a cleared transaction with a CCP that is not a QCCP, a clearing member [BANKING ORGANIZATION] must apply the risk weight applicable to the CCP according to § __.111.

(iii) Notwithstanding paragraphs (c)(3)(i) and (ii) of this section, a clearing member [BANKING ORGANIZATION] may apply a risk weight of zero percent to the trade exposure amount for a cleared transaction with a QCCP where the clearing member [BANKING ORGANIZATION] is acting as a financial intermediary on behalf of a clearing member client, the transaction offsets another transaction that satisfies the requirements set forth in § __.3(a), and the clearing member [BANKING ORGANIZATION] is not obligated to reimburse the clearing member client in the event of the QCCP default.

(4) *Collateral*. (i) Notwithstanding any other requirement of this section, collateral posted by a clearing member [BANKING ORGANIZATION] that is held by a custodian in a manner that is bankruptcy remote from the CCP is not subject to a capital requirement under this section.

(ii) A clearing member [BANKING ORGANIZATION] must calculate a risk-weighted asset amount for any collateral provided to a CCP, clearing member or a custodian in connection with a cleared transaction in accordance with requirements under subparts E or F of this part, as applicable.

(d) *Default fund contributions*—(1) *General requirement.* A clearing member [BANKING ORGANIZATION] must determine the risk-weighted asset amount for a default fund contribution to a CCP at least quarterly, or more frequently if, in the opinion of the [BANKING ORGANIZATION] or the [AGENCY], there is a material change in the financial condition of the CCP. The total risk-weighted assets for default fund contributions of a clearing member [BANKING ORGANIZATION] is the sum of the [BANKING ORGANIZATION]'s risk-weighted assets for all of its default fund contributions to all CCPs of which the [BANKING ORGANIZATION] is a clearing member.

(2) *Risk-weighted asset amount for default fund contributions to nonqualifying CCPs.* A clearing member [BANKING ORGANIZATION]'s risk-weighted asset amount for default fund contributions to CCPs that are not QCCPs equals the sum of such default fund contributions multiplied by 1,250 percent, or an amount determined by the [AGENCY], based on factors such as size, structure, and membership characteristics of the CCP and riskiness of its transactions, in cases where such default fund contributions may be unlimited.

(3) *Risk-weighted asset amount for default fund contributions to QCCPs.* A clearing member [BANKING ORGANIZATION]'s risk-weighted asset amount for default fund contributions to QCCPs equals the sum of its capital requirement, KCM for each QCCP, as calculated under the methodology set forth in paragraph (d)(4) of this section, multiplied by 12.5.

(4) *Capital requirement for default fund contributions to a QCCP.* A clearing member [BANKING ORGANIZATION]'s capital requirement for its default fund contribution to a QCCP (KCM) is equal to:

$$K_{CM} = \max\{K_{CCP} * \left(\frac{DF^{pref}}{DF_{CCP} + DF_{CCPCM}^{pref}}\right); 0.16\ percent * DF^{pref}\}$$

Where:

K_{CCP} is the hypothetical capital requirement of the QCCP, as determined under paragraph (d)(5) of this section;

DF^{pref} is the prefunded default fund contribution of the clearing member [BANKING ORGANIZATION] to the QCCP;

DF^{CCP} is the QCCP's own prefunded amounts that are contributed to the default waterfall and are junior or *pari passu* with prefunded default fund contributions of clearing members of the CCP; and

DF_{CCPCM}^{pref} is the total prefunded default fund contributions from clearing members of the QCCP to the QCCP.

(5) *Hypothetical capital requirement of a QCCP.* Where a QCCP has provided its K_{CCP}, a [BANKING ORGANIZATION] must rely on such disclosed figure instead of calculating K_{CCP} under this paragraph (d)(5), unless the [BANKING ORGANIZATION] determines that a more

conservative figure is appropriate based on the nature, structure, or characteristics of the QCCP. The hypothetical capital requirement of a QCCP (K_{CCP}), as determined by the [BANKING ORGANIZATION], is equal to:

$$K_{CCP} = \sum_{CM_i} EA_i * 1.6\ percent$$

Where:

CM_i is each clearing member of the QCCP; and

EA_i is the exposure amount of the QCCP to each clearing member of the QCCP to the QCCP, as determined under paragraph (d)(6) of this section.

(6) *Exposure amount of a QCCP to a clearing member.* (i) The exposure amount of a QCCP to a clearing member is equal to the sum of the exposure amount for derivative contracts determined under paragraph (d)(6)(ii) of this section and the exposure amount for repo-style transactions determined under paragraph (d)(6)(iii) of this section.

(ii) With respect to any derivative contracts between the QCCP and the clearing member and any guarantees that the clearing member has provided to the QCCP with respect to performance of a clearing member client on a derivative contract, the exposure amount is equal to the exposure amount of the QCCP to the clearing member for all such derivative contracts and guaranteed derivative contracts calculated under SA-CCR in § __.114 (or, with respect to a QCCP located outside the United States, under a substantially identical methodology in effect in the jurisdiction) using a value of 10 business days for purposes of § __.114(i)(4), provided that for this calculation, in place of the net independent collateral amount, the calculation must include the fair value amount of the independent collateral, as adjusted by the market price volatility haircut under Table 1 to § __.115, as applicable, posted to the QCCP by the clearing

member, including collateral posted on behalf of a client of the clearing member in connection with a derivative contract for which the clearing member has provided guarantees to the QCCP, plus the amount of the prefunded default fund contribution, as adjusted by the market price volatility haircut under Table 1 to § __.115, as applicable, plus the amount of the prefunded default fund contribution of the clearing member to the QCCP.

(iii) With respect to any repo-style transactions between the clearing member and the QCCP that are cleared transactions, exposure amount (EA) is equal to:

$$EA = \max\{EBRMi - IMi - DFi; 0\}$$

Where:

$EBRM_i$ is the exposure amount of the QCCP to each clearing member for all repo-style transactions between the QCCP and the clearing member, as determined under § __.115 and without recognition of the initial margin collateral posted by the clearing member to the QCCP with respect to the repo-style transactions or the prefunded default fund contribution of the clearing member institution to the QCCP;

IM_i is the initial margin collateral posted by each clearing member to the QCCP with respect to the repo-style transactions; and

DF_i is the prefunded default fund contribution of each clearing member to the QCCP that is not already deducted in paragraph (d)(6)(ii) of this section.

(iv) Exposure amount must be calculated separately for each clearing member's sub-client accounts and sub-house account (i.e., for the clearing member's proprietary activities). If the clearing member's collateral and its client's collateral are held in the same default fund contribution account, then the exposure amount of that account is the sum of the exposure

amount for the client-related transactions within the account and the exposure amount of the house-related transactions within the account. For purposes of determining such exposure amounts, the independent collateral of the clearing member and its client must be allocated in proportion to the respective total amount of independent collateral posted by the clearing member to the QCCP.

(v) If any account or sub-account contains both derivative contracts and repo-style transactions, the exposure amount of that account is the sum of the exposure amount for the derivative contracts within the account and the exposure amount of the repo-style transactions within the account. If independent collateral is held for an account containing both derivative contracts and repo-style transactions, then such collateral must be allocated to the derivative contracts and repo-style transactions in proportion to the respective product specific exposure amounts, calculated, excluding the effects of collateral, according to § __.115 for repo-style transactions and to § __.114 for derivative contracts.

(vi) Notwithstanding any other provision of paragraph (d) of this section, with the prior approval of the [AGENCY], a [BANKING ORGANIZATION] may determine the risk-weighted asset amount for a default fund contribution to a QCCP according to § __.35(d)(3)(i) through (iii).

§ __.117 Unsettled transactions.

(a) *Definitions*. For purposes of this section:

(1) *Delivery-versus-payment (DvP)* transaction means a securities or commodities transaction in which the buyer is obligated to make payment only if the seller has made delivery

of the securities or commodities and the seller is obligated to deliver the securities or commodities only if the buyer has made payment.

(2) *Payment-versus-payment (PvP) transaction* means a foreign exchange transaction in which each counterparty is obligated to make a final transfer of one or more currencies only if the other counterparty has made a final transfer of one or more currencies.

(3) A transaction has a normal settlement period if the contractual settlement period for the transaction is equal to or less than the market standard for the instrument underlying the transaction and equal to or less than five business days.

(4) Positive current exposure of a [BANKING ORGANIZATION] for a transaction is the difference between the transaction value at the agreed settlement price and the current market price of the transaction, if the difference results in a credit exposure of the [BANKING ORGANIZATION] to the counterparty.

(b) *Scope*. This section applies to all transactions involving securities, foreign exchange instruments, and commodities that have a risk of delayed settlement or delivery. This section does not apply to:

(1) Cleared transactions that are marked-to-market daily and subject to daily receipt and payment of variation margin;

(2) Repo-style transactions, including unsettled repo-style transactions;

(3) One-way cash payments on OTC derivative contracts; or

(4) Transactions with a contractual settlement period that is longer than the normal settlement period (which are treated as OTC derivative contracts).

(c) *System-wide failures*. In the case of a system-wide failure of a settlement, clearing system or central counterparty, the [AGENCY] may waive risk-based capital requirements for unsettled and failed transactions until the situation is rectified.

(d) *Delivery-versus-payment (DvP) and payment-versus-payment (PvP) transactions.* A [BANKING ORGANIZATION] must hold risk-based capital against any DvP or PvP transaction with a normal settlement period if the [BANKING ORGANIZATION]'s counterparty has not made delivery or payment within five business days after the settlement date. The [BANKING ORGANIZATION] must determine its risk-weighted asset amount for such a transaction by multiplying the positive current exposure of the transaction for the [BANKING ORGANIZATION] by the appropriate risk weight in Table 1 to § __.117.

Table 1 to § __.117—Risk Weights for Unsettled DvP and PvP Transactions

Number of business days after contractual settlement date	Risk weight to be applied to positive current exposure (in percent)
From 5 to 15	100.0
From 16 to 30	625.0
From 31 to 45	937.5
46 or more	1,250.0

(e) *Non-DvP/non-PvP (non-delivery-versus-payment/non-payment-versus-payment) transactions.* (1) A [BANKING ORGANIZATION] must hold risk-based capital against any non-DvP/non-PvP transaction with a normal settlement period if the [BANKING ORGANIZATION] has delivered cash, securities, commodities, or currencies to its counterparty but has not received its corresponding deliverables by the end of the same business day. The [BANKING ORGANIZATION] must continue to hold risk-based capital against the transaction until the [BANKING ORGANIZATION] has received its corresponding deliverables.

(2) From the business day after the [BANKING ORGANIZATION] has made its delivery until five business days after the counterparty delivery is due, the [BANKING ORGANIZATION] must calculate the risk-weighted asset amount for the transaction by treating the current fair value of the deliverables owed to the [BANKING ORGANIZATION] as an exposure to the counterparty and using the applicable counterparty risk weight under this subpart.

(3) If the [BANKING ORGANIZATION] has not received its deliverables by the fifth business day after counterparty delivery was due, the [BANKING ORGANIZATION] must assign a 1,250 percent risk weight to the current fair value of the deliverables owed to the [BANKING ORGANIZATION].

(f) *Total risk-weighted assets for unsettled transactions.* Total risk-weighted assets for unsettled transactions is the sum of the risk-weighted asset amounts of all DvP, PvP, and non-DvP/non-PvP transactions.

Credit Risk Mitigation

§ __.120 Guarantees and credit derivatives: Substitution approach.

(a) *Scope*—(1) A [BANKING ORGANIZATION] may recognize the credit risk mitigation benefits of an eligible guarantee or eligible credit derivative that is not an n^{th}-to-default credit derivative by substituting the risk weight associated with the protection provider for the risk weight assigned to an exposure, as provided under this section.

(2) This section applies to exposures for which:

(i) Credit risk is fully covered by an eligible guarantee or eligible credit derivative; or

(ii) Credit risk is covered on a pro rata basis (that is, on a basis in which the [BANKING ORGANIZATION] and the protection provider share losses proportionately) by an eligible guarantee or eligible credit derivative.

(3) Exposures on which there is a tranching of credit risk (reflecting at least two different levels of seniority) generally are securitization exposures subject to §§ __.130 through __.134.

(4) If multiple eligible guarantees or eligible credit derivatives cover a single exposure described in this section, a [BANKING ORGANIZATION] may treat the hedged exposure as multiple separate exposures, each covered by a single eligible guarantee or eligible credit derivative, and may calculate a separate risk-weighted asset amount for each separate exposure as described in paragraph (c) of this section.

(5) If a single eligible guarantee or eligible credit derivative covers multiple hedged exposures described in paragraph (a)(2) of this section, a [BANKING ORGANIZATION] must treat each hedged exposure as covered by a separate eligible guarantee or eligible credit derivative and must calculate a separate risk-weighted asset amount for each exposure as described in paragraph (c) of this section.

(b) *Rules of recognition.* (1) A [BANKING ORGANIZATION] may only recognize the credit risk mitigation benefits of eligible guarantees and eligible credit derivatives that are not n^{th}-to-default credit derivatives.

(2) A [BANKING ORGANIZATION] may only recognize the credit risk mitigation benefits of an eligible credit derivative to hedge an exposure that is different from the credit derivative's reference exposure used for determining the derivative's cash settlement value, deliverable obligation, or occurrence of a credit event if:

(i) The reference exposure ranks *pari passu* with, or is subordinated to, the hedged exposure;

(ii) The reference exposure and the hedged exposure are to the same legal entity; and

(iii) Legally enforceable cross-default or cross-acceleration clauses are in place to ensure payments under the credit derivative are triggered when the obligated party of the hedged exposure fails to pay under the terms of the hedged exposure.

(c) *Substitution approach*—(1) *Full coverage*. If an eligible guarantee or eligible credit derivative meets the conditions in paragraphs (a) and (b) of this section and the protection amount (P) of the guarantee or credit derivative is greater than or equal to the exposure amount of the hedged exposure, a [BANKING ORGANIZATION] may recognize the guarantee or credit derivative in determining the risk-weighted asset amount for the hedged exposure by substituting the risk weight applicable to the guarantor or credit derivative protection provider under this subpart for the risk weight assigned to the exposure.

(2) *Partial coverage*. If an eligible guarantee or eligible credit derivative meets the conditions in paragraphs (a) and (b) of this section and the protection amount (P) of the guarantee or credit derivative is less than the exposure amount of the hedged exposure, the [BANKING ORGANIZATION] must treat the hedged exposure as two separate exposures (protected and unprotected) in order to recognize the credit risk mitigation benefit of the guarantee or credit derivative.

(i) The [BANKING ORGANIZATION] may calculate the risk-weighted asset amount for the protected exposure under this subpart E, where the applicable risk weight is the risk weight applicable to the guarantor or credit derivative protection provider.

(ii) The [BANKING ORGANIZATION] must calculate the risk-weighted asset amount for the unprotected exposure under this subpart E, where the applicable risk weight is that of the unprotected portion of the hedged exposure.

(iii) The treatment provided in this section is applicable when the credit risk of an exposure is covered on a partial pro rata basis and may be applicable when an adjustment is made to the effective notional amount of the guarantee or credit derivative under paragraph (d), (e), or (f) of this section.

(d) *Maturity mismatch adjustment.* (1) A [BANKING ORGANIZATION] that recognizes an eligible guarantee or eligible credit derivative in determining the risk-weighted asset amount for a hedged exposure must adjust the effective notional amount of the credit risk mitigant to reflect any maturity mismatch between the hedged exposure and the credit risk mitigant.

(2) A maturity mismatch occurs when the residual maturity of a credit risk mitigant is less than that of the hedged exposure(s).

(3) The residual maturity of a hedged exposure is the longest possible remaining time before the obligated party of the hedged exposure is scheduled to fulfil its obligation on the hedged exposure. If a credit risk mitigant has embedded options that may reduce its term, the [BANKING ORGANIZATION] (protection purchaser) must adjust the residual maturity of the credit risk mitigant. If a call is at the discretion of the protection provider, the residual maturity of the credit risk mitigant is at the first call date. If the call is at the discretion of the [BANKING ORGANIZATION] (protection purchaser), but the terms of the arrangement at origination of the credit risk mitigant contain a positive incentive for the [BANKING ORGANIZATION] to call

the transaction before contractual maturity, the remaining time to the first call date is the residual maturity of the credit risk mitigant.

(4) A credit risk mitigant with a maturity mismatch may be recognized only if its original maturity is greater than or equal to one year and its residual maturity is greater than three months.

(5) When a maturity mismatch exists, the [BANKING ORGANIZATION] must apply the following adjustment to reduce the effective notional amount of the credit risk mitigant:

$Pm = E \times (t-0.25)/(T-0.25)$, where:

(i) Pm = effective notional amount of the credit risk mitigant, adjusted for maturity mismatch;

(ii) E = effective notional amount of the credit risk mitigant;

(iii) t = the lesser of T or the residual maturity of the credit risk mitigant, expressed in years; and

(iv) T = the lesser of five or the residual maturity of the hedged exposure, expressed in years.

(e) *Adjustment for credit derivatives without restructuring as a credit event.* (1) If a [BANKING ORGANIZATION] recognizes an eligible credit derivative that does not include as a credit event a restructuring of the hedged exposure involving forgiveness or postponement of principal, interest, or fees that results in a credit loss event (that is, a charge-off, specific provision, or other similar debit to the profit and loss account), the [BANKING ORGANIZATION] must apply the adjustment in paragraph (e)(2) of this section to reduce the effective notional amount of the credit derivative unless:

(i) The terms of the hedged exposure and the reference exposure, if different from the hedged exposure, allow the maturity, principal, coupon, currency, or seniority status of the exposure to be amended outside of receivership, insolvency, liquidation, or similar proceeding only by unanimous consent of all parties, and

(ii) The [BANKING ORGANIZATION] has conducted sufficient legal review to conclude with a well-founded basis (and maintains sufficient written documentation of that legal review) that the hedged exposure is subject to the U.S. Bankruptcy Code, the Federal Deposit Insurance Act, or a domestic or foreign insolvency regime with similar features that allow for a company to liquidate, reorganize, or restructure and provides for an orderly settlement of creditor claims.

(2) The [BANKING ORGANIZATION] must apply the following adjustment to reduce the effective notional amount of any eligible credit derivative that is subject to adjustment under paragraph (e)(1) of this section:

$Pr = Pm \times 0.60$, where:

(i) Pr = effective notional amount of the credit risk mitigant, adjusted for lack of restructuring event (and maturity mismatch, if applicable); and

(ii) Pm = effective notional amount of the credit risk mitigant (adjusted for maturity mismatch, if applicable).

(f) *Currency mismatch adjustment.* (1) If a [BANKING ORGANIZATION] recognizes an eligible guarantee or eligible credit derivative that is denominated in a currency different from that in which the hedged exposure is denominated, the [BANKING ORGANIZATION] must

apply the following formula to the effective notional amount of the guarantee or credit derivative:

$Pc = Pr \times (1 - H_{FX})$, where:

(i) Pc = effective notional amount of the credit risk mitigant, adjusted for currency mismatch (and maturity mismatch and lack of restructuring event, if applicable);

(ii) Pr = effective notional amount of the credit risk mitigant (adjusted for maturity mismatch and lack of restructuring event, if applicable); and

(iii) H_{FX} = haircut appropriate for the currency mismatch between the credit risk mitigant and the hedged exposure, as determined under paragraphs (f)(2) through (3) of this section.

(2) Subject to paragraph (f)(3) of this section, a [BANKING ORGANIZATION] must set H_{FX} equal to eight percent.

(3) A [BANKING ORGANIZATION] must increase H_{FX} as determined under paragraph (f)(2) of this section if the [BANKING ORGANIZATION] revalues the guarantee or credit derivative less frequently than once every 10 business days using the following formula:

$H_{FX} = 8\% \times \sqrt{\frac{T_M}{10}}$, where T_M equals the greater of 10 or the number of business days between revaluations.

§ __.121 Collateralized transactions and prepaid credit protection arrangements.

(a) *Financial Collateral*. To recognize the risk-mitigating effects of financial collateral, a [BANKING ORGANIZATION] may use the simple approach in paragraph (b) of this section for any exposure for which the [BANKING ORGANIZATION] does not use §§ __.113 through __.115 to calculate the exposure amount for counterparty credit risk. A [BANKING

ORGANIZATION] must use the same approach to recognize the risk-mitigating effects of financial collateral for similar exposures or transactions.

(b) *The simple approach*—(1) *General requirements.* To qualify for the simple approach under this paragraph (b), the financial collateral must meet the following requirements:

(i) The collateral must be revalued at least every six months;

(ii) The legal mechanism by which financial collateral is pledged or transferred must be enforceable in the relevant jurisdictions and ensure that the [BANKING ORGANIZATION] has the contractual right, as applicable to the characteristics of the financial collateral and exposure, to liquidate or take legal possession of the financial collateral, setoff amounts owed to the obligor against amounts owed to the [BANKING ORGANIZATION] and close out any transaction giving rise to the secured exposure, in a timely manner, in the event of the default, insolvency or bankruptcy (or one or more otherwise-defined credit events set out in the transaction documentation) of the obligor;

(iii) If the financial collateral has been pledged or transferred by a party other than the obligor of the secured exposure, the bankruptcy or insolvency of the pledgor or transferor must not terminate or impair the enforceability of the legal mechanism that establishes the [BANKING ORGANIZATION]'s rights in respect of the financial collateral; and

(iv) The [BANKING ORGANIZATION] must be able to reasonably demonstrate the ability to protect and enforce its rights in respect of any financial collateral.

(2) *Risk weight substitution.* (i) A [BANKING ORGANIZATION] may apply a risk weight to the portion of an exposure that is secured by financial collateral that meets the requirements of paragraph (b) of this section, up to the protection amount of the financial collateral as adjusted by paragraph (d) of this section, based on the risk weight assigned to the

collateral under this subpart. For repurchase agreements, reverse repurchase agreements, and securities lending and borrowing transactions, the collateral is the instruments, gold, and cash the [BANKING ORGANIZATION] has borrowed, purchased subject to resale, or taken as collateral from the counterparty under the transaction. Except as provided in paragraph (b)(3) of this section, the risk weight assigned to the portion of the exposure secured by financial collateral may not be less than 20 percent.

(ii) A [BANKING ORGANIZATION] must apply a risk weight to the amount of an exposure in excess of the protection amount of financial collateral securing the exposure based on the risk weight applicable to the exposure under this subpart.

(3) *Exceptions to the 20 percent risk weight floor and other requirements.* Notwithstanding paragraph (b)(2)(i) of this section, a [BANKING ORGANIZATION] may assign a zero percent risk weight up to the protection amount of the financial collateral where:

(i) The financial collateral is cash on deposit; or

(ii) The financial collateral is an exposure to a sovereign that qualifies for a zero percent risk weight under § __.111, and the [BANKING ORGANIZATION] has discounted the fair value of the collateral by 20 percent.

(c) *Eligible prepaid credit protection arrangements.* (1) *Scope*. A [BANKING ORGANIZATION] may recognize the credit risk mitigation benefits of an eligible prepaid credit protection arrangement as provided under this paragraph.

(2) *Application*. This paragraph applies to exposures, including securitization exposures, for which:

(i) Credit risk is fully covered by an eligible prepaid credit protection arrangement; or

(ii) Credit risk is covered on a pro rata basis (that is, on a basis in which the [BANKING ORGANIZATION] and the protection provider share losses proportionately) by an eligible prepaid credit protection arrangement.

(3) *Tranching of credit risk.* Exposures on which there is a tranching of credit risk (reflecting at least two different levels of seniority) generally are securitization exposures subject to § __.130 through __.134.

(4) *Multiple eligible prepaid credit protection arrangements.* If multiple eligible prepaid credit protection arrangements cover a single exposure, a [BANKING ORGANIZATION] may treat the hedged exposure as multiple separate exposures each covered by a single eligible credit protection arrangement and may calculate a separate risk-weighted asset amount for each separate exposure as described in paragraph (c)(6) of this section.

(5) *Single eligible credit protection arrangements.* If a single eligible credit protection arrangement covers multiple hedged exposures, a [BANKING ORGANIZATION] must treat each hedged exposure as covered by a separate eligible credit protection arrangement and must calculate a separate risk-weighted asset amount for each exposure as described in paragraph (c)(6) of this section.

(6) *Prepaid credit protection arrangements—The substitution approach*. (i) *Full coverage*. If an eligible prepaid credit protection arrangement meets the conditions in paragraphs (c)(1) through (5) of this section and the protection amount (P) of the prepaid credit protection arrangement is greater than or equal to the exposure amount of the reference exposure, a [BANKING ORGANIZATION] may assign a zero percent risk weight to the reference exposure.

(ii) *Partial coverage*. If an eligible prepaid credit protection arrangement meets the conditions in paragraphs (c)(1) through (5) of this section and the protection amount (P) of the prepaid credit protection arrangement is less than the exposure amount of the reference exposure, the [BANKING ORGANIZATION] must treat the reference exposure as two separate exposures (protected and unprotected) in order to recognize the credit risk mitigation benefit of the prepaid credit protection arrangement.

(A) The [BANKING ORGANIZATION] may apply a risk-weight of zero percent for the protected exposure.

(B) The [BANKING ORGANIZATION] must calculate the risk-weighted asset amount for the unprotected exposure under this subpart E, where the applicable risk weight is that of the unprotected portion of the reference exposure.

(C) The treatment provided in this section is applicable when the credit risk of a reference exposure is covered on a partial pro rata basis and may be applicable when an adjustment is made to the effective notional amount of the prepaid credit protection arrangement under paragraph (d) of this section.

(d) *Required adjustments*—(1) *Maturity mismatch adjustment.* (i) A [BANKING ORGANIZATION] that recognizes the credit risk mitigation benefits of financial collateral under paragraph (b) of this section or of an eligible prepaid credit protection arrangement under paragraph (c) of this section must adjust the amount of credit risk mitigation recognized to reflect any maturity mismatch.

(ii) A maturity mismatch occurs when:

(A) The residual maturity of the legal mechanism by which financial collateral is pledged is less than that of the secured exposure(s); or

(B) The residual maturity of an eligible prepaid credit protection arrangement is less than that of the reference exposure.

(iii) The residual maturity of a secured exposure under paragraph (b) of this section or a reference exposure under paragraph (c) of this section is the longest possible remaining time before the obligated party of the secured exposure or reference exposure is scheduled to fulfil its obligation on the exposure. For purposes of this paragraph (d)(1)(iii):

(A) For an eligible prepaid credit protection arrangement, if the terms of the arrangement include embedded options that may reduce its term, the [BANKING ORGANIZATION] (protection purchaser) must adjust the residual maturity. If a call is at the discretion of the protection provider, the residual maturity is at the first call date. If the call is at the discretion of the [BANKING ORGANIZATION] (protection purchaser), but the terms of the arrangement at origination contain a positive incentive for the [BANKING ORGANIZATION] to cancel the arrangement before contractual maturity, the remaining time to the first call date is the residual maturity.

(B) For financial collateral that is not cash on deposit at the [BANKING ORGANIZATION], but including cash held for the [BANKING ORGANIZATION] by a third-party custodian or trustee, the residual maturity of any amount of such financial collateral is the earliest date on which the [BANKING ORGANIZATION]'s rights in respect of such amount of financial collateral may be terminated without the pledgor being subject to a contemporaneous requirement to pledge additional financial collateral. For financial collateral that is cash on deposit at the [BANKING ORGANIZATION], the residual maturity of any amount of such cash

collateral is the earliest date on which a depositor may withdraw such amount, notwithstanding any notice requirements or early withdrawal fees or penalties.

(iv) The credit risk mitigation benefits of financial collateral or an eligible prepaid credit protection arrangement with a maturity mismatch may be recognized only if the original maturity of the legal mechanism by which financial collateral is pledged or the eligible prepaid credit protection arrangement is greater than or equal to one year and its residual maturity is greater than three months.

(v) When a maturity mismatch exists, the [BANKING ORGANIZATION] must apply the following adjustment to reduce the protection amount:

$Pm = E \times (t-0.25)/(T-0.25)$, where:

(A) Pm = fair value of the financial collateral or effective notional amount of the eligible prepaid credit protection arrangement, adjusted for maturity mismatch;

(B) E = fair value of the financial collateral or effective notional amount of the eligible prepaid credit protection arrangement;

(C) t = the lesser of T or the residual maturity of the arrangement, expressed in years; and

(D) T = the lesser of five or the residual maturity of the secured exposure or reference exposure, expressed in years.

(2) *Currency mismatch adjustment.* (i) If a [BANKING ORGANIZATION] recognizes the credit risk mitigation benefits of financial collateral under paragraph (b) of this section or of an eligible prepaid credit protection arrangement under paragraph (c) of this section that is denominated in a currency different from that in which the secured or reference exposure is denominated, the [BANKING ORGANIZATION] must apply the following formula to the fair

value of the financial collateral or the effective notional amount of the eligible prepaid credit protection arrangement:

$Pc = Pr \times (1 - H_{FX})$, where:

(A) Pc = fair value of the financial collateral or the effective notional amount of the eligible prepaid credit protection arrangement, adjusted for currency mismatch (and maturity mismatch, if applicable);

(B) Pr = fair value of the financial collateral or the effective notional amount of the eligible prepaid credit protection arrangement (adjusted for maturity mismatch, if applicable); and

(C) H_{FX} = haircut appropriate for the currency mismatch between the financial collateral and the secured exposure or the eligible prepaid credit protection arrangement and the reference exposure, as determined under paragraphs (d)(2)(ii) through (iii) of this section.

(ii) Subject to paragraph (d)(2)(iii) of this section, a [BANKING ORGANIZATION] must set H_{FX} equal to eight percent.

(iii) A [BANKING ORGANIZATION] must increase H_{FX} as determined under paragraph (d)(2)(ii) of this section if the [BANKING ORGANIZATION] revalues the financial collateral or eligible prepaid credit protection arrangement less frequently than once every 10 business days using the following formula:

$H_{FX} = 8\% \times \sqrt{\frac{T_M}{10}}$, where T_M equals the greater of 10 or the number of business days between revaluations.

Risk-Weighted Assets for Securitization Exposures

§ __.130 Operational criteria for recognizing the transfer of risk.

(a) *Operational criteria for traditional securitizations*. A [BANKING ORGANIZATION] that transfers exposures it has originated or purchased to a third party in connection with a traditional securitization may exclude the exposures from the calculation of its risk-weighted assets only if each condition in this section is satisfied. A [BANKING ORGANIZATION] that meets these conditions must hold risk-based capital against any credit risk it retains in connection with the securitization. A [BANKING ORGANIZATION] that fails to meet these conditions must hold risk-based capital against the transferred exposures as if they had not been securitized and must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the transaction and any portion of a CEIO strip that does not constitute after-tax gain-on-sale. If the transferred exposures are in connection with a resecuritization and all of the conditions in this paragraph (a) are satisfied, the [BANKING ORGANIZATION] must exclude the exposures from the calculation of its risk-weighted assets and must hold risk-based capital against any credit risk it retains in connection with the resecuritization. The conditions are:

(1) The exposures are not reported on the [BANKING ORGANIZATION]'s consolidated balance sheet under GAAP;

(2) The [BANKING ORGANIZATION] has transferred to one or more third parties credit risk associated with the underlying exposures;

(3) Any clean-up calls relating to the securitization are eligible clean-up calls; and

(4) The securitization does not:

(i) Include one or more underlying exposures in which the borrower is permitted to vary the drawn amount within an agreed limit under a line of credit; and

(ii) Contain an early amortization provision.

(b) *Operational criteria for synthetic securitizations*. For synthetic securitizations, a [BANKING ORGANIZATION] may recognize for risk-based capital purposes the use of a credit risk mitigant to hedge underlying exposures only if each condition in this paragraph (b) is satisfied. A [BANKING ORGANIZATION] that meets these conditions must hold risk-based capital against any credit risk of the exposures it retains in connection with the synthetic securitization. A [BANKING ORGANIZATION] that fails to meet these conditions or chooses not to recognize the credit risk mitigant for purposes of this section must instead hold risk-based capital against the underlying exposures as if they had not been synthetically securitized. If the synthetic securitization is a resecuritization and all of the conditions in this paragraph (b) are satisfied, the [BANKING ORGANIZATION] must exclude the underlying securitization exposures from the calculation of its risk-weighted assets and must hold risk-based capital against any credit risk it retains in connection with the resecuritization. The conditions are:

(1) The credit risk mitigant is:

(i) Financial collateral;

(ii) A guarantee that meets all criteria as set forth in the definition of *eligible guarantee* in § __.2, except for the criteria in paragraph (3) of that definition;

(iii) A credit derivative that is not an nth-to-default credit derivative and that meets all criteria as set forth in the definition of *eligible credit derivative* in § __.2, except for the criteria in paragraph (3) of the definition of *eligible guarantee* in § __.2; or

(iv) A prepaid credit protection arrangement that meets all criteria as set forth in the definition of *eligible prepaid credit protection arrangement* in § __.2, except for the criteria in paragraph (3) of that definition.

(2) The [BANKING ORGANIZATION] transfers credit risk associated with the underlying exposures to one or more third parties, and the terms and conditions in the credit risk mitigants employed do not include provisions that:

(i) Allow for the termination of the credit protection due to deterioration in the credit quality of the underlying exposures;

(ii) Require the [BANKING ORGANIZATION] to alter or replace the underlying exposures to improve the credit quality of the underlying exposures;

(iii) Increase the [BANKING ORGANIZATION]'s cost of credit protection in response to deterioration in the credit quality of the underlying exposures;

(iv) Increase the yield payable to parties other than the [BANKING ORGANIZATION] in response to a deterioration in the credit quality of the underlying exposures; or

(v) Provide for increases in a retained first loss position or credit enhancement provided by the [BANKING ORGANIZATION] after the inception of the securitization;

(3) The [BANKING ORGANIZATION] obtains a well-reasoned opinion from legal counsel that confirms the enforceability of the credit risk mitigant in all relevant jurisdictions;

(4) Any clean-up calls relating to the securitization are eligible clean-up calls;

(5) No synthetic excess spread is permitted within the synthetic securitization;

(6) Any applicable minimum payment threshold for the credit risk mitigant is consistent with standard market practice; and

(7) The securitization does not:

(i) Include one or more underlying exposures in which the borrower is permitted to vary the drawn amount within an agreed limit under a line of credit; and

(ii) Contain an early amortization provision.

(c) *Due diligence requirements for securitization exposures.* (1) Except for exposures that are deducted from common equity tier 1 capital and exposures subject to § __.132(h), if a [BANKING ORGANIZATION] is unable to demonstrate to the satisfaction of the [AGENCY] a comprehensive understanding of the features of a securitization exposure that would materially affect the performance of the exposure, the [BANKING ORGANIZATION] must assign the securitization exposure a risk weight of 1,250 percent. The [BANKING ORGANIZATION]'s analysis must be commensurate with the complexity of the securitization exposure and the materiality of the exposure in relation to its capital.

(2) A [BANKING ORGANIZATION] must demonstrate its comprehensive understanding of a securitization exposure under paragraph (c)(1) of this section, for each securitization exposure by:

(i) Conducting an analysis of the risk characteristics of a securitization exposure prior to acquiring the exposure and documenting such analysis within 3 business days after acquiring the exposure, considering:

(A) Structural features of the securitization that would materially impact the performance of the exposure, for example, the contractual cash flow waterfall, waterfall-related triggers, credit enhancements, liquidity enhancements, fair value triggers, the performance of organizations that service the exposure, and deal-specific definitions of default;

(B) Relevant information regarding—

(*1*) The performance the underlying credit exposure(s), for example, the percentage of loans 30, 60, and 90 days past due; default rates; prepayment rates; loans in foreclosure; property types; occupancy; average credit score or other measures of creditworthiness; average LTV ratio; and industry and geographic diversification data on the underlying exposure(s); and

(*2*) For resecuritization exposures, in addition to the information described in paragraph (c)(2)(i)(B)(1) of this section, performance information on the underlying securitization exposures, which may include the issuer name and credit quality, and the characteristics and performance of the exposures underlying the securitization exposures; and

(C) Relevant market data of the securitization, for example, bid-ask spread, most recent sales price and historic price volatility, trading volume, implied market rating, and size, depth and concentration level of the market for the securitization; and

(ii) On an on-going basis (no less frequently than quarterly), evaluating, reviewing, and updating as appropriate the analysis required under paragraph (c)(1) of this section for each securitization exposure.

§ __.131 Exposure amount of a securitization exposure.

(a) *On-balance sheet securitization exposure.* The exposure amount of an on-balance sheet securitization exposure (excluding a repo-style transaction, eligible margin loan, OTC derivative contract that is not a credit derivative, or cleared transaction that is not a credit derivative) is equal to the [BANKING ORGANIZATION]'s carrying value of the exposure. For a credit derivative, a [BANKING ORGANIZATION] must apply § __.132(i) or (j), as applicable.

(b) *Off-balance sheet securitization exposure*. Except as provided in § __.132(h), the exposure amount of an off-balance sheet securitization exposure that is not a repo-style transaction, eligible margin loan, OTC derivative contract (other than a credit derivative), or cleared transaction (other than a credit derivative) is the notional amount of the exposure. For an off-balance sheet securitization exposure to an ABCP program, such as an eligible ABCP liquidity facility, the notional amount may be reduced to the maximum potential amount that the [BANKING ORGANIZATION] could be required to fund given the ABCP program's current underlying assets (calculated without regard to the current credit quality of those assets).

(c) *Repo-style transaction, eligible margin loan, OTC derivative contract that is not a credit derivative, or cleared transaction that is not a credit derivative*. The exposure amount of a securitization exposure that is a repo-style transaction, eligible margin loan, or OTC derivative contract (other than a credit derivative) is the exposure amount as calculated in accordance with §§ __.113 through __.115 or § __.112, as applicable, and the exposure amount of a securitization exposure that is a cleared transaction that is not a credit derivative is the exposure amount as calculated in § __.116.

§ __.132 Risk-weighted assets for securitization exposures.

(a) *General approach*. Except as provided elsewhere in this section and in § __.130:

(1) A [BANKING ORGANIZATION] may, subject to the limitation under paragraph (e) of this section, apply the securitization standardized approach (SEC-SA) in § __.133 to the exposure if the exposure meets the following requirements:

(i) The [BANKING ORGANIZATION] has accurate information on A, D, W, and K_G (as defined in § __.133) for the exposure. Data used to assign the parameters described in this

paragraph (a)(1)(i) must be the most currently available data. If the contracts governing the underlying exposures of the securitization require payments on a monthly or quarterly basis, the data used to assign the parameters described in this paragraph (a)(1)(i) must be no more than 91 calendar days old.

(ii) The [BANKING ORGANIZATION] has accurate information regarding whether the exposure is a resecuritization exposure.

(2) If the securitization exposure is an interest rate derivative contract, an exchange rate derivative contract, or a cash collateral account related to an interest rate or exchange rate derivative contract, the [BANKING ORGANIZATION] must assign a risk weight to the exposure equal to the risk weight of a securitization exposure that is *pari passu* to the interest rate derivative contract or exchange rate derivative contract or, if such an exposure does not exist, the risk weight of any subordinate securitization exposure.

(3) If the [BANKING ORGANIZATION] cannot apply, or chooses not to apply, the securitization standardized approach in § __.133, the [BANKING ORGANIZATION] must apply a 1,250 percent risk weight to the exposure.

(b) *Total risk-weighted assets for securitization exposures*. A [BANKING ORGANIZATION]'s total risk-weighted assets for securitization exposures equals the sum of the risk-weighted asset amount for securitization exposures that the [BANKING ORGANIZATION] risk weights under §§ __.132 through __.134, as applicable.

(c) *After-tax gain-on-sale resulting from a securitization*. Notwithstanding any other provision of this subpart, a [BANKING ORGANIZATION] must deduct from common equity

tier 1 capital any after-tax gain-on-sale resulting from a securitization as well as the portion of a CEIO that does not constitute an after-tax gain-on sale.

(d) *Overlapping exposures*. (1) If a [BANKING ORGANIZATION] has multiple securitization exposures that provide duplicative coverage of the underlying exposures of a securitization (such as when a [BANKING ORGANIZATION] provides a program-wide credit enhancement and multiple pool-specific liquidity facilities to an ABCP program), the [BANKING ORGANIZATION] is not required to hold duplicative risk-based capital against the overlapping position. Instead, the [BANKING ORGANIZATION] may apply to the overlapping position the applicable risk-based capital treatment that results in the highest risk-based capital requirement.

(2) If a [BANKING ORGANIZATION] has two or more securitization exposures that partially overlap with each other, the [BANKING ORGANIZATION] may treat the exposures as overlapping and apply the treatment under paragraph (d)(1). For purposes of such a treatment under this paragraph (d)(2), the [BANKING ORGANIZATION] must include in expanded total risk-weighted assets the risk-weighted asset amount for a hypothetical securitization exposure that would fully overlap with all of the partially overlapping exposures.

(3) If a [BANKING ORGANIZATION] has a securitization exposure under this subpart that is an overlapping exposure with a securitization exposure that is a market risk covered position under subpart F of this part, the [BANKING ORGANIZATION] may assign to the overlapping securitization exposure the applicable risk-based capital treatment under either this subpart or subpart F, whichever results in the highest risk-based capital requirement.

(e) *Implicit support*. If a [BANKING ORGANIZATION] provides support to a securitization in excess of the [BANKING ORGANIZATION]'s contractual obligation to provide credit support to the securitization:

(1) The [BANKING ORGANIZATION] must calculate a risk-weighted asset amount for underlying exposures associated with the securitization as if the exposures had not been securitized and must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the securitization and any portion of a CEIO strip that does not constitute after-tax gain-on-sale; and

(2) The [BANKING ORGANIZATION] must disclose publicly:

(i) That it has provided implicit support to the securitization; and

(ii) The risk-based capital impact to the [BANKING ORGANIZATION] of providing such implicit support.

(f) *Undrawn portion of a servicer cash advance facility*. (1) Notwithstanding any other provision of this subpart, a [BANKING ORGANIZATION] that is a servicer under an eligible servicer cash advance facility is not required to hold risk-based capital against potential future cash advance payments that it may be required to provide under the contract governing the facility.

(2) For a [BANKING ORGANIZATION] that acts as a servicer, the exposure amount for a servicer cash advance facility that is not an eligible servicer cash advance facility is equal to the amount of all potential future cash advance payments that the [BANKING ORGANIZATION] may be contractually required to provide during the subsequent 12-month period under the contract governing the facility.

(g) *Interest-only mortgage-backed securities*. Notwithstanding any other provision of this subpart, the risk weight for a non-credit-enhancing interest-only mortgage-backed security may not be less than 100 percent.

(h) *Small-business loans and leases on personal property transferred with retained contractual exposure.* (1) Regardless of any other provision of this subpart, a [BANKING ORGANIZATION] that has transferred small-business loans and leases on personal property (small-business obligations) with recourse must include in risk-weighted assets only its contractual exposure to the small-business obligations if all the following conditions are met:

(i) The transaction must be treated as a sale under GAAP;

(ii) The [BANKING ORGANIZATION] establishes and maintains, pursuant to GAAP, a non-capital reserve sufficient to meet the [BANKING ORGANIZATION]'s reasonably estimated liability under the contractual obligation;

(iii) The small-business obligations are to businesses that meet the criteria for a small-business concern established by the Small Business Administration under section 3(a) of the Small Business Act (15 U.S.C. 632 et seq.); and

(iv) The [BANKING ORGANIZATION] is well capitalized for purposes of the Prompt Corrective Action framework (12 U.S.C. 1831o). For purposes of determining whether a [BANKING ORGANIZATION] is well capitalized for purposes of this paragraph (h), the [BANKING ORGANIZATION]'s capital ratios must be calculated without regard to the capital treatment for transfers of small-business obligations with recourse specified in paragraph (h)(1) of this section.

(2) The total outstanding amount of contractual exposure retained by a [BANKING ORGANIZATION] on transfers of small-business obligations receiving the capital treatment specified in paragraph (h)(1) of this section cannot exceed 15 percent of the [BANKING ORGANIZATION]'s total capital.

(3) If a [BANKING ORGANIZATION] ceases to be well capitalized, or exceeds the 15 percent capital limitation provided in paragraph (h)(2) of this section, the capital treatment specified in paragraph (h)(1) of this section will continue to apply to any transfers of small-business obligations with retained contractual exposure that occurred during the time that the [BANKING ORGANIZATION] was well capitalized and did not exceed the capital limit.

(4) The risk-based capital ratios of the [BANKING ORGANIZATION] must be calculated without regard to the capital treatment for transfers of small-business obligations specified in paragraph (h)(1) of this section for purposes of:

(i) Determining whether a [BANKING ORGANIZATION] is adequately capitalized, undercapitalized, significantly undercapitalized, or critically undercapitalized under the [AGENCY]'s prompt corrective action regulations; and

(ii) Reclassifying a well-capitalized [BANKING ORGANIZATION] to adequately capitalized and requiring an adequately capitalized [BANKING ORGANIZATION] to comply with certain mandatory or discretionary supervisory actions as if the [BANKING ORGANIZATION] were in the next lower prompt-corrective-action category.

(i) *N^{th}-to-default credit derivatives*—(1) *Protection provider*. A [BANKING ORGANIZATION] providing protection through a first-to-default or second-or-later-to-default derivative is subject to capital requirements on such instruments under this paragraph (i)(1).

(i) *First-to-default*. For first-to-default derivatives, a [BANKING ORGANIZATION] must aggregate by simple summation the risk weights of the assets covered up to a maximum of 1,250 percent and multiply by the nominal amount of the protection provided by the credit derivative to obtain the risk-weighted asset amount.

(ii) *Nth-to-default*. For second-or-later-to-default derivatives, in aggregating the risk weights, a [BANKING ORGANIZATION] may exclude the asset with the lowest risk-weighted amount from the risk-weighted capital calculation. This risk-based capital treatment applies for nth-to-default derivatives for which the n-1 assets with the lowest risk-weighted amounts can be excluded from the risk-weighted capital calculation.

(2) *Protection purchaser*. A [BANKING ORGANIZATION] is not permitted to recognize purchased protection in the form of an nth-to-default credit derivative as a credit risk mitigant. A [BANKING ORGANIZATION] must calculate the counterparty credit risk of a purchased nth-to-default credit derivative under §§ __.113 through __.114.

(j) *Guarantees, credit derivatives other than nth-to-default credit derivatives, and prepaid credit protection arrangements*—(1) *Protection provider.* For a guarantee, credit derivative (other than an nth-to-default credit derivative), or prepaid credit protection arrangement provided by a [BANKING ORGANIZATION] that covers the full amount or a pro rata share of a securitization exposure's principal and interest, the [BANKING ORGANIZATION] must risk-weight the guarantee, credit derivative, or prepaid credit protection arrangement under paragraph (a) of this section as if it held the portion of the securitization exposure covered by the guarantee, credit derivative, or prepaid credit protection arrangement.

(2) *Protection purchaser*. (i) A [BANKING ORGANIZATION] that purchases a credit derivative (other than an n^{th}-to-default credit derivative) that is recognized under § __.134 as a credit risk mitigant (including via recognized collateral) is not required to compute a separate counterparty credit risk capital requirement under §§ __.113 through __.114.

(ii) If a [BANKING ORGANIZATION] cannot, or chooses not to, recognize protection purchased in the form of a credit derivative as a credit risk mitigant under § __.134, the [BANKING ORGANIZATION] must determine the exposure amount of the credit derivative under § __.114.

(A) If the [BANKING ORGANIZATION] purchases credit protection from a counterparty the activities of which are limited to those appropriate for the specific purpose of holding the underlying exposures of a securitization, the [BANKING ORGANIZATION] must determine the risk weight for the exposure according to § __.111.

(B) If the [BANKING ORGANIZATION] purchases credit protection from a counterparty the activities of which are limited to those appropriate for the specific purpose of holding the underlying exposures of a securitization, the [BANKING ORGANIZATION] must determine the risk weight for the exposure according to this section.

(k) *Look-through approach.* (1) Subject to paragraph (k)(2) of this section, a [BANKING ORGANIZATION] may assign a risk weight to a senior securitization exposure that is not a resecuritization exposure equal to the greater of:

(i) The weighted-average risk weight, calculated without reference to, or use of, the risk weight under § __.141(b)(3)(iii), of all the underlying exposures where the weight for each

exposure in the weighted-average calculation is determined by the unpaid principal amount of the exposure; and

(ii) 15 percent.

(2) A [BANKING ORGANIZATION] may assign a risk weight under this paragraph (k) only if the [BANKING ORGANIZATION] has knowledge of the composition of all of the underlying exposures.

(l) *NPL securitization.* Notwithstanding any other provision of this subpart except for paragraph (e) of this section:

(1) If the nonrefundable purchase price discount for the NPL securitization is greater than or equal to 50 percent of the outstanding balance of the pool of exposures at inception of the transaction, the risk weight for a senior securitization exposure to an NPL securitization is 100 percent.

(2) If the [BANKING ORGANIZATION] is an originating [BANKING ORGANIZATION] with respect to the NPL securitization, the [BANKING ORGANIZATION] may hold risk-based capital against the transferred exposures as if they had not been securitized and must deduct from common equity tier 1 capital any after-tax gain-on-sale resulting from the transaction and any portion of a CEIO that does not constitute an after-tax gain-on-sale.

§ __.133 Securitization standardized approach (SEC-SA).

(a) *In general*. The risk weight RW_{SEC-SA} assigned to a securitization exposure, or portion of a securitization exposure, is calculated according to the following formula:

$$RW_{SEC-SA} = \begin{cases} max(RW_{FLOOR}, 1{,}250\% \cdot K_{SEC-SA}), & K_A \leq A \\ max\left(RW_{FLOOR}, \left(\frac{K_A - A}{D - A}\right) \cdot 1{,}250\% + \left(\frac{D - K_A}{D - A}\right) \cdot 1{,}250\% \cdot K_{SEC-SA}\right), & A < K_A < D \\ 1{,}250\%, & D \leq K_A \end{cases}$$

Where:

(1) K_A is calculated under paragraph (b) of this section;

(2) A (attachment point) equals the greater of zero and the ratio, expressed as a decimal value between zero and one, of the current dollar amount of underlying exposures that are subordinated to the exposure of the [BANKING ORGANIZATION] to the current dollar amount of the underlying exposures, as adjusted in accordance with paragraph (a)(6) of this section;

(3) D (detachment point) equals the greater of zero and the sum of parameter A and the ratio, expressed as a decimal value between zero and one, of the current dollar amount of the securitization exposures that are pari passu with the exposure (that is, have equal seniority with respect to credit risk) to the current dollar amount of the underlying exposures, as adjusted in accordance with paragraph (a)(6) of this section;

(4) RW_{FLOOR} equals 100 percent for resecuritization exposures and NPL securitization exposures and 15 percent for all other securitization exposures; and

(5) K_{SEC-SA} is calculated according to the following formula:

$$K_{SEC-SA} = \frac{e^{a \cdot u} - e^{a \cdot l}}{a \cdot (u - l)}$$

Where:

(i) a equals $-\frac{1}{p \cdot K_A}$ (as K_A is defined in this paragraph (a)), where p equals 1.5 for a resecuritization exposure and 0.5 for all other securitization exposures;

(ii) u equals $D - K_A$ (as D and K_A are defined in paragraph (a) of this section);

(iii) l equals $max(A - K_A, 0)$ (as A and K_A are defined in paragraph (a) of this section); and

(iv) e equals the base of the natural logarithm.

(6) A [BANKING ORGANIZATION] must include in the calculation of A and D the funded portion of any reserve account funded by the accumulated cash flows from the underlying exposures that is subordinated to the [BANKING ORGANIZATION]'s securitization exposure. Interest rate derivative contracts, exchange rate derivative contracts, and cash collateral accounts related to these contracts must not be included in the calculation of A and D. If the securitization exposure includes a nonrefundable purchase price discount, the nonrefundable purchase price discount must be included in the numerator and denominator of A and D.

(b) *Calculation of K_A.* K_A is calculated under this paragraph (b) according to the following formula:

$$K_A = (1 - W) \cdot K_G + (W \cdot 0.5)$$

Where:

(1) W equals the ratio, expressed as a decimal value between zero and one, of the sum of the dollar amounts of any underlying exposures of the securitization that are not securitization exposures and that meet any of the criteria in paragraphs (b)(1)(i) through (vii) of this section to the outstanding balance of all underlying exposures:

(i) Ninety days or more past due;

(ii) Subject to a bankruptcy or insolvency proceeding;

(iii) In the process of foreclosure;

(iv) Held as real estate owned;

(v) Has contractually deferred payments for 90 days or more, other than principal or interest payments deferred on:

(A) Federally guaranteed student loans, in accordance with the terms of those guarantee programs; or

(B) Consumer loans, including non-federally-guaranteed student loans, provided that such payments are deferred pursuant to provisions included in the contract at the time funds are disbursed that provide for period(s) of deferral that are not initiated based on changes in the creditworthiness of the borrower; or

(vi) Is in default; and

(vii) Notwithstanding paragraphs (1)(i) through (vi) of this paragraph, an exposure that is directly and unconditionally guaranteed by the U.S. Government, its central bank, or a U.S. Government agency may be excluded from the calculation of W up to the amount of the guarantee; and

(2) K_G equals the weighted average (with unpaid principal used as the weight for each credit exposure and fair value used for each equity exposure) total capital requirement, expressed as a decimal value between zero and one, of the underlying exposures calculated using this subpart E (that is, an average risk weight of 100 percent represents a value of K_G equal to 0.08),

as adjusted in accordance with this paragraph (b)(2). For purposes of K_G, the determination of the capital requirement associated with an underlying exposure that is an equity exposure cannot use the risk weight under §__.141(b)(3)(iii). For interest rate derivative contracts and exchange rate derivative contracts, the positive current exposure times the risk weight of the counterparty multiplied by 0.08 must be included in the numerator of K_G but must be excluded from the denominator of K_G.

§ __.134 Recognition of credit risk mitigants for securitization exposures.

(a) *General.* (1) An originating [BANKING ORGANIZATION] that has obtained a credit risk mitigant to hedge its exposure to a synthetic or traditional securitization that satisfies the operational criteria provided in § __.130 may recognize the credit risk mitigant under § __.120 or § __.121, but only as provided in this section.

(2) An investing [BANKING ORGANIZATION] that has obtained a credit risk mitigant to hedge a securitization exposure may recognize the credit risk mitigant under § __.120 or § __.121, but only as provided in this section.

(3) If the recognized credit risk mitigant hedges a portion of the [BANKING ORGANIZATION]'s securitization exposure, the [BANKING ORGANIZATION] must calculate its capital requirements for the hedged and unhedged portions of the exposure separately. For each unhedged portion, the [BANKING ORGANIZATION] must calculate capital requirements according to § __.131 and § __.132. For each hedged portion, the [BANKING ORGANIZATION] may recognize the credit risk mitigant under § __.120 or § __.121, but only as provided in this section.

(4) When a [BANKING ORGANIZATION] purchases or sells credit protection on a portion of a senior tranche, the lower-priority portion, whether hedged or unhedged, must be considered a non-senior securitization exposure.

(b) *Mismatches*. A [BANKING ORGANIZATION] must make any applicable adjustment to the protection amount as required in §§ __.120 or __.121 for any hedged securitization exposure. In the context of a synthetic securitization, when a credit risk mitigant described in § __.130(b)(1)(ii) through (iv) covers multiple hedged exposures that have different residual maturities, the [BANKING ORGANIZATION] must use the longest residual maturity of any of the hedged exposures as the residual maturity of all hedged exposures.

Risk-Weighted Assets for Equity Exposures

§ __.140 Introduction and exposure measurement.

(a) *General.* (1) *Calculation of risk-weighted asset amounts*. To calculate its risk-weighted asset amounts for equity exposures that are not equity exposures in investment funds, a [BANKING ORGANIZATION] must use the approach provided in § __.141. A [BANKING ORGANIZATION] must use the approaches provided in § __.142 to calculate its risk-weighted asset amounts for other equity exposures as provided in § __.142.

(2) *Separate accounts*. A [BANKING ORGANIZATION] must treat an investment in a separate account (as defined in § __.2) as if it were an equity exposure subject to § __.142.

(3) *Stable value protection*—(i) *Stable value protection* means a contract where the provider of the contract is obligated to pay:

(A) The policy owner of a separate account an amount equal to the shortfall between the fair value and cost basis of the separate account when the policy owner of the separate account surrenders the policy; or

(B) The beneficiary of the contract an amount equal to the shortfall between the fair value and book value of a specified portfolio of assets.

(ii) A [BANKING ORGANIZATION] that purchases stable value protection on its investment in a separate account must treat the portion of the carrying value of its investment in the separate account attributable to the stable value protection as an exposure to the provider of the protection and the remaining portion of the carrying value of its separate account as an equity exposure subject to § __.142.

(iii) A [BANKING ORGANIZATION] that provides stable value protection must treat the exposure as an equity derivative with an adjusted carrying value determined as the sum of paragraphs (b)(1) and (2) of this section.

(b) *Adjusted carrying value.* For purposes of §§ __.140 through __.142, the adjusted carrying value of an equity exposure is:

(1) For the on-balance sheet component of an equity exposure, the [BANKING ORGANIZATION]'s carrying value of the exposure;

(2) For the off-balance sheet component of an equity exposure that is not an equity commitment, the effective notional principal amount of the exposure, the size of which is equivalent to a hypothetical on-balance sheet position in the underlying equity instrument that would evidence the same change in fair value (measured in dollars) given a small change in the price of the underlying equity instrument, minus the adjusted carrying value of the on-balance sheet component of the exposure as calculated in paragraph (b)(1) of this section; and

(3) For a commitment to acquire an equity exposure (an equity commitment), the effective notional principal amount of the exposure is multiplied by the following conversion factors (CFs):

(i) Conditional equity commitments receive a 40 percent conversion factor.

(ii) Unconditional equity commitments receive a 100 percent conversion factor.

§__.141 Simple risk-weight approach (SRWA).

(a) *General.* A [BANKING ORGANIZATION]'s total risk-weighted assets for equity exposures equals the sum of the risk-weighted asset amounts for each of the [BANKING ORGANIZATION]'s equity exposures that are not equity exposures subject to § __.142, as determined under this section, and the risk-weighted asset amounts for each of the [BANKING ORGANIZATION]'s equity exposures subject to § __.142, as determined under § __.142.

(b) *Computation for individual equity exposures.* A [BANKING ORGANIZATION] must determine the risk-weighted asset amount for an equity exposure that is not an equity exposure subject to § __.142 by multiplying the adjusted carrying value of the exposure or the effective portion and ineffective portion of a hedge pair (as defined in paragraph (c) of this section) by the lowest applicable risk weight in this paragraph (b).

(1) *Zero percent risk weight equity exposures.* An equity exposure to a sovereign, a specified supranational entity, an MDB, and any other entity whose credit exposures receive a zero percent risk weight under § __.111 may be assigned a zero percent risk weight.

(2) *20 percent risk weight equity exposures.* An equity exposure to a PSE, Federal Home Loan Bank, or the Federal Agricultural Mortgage Corporation (Farmer Mac) must be assigned a 20 percent risk weight.

(3) *100 percent risk weight.* The equity exposures set forth in this paragraph (b)(3) must be assigned a 100 percent risk weight:

(i) An equity exposure that qualifies as a community development investment under section 24 (Eleventh) of the National Bank Act, excluding equity exposures to an unconsolidated small business investment company and equity exposures held through a consolidated small

business investment company described in section 302 of the Small Business Investment Act.

(ii) The effective portion of a hedge pair; and

(iii) Equity exposures, excluding significant investments in the capital of an unconsolidated institution in the form of common stock and exposures to an investment firm that would meet the definition of a traditional securitization were it not for the [AGENCY]'s application of paragraph (8) of that definition in § __.2 and has greater than immaterial leverage, to the extent that the aggregate adjusted carrying value of the exposures does not exceed 10 percent of the [BANKING ORGANIZATION]'s total capital.

(A) To compute the aggregate adjusted carrying value of a [BANKING ORGANIZATION]'s equity exposures for purposes of this section, the [BANKING ORGANIZATION] may exclude equity exposures described in (b)(1), (2), (3)(i), (3)(ii), and (3)(iii) of this section, the equity exposure in a hedge pair with the smaller adjusted carrying value, and a proportion of each equity exposure to an investment fund equal to the proportion of the assets of the investment fund that are not equity exposures or that meet the criterion of paragraph (b)(3)(i) of this section. If a [BANKING ORGANIZATION] does not know the actual holdings of the investment fund, the [BANKING ORGANIZATION] may calculate the proportion of the assets of the fund that are not equity exposures based on the terms of the prospectus, partnership agreement, or similar contract that defines the fund's permissible investments. If the sum of the investment limits for all exposure classes within the fund exceeds 100 percent, the [BANKING ORGANIZATION] must assume for purposes of this section that the investment fund invests to the maximum extent possible in equity exposures.

(B) When determining which of a [BANKING ORGANIZATION]'s equity exposures qualifies for a 100 percent risk weight under this section, a [BANKING ORGANIZATION] first

must include equity exposures to unconsolidated small business investment companies or held through consolidated small business investment companies described in section 302 of the Small Business Investment Act, then must include publicly traded equity exposures (including those held indirectly through investment funds), and then must include non-publicly traded equity exposures (including those held indirectly through investment funds).

(4) *250 percent risk weight.* Significant investments in the capital of unconsolidated financial institutions in the form of common stock that are not deducted from capital pursuant to § __.22(d)(2) must be assigned a 250 percent risk weight.

(5) *300 percent risk weight.* An equity exposure that is publicly traded (other than an equity exposure described in paragraph (b)(7) of this section and including the ineffective portion of a hedge pair) must be assigned a 300 percent risk weight.

(6) *400 percent risk weight*. An equity exposure that is not publicly traded and is not described in paragraph (b)(7) of this section must be assigned a 400 percent risk weight.

(7) *600 percent risk weight*. An equity exposure to an investment firm must be assigned a 600 percent risk weight, provided that the investment firm:

(i) Would meet the definition of a *traditional securitization* were it not for the application of paragraph (8) of that definition; and

(ii) Has greater than immaterial leverage.

(c) *Hedge transactions* –

(1) *Hedge pair.* A hedge pair comprises two equity exposures that form an effective hedge so long as each equity exposure is publicly traded or has a return that is primarily based on a publicly traded equity exposure.

(2) *Effective hedge*. Two equity exposures form an effective hedge if the exposures either have the same remaining maturity or each has a remaining maturity of at least three months; the hedge relationship is formally documented in a prospective manner (that is, before the [BANKING ORGANIZATION] acquires at least one of the equity exposures); the documentation specifies the measure of effectiveness (E) the [BANKING ORGANIZATION] will use for the hedge relationship throughout the life of the transaction; and the hedge relationship has an E greater than or equal to 0.8. A [BANKING ORGANIZATION] must measure E at least quarterly and must use one of three alternative measures of E as set forth in this paragraph (c)(2).

(i) Under the dollar-offset method of measuring effectiveness, the [BANKING ORGANIZATION] must determine the ratio of value change (RVC). The RVC is the ratio of the cumulative sum of the changes in value of one equity exposure to the cumulative sum of the changes in the value of the other equity exposure. If RVC is positive, the hedge is not effective and E equals 0. If RVC is negative and greater than or equal to −1 (that is, between zero and −1), then E equals the absolute value of RVC. If RVC is negative and less than −1, then E equals 2 plus RVC.

(ii) Under the variability-reduction method of measuring effectiveness:

$$E = 1 - \frac{\sum_{t=1}^{T}(X_t - X_{t-1})^2}{\sum_{t=1}^{T}(A_t - A_{t-1})^2}$$

Where:

(A) $X_t = A_t - B_t$

(B) A_t = the value at time t of one exposure in a hedge pair;

(C) B_t = the value at time t of the other exposure in a hedge pair;

(iii) Under the regression method of measuring effectiveness, E equals the coefficient of determination of a regression in which the change in value of one exposure in a hedge pair is the dependent variable and the change in value of the other exposure in a hedge pair is the independent variable. However, if the estimated regression coefficient is positive, then E equals zero.

(3) The effective portion of a hedge pair is E multiplied by the greater of the adjusted carrying values of the equity exposures forming a hedge pair.

(4) The ineffective portion of a hedge pair is (1-E) multiplied by the greater of the adjusted carrying values of the equity exposures forming a hedge pair.

§__.142 Equity exposures to investment funds.

(a) *Available approaches.*

(1) Unless the exposure meets the requirements for a community development equity exposure in § __.141(b)(3)(i), a [BANKING ORGANIZATION] must determine the risk-weighted asset amount of an equity exposure to an investment fund under the full look-through approach described in paragraph (b) of this section, the simple look-through approach described in paragraph (c), or the alterative modified look-through approach described in paragraph (d) of this section, provided, however, that the minimum risk weight that may be assigned to an equity exposure under this section is 20 percent.

(2) The risk-weighted asset amount of an equity exposure to an investment fund that meets the requirements for a community development equity exposure in § __.141(b)(3)(i) is its adjusted carrying value.

(3) If an equity exposure to an investment fund is part of a hedge pair and the [BANKING ORGANIZATION] does not use the full look-through approach, the [BANKING

ORGANIZATION] must use the ineffective portion of the hedge pair as determined under § __.141(b)(4)(i) as the adjusted carrying value for the equity exposure to the investment fund. The risk-weighted asset amount of the effective portion of the hedge pair is equal to its adjusted carrying value.

(b) *Full look-through approach.* A [BANKING ORGANIZATION] that is able to calculate a risk-weighted asset amount for its proportional ownership share of each exposure held by the investment fund (as calculated under this subpart E of this part as if the proportional ownership share of each exposure were held directly by the [BANKING ORGANIZATION]) may set the risk-weighted asset amount of the [BANKING ORGANIZATION]'s exposure to the fund equal to the product of:

(1) The aggregate risk-weighted asset amounts of the exposures held by the fund as if they were held directly by the [BANKING ORGANIZATION]; and

(2) The [BANKING ORGANIZATION]'s proportional ownership share of the fund.

(c) *Simple modified look-through approach.* Under the simple modified look-through approach, the risk-weighted asset amount for a [BANKING ORGANIZATION]'s equity exposure to an investment fund equals the adjusted carrying value of the equity exposure multiplied by the highest risk weight that applies to any exposure the fund is permitted to hold under its prospectus, partnership agreement, or similar contract that defines the fund's permissible investments (excluding derivative contracts that are used for hedging rather than speculative purposes and that do not constitute a material portion of the fund's exposures).

(d) *Alternative modified look-through approach.* Under the alternative modified look-through approach, a [BANKING ORGANIZATION] may assign the adjusted carrying value of an equity exposure to an investment fund on a pro rata basis to different risk weight categories

under this subpart based on the investment limits in the fund's prospectus, partnership agreement, or similar contract that defines the fund's permissible investments. The risk-weighted asset amount for the [BANKING ORGANIZATION]'s equity exposure to the investment fund equals the sum of each portion of the adjusted carrying value assigned to an exposure type multiplied by the applicable risk weight under this subpart. If the sum of the investment limits for all exposure types within the fund exceeds 100 percent, the [BANKING ORGANIZATION] must assume that the fund invests to the maximum extent permitted under its investment limits in the exposure type with the highest applicable risk weight under this subpart and continues to make investments in order of the exposure type with the next highest risk weight under this subpart until the maximum total investment level is reached. If more than one exposure type applies to an exposure, the [BANKING ORGANIZATION] must use the highest applicable risk weight. A [BANKING ORGANIZATION] may exclude derivative contracts held by the fund that are used for hedging rather than for speculative purposes and do not constitute a material portion of the fund's exposures.

Risk-Weighted Assets for Operational Risk

§ __.150 Operational Risk Capital

(a) *Risk-weighted assets for operational risk*. Risk-weighted assets for operational risk equals the product of the business indicator component, as calculated pursuant to paragraph (b) of this section, multiplied by 12.5.

(b) *Business indicator component*. A [BANKING ORGANIZATION]'s business indicator component is calculated as follows:

(1) If the [BANKING ORGANIZATION]'s business indicator is less than or equal to $1 billion, as adjusted pursuant to § __.4 , the business indicator component equals the product of the business indicator and 0.12.

(2) If the [BANKING ORGANIZATION]'s business indicator is greater than $1 billion, as adjusted pursuant to § __.4 , and less than or equal to $30 billion, as adjusted pursuant to § __.4, the business indicator component equals $120 million, as adjusted pursuant to § __.4, plus the product of:

(i) The business indicator less $1 billion, as adjusted pursuant to § __.4; and

(ii) 0.15.

(3) If the [BANKING ORGANIZATION]'s business indicator is greater than $30 billion, as adjusted pursuant to § __.4, the business indicator component equals $4.47 billion, as adjusted pursuant to § __.4 plus the product of:

(i) The business indicator less $30 billion, as adjusted pursuant to § __.4; and

(ii) 0.18.

(c) *Business indicator*.

(1) A [BANKING ORGANIZATION]'s business indicator equals the sum of the interest, lease, and dividend component and the noninterest component.

(i) The interest, lease, and dividend component is calculated using the following formula:

Interest, lease, and dividend component = min(Avg3y(Abs(total interest income – total interest expense)), 0.0225*Avg3y(interest earning assets)) + Avg3y(dividend income)

where Avg3y refers to the three-year average of the expression in parenthesis; Abs refers to the absolute value of the expression in parenthesis; and total interest income, total interest expense, interest earning assets, and dividend income are the amounts determined in accordance with paragraph (c)(2) of this section.

(ii) The noninterest component is calculated using the following formula:

Noninterest component = Avg3y(Abs(total noninterest income + realized gains (losses) on held-to-maturity securities + realized gains (losses) on available-for-sale debt securities – noninterest expense for BI – 0.7*(total noninterest income from investment management, investment services, and non-lending treasury services – noninterest expense for BI from investment management, investment services, and non-lending treasury services)) + total operational losses)

where Avg3y refers to the three-year average of the expression in parenthesis; Abs refers to the absolute value of the expression in parenthesis; and total noninterest income, realized gains (losses) on held-to-maturity securities, realized gains (losses) on available-for-sale debt securities, noninterest expense for BI, total noninterest income from investment management, investment services, and non-lending treasury services, noninterest expense for BI from investment management, investment services, and non-lending treasury services, and total operational losses are the amounts determined in accordance with paragraph (c)(2) of this section.

(2) For purposes of paragraph (c)(1) of this section, to calculate the three-year average of the Abs(total interest income – total interest expense), dividend income, Abs(total noninterest income + realized gains (losses) on held-to-maturity securities + realized gains (losses) on available-for-sale debt securities – noninterest expense for BI – 0.7*(total noninterest income from investment management, investment services, and non-lending treasury services – noninterest expense for BI from investment management, investment services, and non-lending treasury services)), and total operational losses, a [BANKING ORGANIZATION] must calculate the average of the values of each of these items for each of the three most recent preceding four-calendar-quarter periods. The total operational losses for a four-calendar quarter

period equals the sum of all operational losses for each quarter in that period. To calculate the three-year average of interest-earning assets, a [BANKING ORGANIZATION] must divide by 12 the sum of the quarter-end values of interest-earning assets over each of the previous 12 quarters. For purposes of the calculations in this paragraph, the amounts used must be based on the consolidated financial statements of the [BANKING ORGANIZATION].

(3) For purposes of paragraph (c)(1) of this section, a [BANKING ORGANIZATION] must exclude loss provisions and reversals of provisions, except for those relating to operational loss events, from the calculation of the business indicator.

(4) For purposes of paragraph (c)(1) of this section, a [BANKING ORGANIZATION] must reflect three full years of data for entities that were acquired by or merged with the [BANKING ORGANIZATION], including for any period prior to the acquisition or merger, in the [BANKING ORGANIZATION]'s business indicator.

(5) With the prior approval of the [AGENCY], a [BANKING ORGANIZATION] may exclude from the calculation of its business indicator any interest income, interest expense, dividend income, interest-earning assets, noninterest income, realized gains (losses) on held-to-maturity securities, realized gains (losses) on available-for-sale debt securities, noninterest expense for BI, noninterest income from investment management, investment services, and non-lending treasury services, noninterest expense for BI from investment management, investment services, and non-lending treasury services, and operational losses associated with an activity if the [BANKING ORGANIZATION] has ceased to directly or indirectly conduct the activity. Approval by the [AGENCY] requires a demonstration that the activity does not carry legacy legal exposure.

(d) *Operational risk management and operational loss event data collection processes*.

(1) A [BANKING ORGANIZATION] must:

(i) Have an operational risk management function that:

(A) Is independent of business line management; and

(B) Is responsible for designing, implementing, and overseeing the [BANKING ORGANIZATION]'s internal loss event data collection processes as specified in paragraph (d)(2) of this section and for overseeing the processes that implement paragraph (d)(1)(ii);

(ii) Report operational loss events and other relevant operational risk information to business unit management, senior management, and the board of directors (or a designated committee of the board).

(2) A [BANKING ORGANIZATION] must have operational loss event data collection processes that meet the following requirements:

(i) The processes must produce operational loss event data that satisfies the following criteria:

(A) Operational loss event data must be comprehensive and capture all operational loss events that resulted in operational losses equal to or higher than $20,000, as adjusted pursuant to § __.4, (before any recoveries are taken into account) from all activities and exposures of the [BANKING ORGANIZATION];

(B) Operational loss event data must include operational loss event data relative to entities that have been acquired by or merged with the [BANKING ORGANIZATION] for ten full years, including for any period prior to the acquisition or merger during the ten-year period; and

(C) Operational loss event data must include gross operational loss amounts, recovery amounts, the date when the event occurred or began (occurrence date), the date when the

[BANKING ORGANIZATION] became aware of the event (discovery date), and the date (or dates) when losses or recoveries related to the event were recognized in the [BANKING ORGANIZATION]'s profit and loss accounts (accounting date). The [BANKING ORGANIZATION] must be able to map its operational loss event data into the seven operational loss event type categories. In addition, the [BANKING ORGANIZATION] must collect descriptive information about the drivers of operational loss events.

(ii) Procedures for the identification and collection of internal loss event data must be documented.

(iii) The [BANKING ORGANIZATION] must have processes to independently review the comprehensiveness and accuracy of operational loss event data.

(iv) The [BANKING ORGANIZATION] must subject the procedures in paragraph (d)(2)(ii) of this section and the processes in (d)(2)(iii) of this section to regular independent reviews by internal or external audit functions.

Disclosures

§ __.160 Purpose and scope.

Sections __.160 through __.162 establish public disclosure requirements related to the capital requirements for a [BANKING ORGANIZATION] that calculates expanded total risk-weighted assets pursuant to this subpart E, unless the [BANKING ORGANIZATION] is a consolidated subsidiary of a bank holding company, savings and loan holding company, or depository institution that is subject to these disclosure requirements, or a subsidiary of a non-U.S. banking organization that is subject to comparable public disclosure requirements in its home jurisdiction.

§ __.161 Disclosure requirements.

(a) A [BANKING ORGANIZATION] described in § __.160 must provide timely public disclosures each calendar quarter of the information in the applicable tables in § __.162, except as provided in paragraph (d) of this section. If a significant change occurs to the information required to be reported in the applicable tables in § __.162 or to the [BANKING ORGANIZATION]'s financial condition as reported on the Call Report, for a bank; FR Y-9C, for a bank holding company or savings and loan holding company; or FFIEC 101, as applicable, then a brief discussion of this change and its likely impact must be disclosed as soon as practicable thereafter. Qualitative disclosures that typically do not change each quarter (for example, a general summary of the [BANKING ORGANIZATION]'s risk management objectives and policies, reporting system, and definitions) may be disclosed annually after the end of the fourth calendar quarter, provided that any significant changes are disclosed in the interim. The [BANKING ORGANIZATION]'s management may provide all of the disclosures required by § __.162 in one place on the [BANKING ORGANIZATION]'s public website or may provide the disclosures in more than one public financial report or other regulatory report. If the [BANKING ORGANIZATION] does not provide all of the disclosures as required by § __.162 in one place on the [BANKING ORGANIZATION]'s public website, the [BANKING ORGANIZATION] must provide a summary table specifically indicating the location(s) of all such disclosures on the [BANKING ORGANIZATION]'s public website.

(b) A [BANKING ORGANIZATION] described in § __.160 must have a formal disclosure policy approved by the board of directors that addresses its approach for determining the disclosures it makes. The policy must address the associated internal controls and disclosure controls and procedures. The board of directors and senior management are responsible for establishing and maintaining an effective internal control structure over financial reporting,

including the disclosures required by this subpart, and must ensure that appropriate review of the disclosures takes place. One or more senior officers of the [BANKING ORGANIZATION] must attest that the disclosures meet the requirements of this subpart.

(c) If a [BANKING ORGANIZATION] described in § __.160 reasonably concludes that specific commercial or financial information that it would otherwise be required to disclose under this section would be exempt from disclosure by the [AGENCY] under the Freedom of Information Act (5 U.S.C. 552), then the [BANKING ORGANIZATION] is not required to disclose that specific information pursuant to this section. However, the [BANKING ORGANIZATION] must disclose more general information about the subject matter of the requirement, together with the fact that, and the reason why, the specific items of information have not been disclosed.

(d) A [BANKING ORGANIZATION] described in § __.160 is required to make the disclosures in Table 4 of § __.162 only if the [BANKING ORGANIZATION] is subject to §__.11(b).

§ __.162 Disclosures by [BANKING ORGANIZATION] described in § __.160.

(a) *General disclosures*. Except as provided in § __.161, a [BANKING ORGANIZATION] described in § __.160 must make the disclosures described in Tables 1 through 13 to § __.162. The [BANKING ORGANIZATION] must make these disclosures publicly available for each of the last twelve quarters, or such shorter period beginning in the quarter in which the [BANKING ORGANIZATION] becomes subject to subpart E of this part.

Table 1 to § __.162—Scope of Application

Qualitative Disclosures	(a)	The name of the top corporate entity in the group to which subpart E of this part applies.
	(b)	A brief description of the differences in the basis for consolidating entities[1] for accounting and regulatory purposes, with a description of those entities:

		(1) That are fully consolidated;
		(2) That are deconsolidated and deducted from total capital;
		(3) For which the total capital requirement is deducted; and
		(4) That are neither consolidated nor deducted (for example, where the investment in the entity is assigned a risk weight in accordance with this subpart).
	(c)	Any restrictions, or other major impediments, on transfer of funds or total capital within the group.
	(d)	The aggregate amount of surplus capital of insurance subsidiaries included in the total capital of the consolidated group.

[1] Entities include securities, insurance, and other financial subsidiaries; commercial subsidiaries (where permitted); and significant minority equity investments in insurance, financial, and commercial entities.

Table 2 to § __.162—Capital Structure

Qualitative Disclosures	(a)	Summary information on the terms and conditions of the main features of all regulatory capital instruments.

Table 3 to § __.162—Capital Adequacy

Qualitative disclosures	(a)	A summary discussion of the [BANKING ORGANIZATION]'s approach to assessing the adequacy of its capital to support current and future activities.

Table 4 to § __.162—Countercyclical Capital Buffer

Qualitative disclosures	(a)	The [BANKING ORGANIZATION] must publicly disclose the geographic breakdown of its private sector credit exposures used in the calculation of the countercyclical capital buffer.

(b) *Risk management-related disclosure requirements*. (1) The [BANKING ORGANIZATION] must describe its risk management objectives and policies for the organization overall, in particular:

(i) How the business model determines and interacts with the overall risk profile (for example, the key risks related to the business model and how each of these risks is reflected and described in the risk disclosures) and how this risk profile aligns with the parameters of the risk tolerance approved by the [BANKING ORGANIZATION]'s board of directors;

(ii) The risk governance structure, including: responsibilities attributed throughout the [BANKING ORGANIZATION] (for example, oversight and delegation of authority; breakdown of responsibilities by type of risk, business unit, etc.); and relationships between the structures involved in risk management processes (for example, board of directors, executive management, separate risk committee, risk management structure, compliance function, internal audit function);

(iii) Channels to communicate, define, and enforce the risk culture within the [BANKING ORGANIZATION] (for example, code of conduct; manuals containing operating limits or procedures to treat violations or breaches of risk thresholds; procedures to raise and share risk issues between business lines and risk functions);

(iv) The scope and nature of risk reporting and/or measurement systems;

(v) Description of the process of risk information reporting provided to the board and senior management, in particular the scope and main content of reporting on risk exposure;

(vi) Qualitative information on stress testing (for example, portfolios subject to stress testing, scenarios adopted and methodologies used, and use of stress testing in risk management); and

(vii) The strategies and processes to manage, hedge, and mitigate risks that arise from the [BANKING ORGANIZATION]'s business model, and the processes for monitoring the continuing effectiveness of hedges and mitigants.

(2) For each separate risk area that is the subject of Tables 5 through 13 to § __.162, the [BANKING ORGANIZATION] must describe its risk management objectives and policies, including:

(i) The strategies and processes;

(ii) The structure and organization of the relevant risk management function;

(iii) The scope and nature of risk reporting and/or measurement systems; and

(iv) Policies for hedging and/or mitigating risk and strategies and processes for monitoring the continuing effectiveness of hedges/mitigants.

Table 5 to § __.162[1]—Credit Risk: General Disclosures

Qualitative Disclosures	(a)	The general qualitative disclosure requirement with respect to credit risk (excluding counterparty credit risk disclosed in accordance with Table 6), including the:
		(1) Policy for determining past due or delinquency status;
		(2) Policy for placing loans on nonaccrual;
		(3) Policy for returning loans to accrual status;
		(4) Definition of and policy for identifying impaired loans (for financial accounting purposes);
		(5) Description of the methodology that the [BANKING ORGANIZATION] uses to estimate its adjusted allowance for credit losses, as applicable, including statistical methods used where applicable;
		(6) Policy for charging-off uncollectible amounts; and
		(7) Discussion of the [BANKING ORGANIZATION]'s credit risk management policy.
	(b)	The [BANKING ORGANIZATION] must describe its risk management objectives and policies for credit risk, focusing in particular on:
		(1) How the business model translates into the components of the [BANKING ORGANIZATION]'s credit risk profile;
		(2) Criteria and approach used for defining credit risk management policy and for setting credit risk limits;
		(3) Structure and organization of the credit risk management and control function;
		(4) Relationships between the credit risk management, risk control, compliance, and internal audit functions; and
		(5) Scope and main content of the reporting on credit risk exposure and on the credit risk management function to executive management and the board of directors.

[1]Table 5 does not cover equity exposures, which should be reported in table 9.

Table 6 to § __.162—General Disclosure for Counterparty Credit Risk-Related Exposures

Qualitative Disclosures	(a)	The general qualitative disclosure requirement with respect to OTC derivatives, eligible margin loans, and repo-style transactions, including a discussion of: (1) The methodology used to assign economic capital and credit limits for counterparty credit exposures; (2) Policies for securing collateral, valuing and managing collateral, and establishing credit reserves; (3) The primary types of collateral taken; (4) The policies with respect to wrong-way risk exposures; and (5) The impact of the amount of collateral the [BANKING ORGANIZATION] would have to provide given a deterioration in the [BANKING ORGANIZATION]'s own creditworthiness.
	(b)	The [BANKING ORGANIZATION] must provide risk management objectives and policies related to counterparty credit risk, including: (1) The method used to assign the operating limits defined in terms of internal capital for counterparty credit exposures and for CCP exposures; (2) Policies relating to guarantees and other risk mitigants and assessments concerning counterparty risk, including exposures towards CCPs; (3) Policies with respect to wrong-way risk exposures; and (4) The impact in terms of the amount of collateral that the bank would be required to provide given a credit rating downgrade.

Table 7 to § __.162—Credit Risk Mitigation[1, 2]

Qualitative Disclosures	(a)	The general qualitative disclosure requirement with respect to credit risk mitigation, including: (1) Policies and processes for, and an indication of the extent to which the [BANKING ORGANIZATION] uses, on- or off-balance sheet netting; (2) Policies and processes for collateral valuation and management; (3) A description of the main types of collateral taken by the [BANKING ORGANIZATION]; (4) Information about (market or credit) risk concentrations with respect to credit risk mitigation; and (5) A meaningful breakdown of its credit derivative, guarantee, and prepaid credit protection arrangement providers, including a breakdown by rating class or by type of counterparty (e.g., banks, other financial institutions, non-financial institutions).

[1] At a minimum, a [BANKING ORGANIZATION] must provide the disclosures in Table 7 in relation to credit risk mitigation that has been recognized for the purposes of reducing capital requirements under this subpart. Where relevant, a [BANKING ORGANIZATION] is encouraged to give further information about mitigants that have not been recognized for that purpose.

[2] Credit derivatives and eligible prepaid credit protection arrangements that are treated, for the purposes of this subpart, as synthetic securitization exposures should be excluded from the credit risk mitigation disclosures and included within those relating to securitization (Table 8 to § __.162).

Table 8 to § __.162—Securitization

Qualitative Disclosures	(a)	The general qualitative disclosure requirement with respect to a securitization (including synthetic securitizations), including a discussion of: (1) The [BANKING ORGANIZATION]'s objectives for securitizing assets, including the extent to which these activities transfer credit risk of the underlying exposures away from the [BANKING ORGANIZATION] to other entities and including the type of risks assumed and retained with resecuritization activity;[1] (2) The nature of the risks (e.g., liquidity risk) inherent in the securitized assets; (3) The roles played by the [BANKING ORGANIZATION] in the securitization process[2] and an indication of the extent of the [BANKING ORGANIZATION]'s involvement in each of them; (4) The processes in place to monitor changes in the credit and market risk of securitization exposures, including how those processes differ for resecuritization exposures; (5) The [BANKING ORGANIZATION]'s policy for mitigating the credit risk retained through securitization and resecuritization exposures; and (6) The risk-based capital approaches that the [BANKING ORGANIZATION] follows for its securitization exposures including the type of securitization exposure to which each approach applies.
	(b)	A list of: (1) The type of traditional securitizations that the [BANKING ORGANIZATION], as sponsor, uses to securitize third-party exposures. The [BANKING ORGANIZATION] must indicate whether it has exposure to these SPEs, either on- or off-balance sheet; (2) Entities to which the [BANKING ORGANIZATION] provides implicit support and the associated capital impact for each of them (as required in § __.130(e)); and (3) Affiliated entities: (i) That the [BANKING ORGANIZATION] manages or advises; and (ii) That invest either in the securitization exposures that the [BANKING ORGANIZATION] has securitized or in traditional securitizations that the [BANKING ORGANIZATION] sponsors.[3]
	(c)	Summary of the [BANKING ORGANIZATION]'s accounting policies for securitization activities, including: (1) Whether the transactions are treated as sales or financings; (2) Recognition of gain-on-sale; (3) Methods and key assumptions applied in valuing retained or purchased interests; (4) Changes in methods and key assumptions from the previous period for valuing retained interests and impact of the changes;

(5) Treatment of synthetic securitizations;
(6) How exposures intended to be securitized are valued and whether they are recorded under subpart E of this part; and
(7) Policies for recognizing liabilities on the balance sheet for arrangements that could require the [BANKING ORGANIZATION] to provide financial support for securitized assets.

(d) If a [BANKING ORGANIZATION] provides support to a securitization as described in section __.132(e), disclosure indicating:

(1) That it has provided implicit support to the securitization; and

(2) The risk-based capital impact to the [BANKING ORGANIZATION] of providing such implicit support.

[1]The [BANKING ORGANIZATION] should describe the structure of resecuritizations in which it participates; this description should be provided for the main categories of resecuritization products in which the [BANKING ORGANIZATION] is active.

[2]For example, these roles may include originator, investor, servicer, provider of credit enhancement, sponsor, liquidity provider, or swap provider.

[3]Such affiliated entities may include, for example, money market funds, to be listed individually, and personal and private trusts, to be noted collectively.

Table 9 to § __.162—Equities Not Subject to Subpart F of This Part

Qualitative Disclosures	(a) The general qualitative disclosure requirement with respect to equity risk for equities not subject to subpart F of this part, including: (1) Differentiation between holdings on which capital gains are expected and those taken under other objectives including for relationship and strategic reasons; and (2) Discussion of important policies covering the valuation of and accounting for equity holdings not subject to subpart F of this part. This includes the accounting techniques and valuation methodologies used, including key assumptions and practices affecting valuation as well as significant changes in these practices.

Table 10 to § __.162—Interest Rate Risk for Non-Trading Activities

Qualitative disclosures	(a) The general qualitative disclosure requirement, including the nature of interest rate risk for non-trading activities and key assumptions, including assumptions regarding loan prepayments and behavior of non-maturity deposits, and frequency of measurement of interest rate risk for non-trading activities.

Table 11 to § __.162—Additional Disclosure Related to the Credit Quality of Assets

Qualitative Disclosures	The [BANKING ORGANIZATION] must provide the following disclosures:
	(a) The scope of exposures that qualify as "past due" for accounting purposes and the differences, if any, between the scope of exposures treated as past due for accounting and those treated as past due for regulatory capital purposes.

(b)	The scope of exposures that qualify as past due exposures under section __.111(h)(5)(i) of this part or past due real estate exposures under section ___.111(f)(8) of this part that are not exposures for which credit losses are measured under ASC Topic 326 and for which the [BANKING ORGANIZATION] has recorded a partial write-off/write-down.
(c)	The scope of exposures that qualify as "loan modification to borrowers experiencing financial difficulty" for accounting purposes and the differences, if any, between the scope of exposures treated as "past due exposures" or "past due real estate exposures" due to the [BANKING ORGANIZATION] having agreed to a distressed restructuring of the exposure for regulatory capital purposes.

Table 12 to § __.162—General Qualitative Information on a [BANKING ORGANIZATION]'S Operational Risk Framework

Qualitative Disclosures	The [BANKING ORGANIZATION] must describe:
(a)	Its policies, frameworks, and guidelines for the management of operational risk;
(b)	The structure and organization of its operational risk management and control function;
(c)	The systems and data used to calculate the operational risk capital requirement;
(d)	The scope and context of its reporting framework on operational risk to executive management and to the board of directors; and
(e)	The risk mitigation and risk transfer used in the management of operational risk. This includes mitigation by policy, including the policies on risk culture, risk appetite, and outsourcing, and by the establishment of controls.

(c) *Regulatory capital instrument and other instruments eligible for total loss absorbing capacity (TLAC) disclosures.* (1) A [BANKING ORGANIZATION] described in § __.160 must provide a description of the main features of its regulatory capital instruments, in accordance with Table 13 to § __.162. If the [BANKING ORGANIZATION] issues or repays a capital instrument, or in the event of a redemption, conversion, write down, or other material change in the nature of an existing instrument, but in no event less frequently than semiannually, the [BANKING ORGANIZATION] must update the disclosures provided in accordance with Table 13 of this section. A [BANKING ORGANIZATION] also must disclose the full terms and conditions of all instruments included in regulatory capital.

(2) In addition to the disclosure requirement in § __.162(c)(1), a [BANKING ORGANIZATION] that is a global systemically important BHC also must provide a description

of the main features of each eligible debt security, as defined in 12 CFR 252.61, that the [BANKING ORGANIZATION] has issued and outstanding, in accordance with Table 13 to § __.162. If the global systemically important BHC issues or repays an eligible debt security, or in the event of a redemption, conversion, write down, or other material change in the nature of an existing instrument, but in no event less frequently than semiannually, the global systemically important BHC must update the disclosures provided in accordance with Table 13 to § __.162. A global systemically important BHC also must disclose the full terms and conditions of all eligible debt securities.

Table 13 to § __.162—Main Features of Regulatory Capital Instruments and of Other TLAC-Eligible Instruments

Qualitative Disclosures	(a) For each regulatory capital instrument and any other instrument that is an eligible debt security as defined in 12 CFR 252.61, the [BANKING ORGANIZATION] must provide the following information: (1) The issuer's legal entity. (2) The unique identifier. (3) The governing law(s) of the instrument. (4) The regulatory capital treatment. (5) The level(s) within the [BANKING ORGANIZATION] at which the instrument is included in capital. (6) The instrument type. (7) The amount recognized in regulatory capital. (8) The par value of the instrument. (9) The accounting classification as debt or equity. (10) The original date of issuance. (11) Whether perpetual or dated. (12) The original maturity date. (13) Whether an issuer call option subject to prior supervisory approval exists. (14) For an instrument with an issuer call option: (i) the first date of call if the instrument has a call option on a specific date (day, month, and year); (ii) the instrument has a tax and/or regulatory event call; and (iii) the redemption price. (15) Whether there are subsequent call option dates and, if so, their frequency. (16) Whether the coupon or dividend is fixed over the life of the instrument, floating over the life of the instrument, currently fixed but will move to a floating rate in the future, or currently floating but will move to a fixed rate in the future. (17) The coupon rate of the instrument and any related index that the coupon or dividend rate references.

(18) Whether the non-payment of a coupon or dividend on the instrument prohibits the payment of dividends on common shares.
(19) Whether the issuer has full, partial, or no discretion over whether a coupon or dividend is paid.
(20) Whether there is a step-up or other incentive to redeem.
(21) Whether the dividends or coupons are cumulative or non-cumulative.
(22) Whether the instrument is convertible or non-convertible.
(23) If the instrument is convertible, the conditions under which the instrument will convert, including point of non-viability. Where one or more authorities have the ability to trigger conversion, the authorities should be listed. For each of the authorities, state whether the legal basis for the authority to trigger conversion is provided by the terms of the contract of the instrument (a contractual approach) or statutory means (a statutory approach).
(24) If the instrument is convertible, whether the instrument will: (i) always convert fully; (ii) may convert fully or partially; or (iii) will always convert partially.
(25) If the instrument is convertible, the rate of conversion into the more loss-absorbent instrument.
(26) If the instrument is convertible, whether conversion is mandatory or optional.
(27) If the instrument is convertible, the instrument type into which it is convertible.
(28) If the instrument is convertible, the issuer of the instrument into which it converts.
(29) Whether a write-down feature exists.
(30) If there is a write-down feature, the trigger at which write-down occurs, including point of non-viability. Where one or more authorities have the ability to trigger write-down, the authorities should be listed. For each of the authorities it should be stated whether the legal basis for the authority to trigger conversion is provided by the terms of the contract of the instrument or statutory means.
(31) If there is a write-down feature, for each write-down trigger separately, whether the instrument will: (i) always be written down fully; (ii) may be written down partially; or (iii) will always be written down partially.
(32) If there is a write-down feature, whether the write-down is permanent or temporary.
(33) For instruments that have a temporary write-down, a description of the writeup mechanism.
(34) The type of subordination.
(35) A description of the position in subordination hierarchy in liquidation, including by specifying the instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned.

Subpart F—Risk-weighted Assets – Market Risk and Credit Valuation Adjustment (CVA)

§ __.201 Purpose, applicability, and reservations of authority.

(a) *Purpose.* This subpart establishes risk-based capital requirements in a manner that:

(1) For [BANKING ORGANIZATIONS] with significant exposure to market risk, provides methods for these [BANKING ORGANIZATIONS] to calculate their standardized measure for market risk and, if applicable, their models-based measure for market risk, and establishes public disclosure requirements; and

(2) For [BANKING ORGANIZATIONS] with significant exposure to CVA risk, provides methods for these [BANKING ORGANIZATIONS] to calculate their basic measure for CVA risk and, if applicable, their standardized measure for CVA risk, and establishes public disclosure requirements.

(b) *Applicability*—(1) *Market risk.* The market risk capital requirements and related reporting and public disclosure requirements specified in §§ __.203 through __.217 apply to a [BANKING ORGANIZATION] that meets one or more of the standards in this paragraph (b)(1):

(i) The [BANKING ORGANIZATION] is a depository institution holding company that is either a Category I [BANKING ORGANIZATION] or a Category II [BANKING ORGANIZATION]; or

(ii) The [BANKING ORGANIZATION] has aggregate trading assets and trading liabilities, excluding customer and proprietary broker-dealer reserve bank accounts, equal to:

(A) 10 percent or more of quarter-end total assets as reported on the most recent quarterly [REGULATORY REPORT]; or

(B) $5 billion, [as adjusted pursuant to § __.4], or more, on average for the four most recent quarters as reported in the [BANKING ORGANIZATION]'s [REGULATORY REPORT]s.

(2) *CVA risk*. The CVA risk-based capital requirements specified in §§ __.220 through __.225 and related reporting and public disclosure requirements specified in § __.217 apply to any [BANKING ORGANIZATION] that is:

(i) A depository institution holding company that is a Category I [BANKING ORGANIZATION] or a Category II [BANKING ORGANIZATION];

(ii) A depository institution subsidiary of an institution described in paragraph (b)(2)(i) of this section where such subsidiary is subject to the market risk framework pursuant to § __.201(b)(1); or

(iii) A [BANKING ORGANIZATION] that is subject to the market risk framework pursuant to § __.201(b)(1) and engages in OTC derivative contracts with an aggregate gross notional value, as reported on the [BANKING ORGANIZATION]'s [REGULATORY REPORT]s of $1 trillion[, as adjusted pursuant to 12 CFR § 217.4,] or more on average for the prior four quarters.

(3) *Initial applicability*. A [BANKING ORGANIZATION] must satisfy the requirements of this subpart beginning [on the first day of] the quarter after a [BANKING ORGANIZATION] meets the criteria of paragraph (b)(1) or (b)(2) of this section, as applicable.

(4) *Monitoring of trading assets and liabilities*. A [BANKING ORGANIZATION] must monitor (i) its aggregate trading assets and trading liabilities to determine the applicability of this subpart F in accordance with paragraph (b)(1) of this section; and (ii) the aggregate gross notional value of the OTC derivative contracts the [BANKING ORGANIZATION] engages in to determine the applicability of this subpart F in accordance with paragraph (b)(2) of this section.

(5) *Ongoing applicability.* (i) A [BANKING ORGANIZATION] that is subject to the market risk capital requirements and related reporting and public disclosure requirements of this subpart F shall remain subject to those requirements unless and until it does not meet any of the standards in paragraph (b)(1) of this section, applying the adjusted thresholds specified in paragraph (b)(1)(ii)(B) of this section effective on the date of comparison.

(ii) A [BANKING ORGANIZATION] that is subject to the CVA risk-based capital requirements and related reporting and public disclosure requirements of this subpart F shall remain subject to those requirements unless and until it does not meet any of the standards in paragraph (b)(2) of this section, applying the adjusted thresholds specified in paragraph (b)(2)(iii) of this section effective on the date of comparison.

(6) *Exclusions*. The [AGENCY] may exclude a [BANKING ORGANIZATION] that meets one or more of the standards of paragraph (b)(1) of this section or in paragraph (b)(2) of this section from application of §§ __.203 through __.217 or §§ __.220 through __.225 if the [AGENCY] determines that the exclusion is appropriate based on the level of market risk or level of CVA risk, respectively, of the [BANKING ORGANIZATION] and is consistent with safe and sound banking practices.

(7) *Data availability*. A [BANKING ORGANIZATION] that does not have four quarters of aggregate data on trading assets and trading liabilities (excluding customer and proprietary

broker-dealer reserve bank accounts) or gross notional value of OTC derivatives must calculate the average in paragraph (b)(1)(ii) or paragraph (b)(2)(iii) of this section, respectively, by averaging as much data as the [BANKING ORGANIZATION] has available, unless the [AGENCY] notifies the [BANKING ORGANIZATION] in writing to use an alternative method.

(c) *Reservations of authority.* (1) The [AGENCY] may apply §§ __.203 through __.217 or §§ __.220 through __.225 to any [BANKING ORGANIZATION] if the [AGENCY] deems it necessary or appropriate because of the level of market risk or CVA risk, respectively, of the [BANKING ORGANIZATION] or to ensure safe and sound banking practices.

(2) The [AGENCY] may require a [BANKING ORGANIZATION] to hold an amount of capital greater than otherwise required under this subpart F if the [AGENCY] determines that the [BANKING ORGANIZATION]'s capital requirement for market risk or CVA risk as calculated under this subpart F is not commensurate with the market risk or the CVA risk of the [BANKING ORGANIZATION]'s market risk covered positions or CVA risk covered positions, respectively.

(3) If the [AGENCY] determines that the risk-based capital requirement calculated under this subpart F by the [BANKING ORGANIZATION] for one or more market risk covered positions or CVA risk covered positions or categories of such positions is not commensurate with the risks associated with those market risk covered positions or CVA risk covered positions or categories of such positions, the [AGENCY] may require the [BANKING ORGANIZATION] to assign a different risk-based capital requirement to the market risk covered positions or CVA risk covered positions or categories of such positions that more accurately reflects the risk of the market risk covered positions or CVA risk covered positions or categories of such positions.

(4) The [AGENCY] may also require a [BANKING ORGANIZATION] to calculate market risk capital requirements for specific positions or categories of positions under this subpart F instead of risk-based capital requirements under subpart D or subpart E of this part, as applicable; or to calculate risk-based capital requirements for specific exposures or categories of exposures under subpart D or subpart E of this part, as applicable, instead of market risk capital requirements under this subpart F, as appropriate, to more accurately reflect the risks of the positions or exposures. In such cases, the [AGENCY] may alternatively require a [BANKING ORGANIZATION] to apply the capital add-ons for re-designations as described in § __.204(f).

(5) The [AGENCY] may require a [BANKING ORGANIZATION] that calculates the models-based measure for market risk to modify the methodology or observation period used to measure market risk.

(d) In making determinations under paragraphs (b)(6), (b)(7), and (c)(1) through (5) of this section, the [AGENCY] will apply notice and response procedures generally in the same manner as the notice and response procedures set forth in [12 CFR 3.404, 263.202, and 324.5(c)]. Nothing in this subpart F limits the authority of the [AGENCY] under any other provision of law or regulation to take supervisory or enforcement action, including action to address unsafe or unsound practices or conditions, deficient capital levels, or violations of law.

§ __.202 Definitions.

(a) Terms set forth in § __.2 and used in this subpart F have the definitions assigned thereto in § __.2.

(b) For the purposes of this subpart F, the following terms are defined as follows:

Actual profit and loss means the actual profit and loss derived from the daily trading activity for market risk covered positions. Intraday trading and net interest income must be included; valuation adjustments for which separate regulatory capital requirements have been otherwise specified, fees, reserves, and commissions must be excluded.

Backtesting means the comparison of a [BANKING ORGANIZATION]'s daily actual profit and loss and hypothetical profit and loss with the VaR-based measure as described in §§ __.204(g) and __.213(b).

Basic CVA hedge means an eligible CVA hedge that is included in the basic CVA approach capital requirement under the standardized measure for CVA risk, pursuant to § __.221(c)(3).

Basic CVA risk covered position means a CVA risk covered position that is included in the basic CVA approach capital requirement, pursuant to § __.221(c)(2).

Cash equity position means an equity position that is not a derivative contract.

Commodity position means a market risk covered position for which price risk arises from changes in the price of one or more commodities.

Commodity risk means the risk of loss that could arise from changes in underlying commodity risk factors.

Corporate position means a market risk covered position that is a corporate exposure.

Correlation trading position means:

(1) Except as provided in paragraph (2) of this definition:

(i) A securitization position for which all or substantially all of the value of the underlying exposures reference the credit exposures to single name companies for which a two-way market exists, or on commonly traded indices based on such exposures, for which a two-way market exists; or

(ii) A position that is not a securitization position and that hedges a position described in paragraph (1)(i) of this definition.

(2) Notwithstanding paragraph (1) of this definition, a correlation trading position does not include:

(i) A resecuritization position;

(ii) A derivative of a securitization position that does not provide a pro rata share in the proceeds of a securitization tranche; or

(iii) A securitization position for which the underlying assets or reference exposures are retail exposures, residential mortgage exposures, or commercial mortgage exposures.

Counterparty credit spread risk means the risk of loss resulting from a change in the credit spread of a counterparty that results in an increase in CVA.

Covered bond means a bond issued by a financial institution that satisfies all of the criteria in paragraphs (1) through (6) of this definition from inception through its remaining maturity:

(1) The bond is subject to a specific regulatory regime under the law of the jurisdiction governing the bond that is designed to protect bond holders;

(2) The bond has a pool of underlying assets consisting exclusively of:

(i) Claims on, or guaranteed by, sovereigns, their central banks, PSEs, or MDBs;

(ii) Claims secured by first lien residential mortgages that would qualify for a 55 percent or lower risk weight under subpart E of this part; or

(iii) Claims secured by commercial real estate that would qualify for a 100 percent or lower risk weight under subpart E of this part and have a loan-to-value ratio of 60 percent or lower; and

(3) If the pool of underlying assets has any claims described in paragraphs (2)(ii) or (2)(iii) of this definition, then, for purposes of calculating the loan-to-value ratios for these assets:

(i) The collateral is valued at or less than the current fair market value under which the property could be sold under private contract between a willing seller and an arm's-length buyer on the date of valuation;

(ii) The issuing financial institution monitors the value of the collateral regularly and at least once per year; and

(iii) A qualified professional evaluates the property when information indicates that the value of the collateral may have declined materially relative to general market prices or when a credit event, such as a default, occurs;

(4) The nominal value of the pool of assets assigned to the bond exceeds the bond's nominal outstanding value by at least 10 percent;

(5) If the law governing the bond does not provide for the requirement in paragraph (4) of this definition, then the issuing financial institution discloses publicly on a regular basis that the issuing financial institution in practice meets the requirement in paragraph (4) of this definition; and

(6) The proceeds deriving from the bond are invested by law in assets that, during the entire duration of the bond—

(i) Are capable of covering claims attached to the bond; and

(ii) In the event of the failure of the issuer, would be used on a priority basis for the payment of principal and accrued interest.

Credit spread risk means the risk of loss that could arise from changes in underlying credit spread risk factors.

Credit valuation adjustment (CVA) means the fair value adjustment to reflect counterparty credit risk in the valuation of derivative contracts.

Cross-currency basis means the basis spread added to the associated reference rate of the non-USD leg or non-EUR leg of a cross-currency basis swap.

Currency union means an agreement by treaty among countries or territorial entities, under which the members agree to use a single currency, where the currency used is described in § __.209(b)(1)(iv).

Curvature risk means the incremental risk of loss of a market risk covered position that is not captured by the delta capital requirement arising from changes in the value of an option or embedded option and is measured based on two stress scenarios (curvature scenarios) involving an upward shock and a downward shock to each prescribed curvature risk factor.

Customer and proprietary broker-dealer reserve bank accounts means segregated accounts established by a subsidiary of a [BANKING ORGANIZATION] that fulfill the requirements of 17 CFR 240.15c3-3 or 17 CFR 1.20.

CVA hedge means a transaction that a [BANKING ORGANIZATION] enters into with a third party or an internal trading desk and manages for the purpose of mitigating CVA risk.

CVA risk means the risk of loss due to an increase in CVA resulting from the deterioration in the creditworthiness of a counterparty perceived by the market or changes in the exposure of CVA risk covered positions.

CVA risk covered position means a position that is a derivative contract that is not a cleared transaction or a client-facing derivative transaction, provided that a position that is an eligible credit derivative the credit risk mitigation benefits of which are recognized under § __.36 or § __.120, as applicable, may be excluded from being a CVA risk covered position.

Default risk means the risk of loss on a non-securitization debt or equity position or a securitization position that could result from the failure of an obligor to make timely payments of principal or interest on its debt obligations, and the risk of loss that could result from bankruptcy, insolvency, or similar proceeding.

Default risk position means a market risk covered position, including a defaulted market risk covered position, that is subject to default risk.

Delta risk means the risk of loss that could result from changes in the value of a position due to small changes in underlying risk factors. Delta risk is measured based on the sensitivities of a position to prescribed delta risk factors, which are specified in §§ __.207 and __.208 for purposes of calculating the sensitivities-based capital requirement and §§ __.224 and __.225 for purposes of calculating the standardized CVA approach capital requirement.

Eligible CVA hedge. (1) Except as provided in paragraph (2) of this definition, *eligible CVA hedge* means a CVA hedge with an external party or a CVA hedge that is the CVA segment of an internal risk transfer that:

(i) For purposes of calculating the basic CVA approach capital requirement, is a CVA hedge of counterparty credit spread risk, specifically:

(A) An index credit default swap (CDS); or

(B) A single-name CDS or a single-name contingent CDS that:

(*1*) References the counterparty directly; or

(*2*) References an affiliate of the counterparty; or

(*3*) References an entity that belongs to the same sector and region as the counterparty.

(ii) For purposes of calculating the standardized CVA approach capital requirement, can include:

(A) Instruments that hedge variability of the counterparty credit spread component of CVA risk; and

(B) Instruments that hedge the exposure component of CVA risk.

(2) Notwithstanding paragraph (1) of this definition, an eligible CVA hedge does not include:

(i) A CVA hedge that is not a whole transaction;

(ii) A securitization position;

(iii) A correlation trading position; and

(iv) A CVA hedge at a [BANKING ORGANIZATION] that is not required to apply the CVA risk-based capital requirements, pursuant to § __.201(b)(2).

Emerging market economy means a country or territorial entity that is not a liquid market economy.

Equity position means a market risk covered position that is not a securitization position or a correlation trading position and that has a value that reacts primarily to changes in equity prices.

Equity risk means the risk of loss that could arise from changes in underlying equity risk factors.

Equity repo rate means the equity repurchase agreement rate.

Exotic exposure means an underlying exposure that is not in scope of any of the risk classes under the sensitivities-based capital requirement or is not captured by the default risk capital requirement, which includes, but is not limited to, longevity risk, weather risk, and natural disaster risk.

Expected shortfall (ES) means a measure of the average of all potential losses exceeding the VaR at a given confidence level and over a specified horizon, as specified in § __.215.

Exposure model means a CVA exposure model used by the [BANKING ORGANIZATION] for financial reporting purposes or such a CVA exposure model that has been adjusted to satisfy the requirements of this subpart F.

Foreign exchange risk means the risk of loss that could arise from changes in underlying foreign exchange risk factors.

Foreign exchange position means a position for which price risk arises from changes in foreign exchange rates.

GSE debt means an exposure to a GSE that is not an equity exposure or exposure to a subordinated debt instrument issued by a GSE.

Hedge means a position or positions that offset all, or substantially all, of the price risk of another position or positions.

Hybrid instrument means an instrument that has characteristics in common with both debt and equity instruments, including traditional convertible bonds.

Hypothetical profit and loss means the change in the value of the market risk covered positions that would have occurred due to changes in the market data at end of current day if the end-of-previous-day market risk covered positions remained unchanged. Valuation adjustments that are updated daily must be included, unless the [BANKING ORGANIZATION] has received approval from the [AGENCY] to exclude them. Valuation adjustments for which separate regulatory capital requirements have been otherwise specified, commissions, fees, reserves, net interest income, and intraday trading must be excluded.

Idiosyncratic risk means the risk of loss in the value of a position that arises from changes in risk factors unique to the issuer.

Idiosyncratic risk factor means categories of risk factors that present idiosyncratic risk.

Interest rate risk means the risk of loss that could arise from changes in underlying interest rate risk factors.

Internal risk management model means a valuation model that the independent risk control unit within the [BANKING ORGANIZATION] uses to report market risks and risk-theoretical profits and losses to senior management.

Internal risk transfer means a transfer, executed through internal derivatives trades:

(1) Of credit risk or interest rate risk arising from an exposure capitalized under subpart D or subpart E of this part to a trading desk under this subpart F; or

(2) Of CVA risk from a CVA desk (or the functional equivalent if a [BANKING ORGANIZATION] does not have any CVA desks) to a trading desk under this subpart F.

Large market cap means a market capitalization equal to or greater than $2 billion, [as adjusted pursuant to § __.4].

Liquid market economy means:

(1) A country or territorial entity that, based on an annual review, the [BANKING ORGANIZATION] has determined meets all of the following criteria:

(i) The country or territorial entity has at least $10,000 in gross domestic product per capita in current prices;

(ii) The country or territorial entity has at least $95 billion in total market capitalization of all domestic stock markets;

(iii) The country or territorial entity has export diversification such that no single sector or commodity comprises more than 50 percent of the country or territorial entity's total annual exports;

(iv) The country or territorial entity does not impose material controls on liquidation of direct investment; and

(v) The country or territorial entity does not have sovereign entities, public sector entities, or sovereign-controlled enterprises subject to sanctions by the U.S. Office of Foreign Assets Control.

(2) A country or territorial entity that is in a currency union with at least one country or territorial entity that meets the criteria in paragraph (1) of this definition.

Liquidity horizon means the time required to exit or hedge a market risk covered position without materially affecting market prices in stressed market conditions.

Look-through approach means an approach in which a [BANKING ORGANIZATION] treats a market risk covered position that has multiple underlying exposures, such as an index instrument, multi-underlying option, an equity position in an investment fund, or a correlation trading position, as if the underlying exposures were held directly by the [BANKING ORGANIZATION].

Market capitalization means the aggregate value of all outstanding publicly traded shares issued by a company and its affiliates as determined by multiplying each share price by the number of outstanding shares.

Market risk means the risk of loss that could result from market movements, such as changes in the level of interest rates, credit spreads, equity prices, foreign exchange rates, or commodity prices.

Market risk covered position. (1) Except as provided in paragraph (2) of this definition, *market risk covered position* means the following positions:

(i) A trading asset or trading liability (whether on- or off-balance sheet),[800] as reported on [REGULATORY REPORT], that is a trading position, a position that is held for the purpose of regular dealing or making a market in securities or in other instruments, or hedges another market risk covered position and that is free of any restrictive covenants on its tradability or where the [BANKING ORGANIZATION] is able to hedge the material risk elements of the position in a two-way market;[801] and

(ii) The following positions, regardless of whether the position is a trading asset or trading liability, and hedges of such positions:

(A) A foreign exchange position or commodity position, excluding:

(*1*) A CVA hedge; and

(*2*) Any structural position in a foreign currency that the [BANKING ORGANIZATION] chooses to exclude with prior approval from the [AGENCY];

[800] Securities subject to repurchase and lending agreements are included as if they are still owned by the lender.

[801] A position that hedges a trading position must be within the scope of the [BANKING ORGANIZATION]'s hedging strategy as described in § __.203(a)(2).

(B) A publicly traded equity position that is not excluded from being a market risk covered position by paragraph (2)(iv) of this definition;

(C) An equity position in an investment fund that is not excluded from being a market risk covered position by paragraph (2)(vi) of this definition;

(D) A net short risk position of $20 million, [as adjusted pursuant to § __.4], or more;

(E) An embedded derivative on instruments issued by the [BANKING ORGANIZATION] that relates to the [BANKING ORGANIZATION]'s credit or equity risk that the [BANKING ORGANIZATION] either:

(*1*) Bifurcates for accounting purposes; or

(*2*) Elects the fair value option for purposes of financial reporting;

(F) With prior approval from the [AGENCY], an entire instrument with an embedded derivative issued by the [BANKING ORGANIZATION] that relates to credit or equity risk, for which the [BANKING ORGANIZATION] elects the fair value option for purposes of financial reporting;

(G) The trading desk segment of an eligible internal risk transfer of credit risk as described in § __.205(g)(1)(i);

(H) The trading desk segment of an eligible internal risk transfer of interest rate risk as described in § __.205(g)(1)(ii);

(I) A position arising from a transaction between a trading desk and an external party conducted as part of an internal risk transfer that meets the criteria described in § __.205(g);

(J) The trading desk segment of an eligible internal risk transfer of CVA risk as described in § __.205(g); and

(K) Instruments resulting from securities underwriting commitments, where the securities are expected to be purchased by the [BANKING ORGANIZATION] on the settlement date but are not securities expected to be purchased by the [BANKING ORGANIZATION] for held to maturity (HTM) or available for sale (AFS) purposes.

(2) Notwithstanding paragraph (1) of this definition, a *market risk covered position* does not include:

(i) An intangible asset, including a servicing asset;

(ii) A hedge of a trading position that the [AGENCY] determines to be outside the scope of the [BANKING ORGANIZATION]'s trading and hedging strategy required in § __.203(a)(2);

(iii) An instrument that, in form or substance, acts as a liquidity facility that provides support to asset-backed commercial paper;

(iv) A publicly traded equity position with restrictions on tradability;

(v) A non-publicly traded equity position that is not an equity position in an investment fund;

(vi) An equity position in an investment fund that does not meet at least one of the two following criteria:

(A) The [BANKING ORGANIZATION] has access to the investment fund's prospectus, partnership agreement, or similar contract that defines the fund's permissible investments and investment limits and is able to use the look-through approach to calculate market risk capital requirements for its proportional ownership share of each exposure held by the investment fund; or

(B) The [BANKING ORGANIZATION] has access to the investment fund's prospectus, partnership agreement, or similar contract that defines the fund's permissible investments and investment limits and obtains daily price quotes for the investment fund;

(vii) Any position a [BANKING ORGANIZATION] holds with the intent to securitize;

(viii) Real estate directly held by the [BANKING ORGANIZATION] or an affiliate;

(ix) A derivative instrument or an exposure to a fund that has material exposure to the instrument types described in paragraphs (2)(i) through (viii) of this definition as underlying assets;

(x) An equity position arising from a deferred compensation plan, or bank owned life insurance or corporate owned life insurance owned by an affiliate of [BANKING ORGANIZATION] that is consistent with the requirements of [Volcker Rule § __.10(c)(7)];

(xi) A significant investment in the capital of unconsolidated financial institutions in the form of common stock that is not deducted from capital pursuant to § __.22(d)(2), as applicable;

(xii) An instrument held for the purpose of hedging a particular risk of a position in the types of instruments described in paragraphs (2)(i) through (xi) of this definition;

(xiii) A CVA hedge;

(xiv) An equity position in an investment fund that the [BANKING ORGANIZATION] or an affiliate organizes and offers, which the [BANKING ORGANIZATION] acquired for the purpose of providing such fund with sufficient initial equity for investment to permit the fund to attract unaffiliated investors and which the [BANKING ORGANIZATION] has held for fewer than five years from the date on which the investment adviser or similar entity to the fund begins making investments pursuant to the written investment strategy for the fund; and

(xv) Hedges that are effective hedges, pursuant to the treatment in § __.52(c) or § __.141(c), as applicable.

Mid-prime RMBS means a security that references underlying exposures that consist primarily of residential mortgages that is not a prime RMBS or a sub-prime RMBS.

Model-eligible position means a market risk covered position on a model-eligible trading desk that is not a model-ineligible position.

Model-eligible trading desk means a trading desk (including a notional trading desk) that received approval of the [AGENCY] to be a model-eligible trading desk pursuant to § __.212(b)(2) and continues to remain a model-eligible trading desk.

Model-ineligible position means an equity position in an investment fund where the [BANKING ORGANIZATION] is not able to identify the underlying positions held by an investment fund on a quarterly basis, a securitization position, or a correlation trading position.

Model-ineligible trading desk means a trading desk that is not a model-eligible trading desk.

Modellable risk factor means a risk factor that satisfies both the risk factor qualitative test in § __.214(b)(2) and the risk factor quantitative test in § __.214(b)(3), consistent with § __.214(b)(1).

Net short risk position means a position that is calculated by comparing the notional amounts of a [BANKING ORGANIZATION]'s long and short positions for a given exposure,

provided that the notional amounts of the short position exceed the notional amounts of the long position and that the position is:[802]

(1) From a credit derivative that the [BANKING ORGANIZATION] recognizes as a guarantee for risk-weighted asset amount calculation purposes under subpart D or subpart E of this part and other exposures recognized under subpart D or subpart E of this part;

(2) Arises under subpart D or subpart E of this part from the credit risk segment of an internal risk transfer described in § __.205(g)(1)(i) that the [BANKING ORGANIZATION] recognizes as a guarantee for risk-weighted asset amount calculation purposes under subpart D or subpart E of this part; and

(3) An equity position or a credit position that arises under subpart D or subpart E of this part that is not referenced in paragraph (1) or (2) of this definition provided that:

(i) For a [BANKING ORGANIZATION] that hedges at the single name level, the notional amounts of the positions are compared at the name or obligor level; and

(ii) For a [BANKING ORGANIZATION] that hedges at the portfolio level using indices, the notional amounts of the positions are compared at the portfolio level.

Non-modellable risk factor means a type A non-modellable risk factor or a type B non-modellable risk factor.

Non-securitization position means a market risk covered position that is not a securitization position or a correlation trading position and that has a value that reacts primarily to changes in interest rates or credit spreads.

[802] For equity derivatives, the notional long and short positions are based on the adjusted notional amount, which is the product of the current price of one unit of the stock (for example, a share of equity) and the number of units referenced by the trade.

Non-securitization debt or equity position means a non-securitization position or an equity position that is subject to default risk.

Notional trading desk means a trading desk created for regulatory capital purposes to account for market risk covered positions arising under subpart D or subpart E of this part, such as net short risk positions, embedded derivatives on instruments issued by the [BANKING ORGANIZATION] that relate to credit or equity risk that the [BANKING ORGANIZATION] either bifurcates for accounting purposes or elects the fair value option for purposes of financial reporting, instruments with an embedded derivative issued by the [BANKING ORGANIZATION] that relate to credit or equity risk, for which the [BANKING ORGANIZATION] elects the fair value option for purposes of financial reporting, and foreign exchange positions and commodity positions. Notional trading desks are not required to fulfill the requirements set forth in § __.203(b)(2) and (c).

Pension fund means:

(1) An employee benefit plan (as defined in 29 U.S.C. 1002(3)) that is not exempt from ERISA, under 29 U.S.C. 1003(b), and that complies with the tax deferral qualification requirements provided in the Internal Revenue Code;

(2) A governmental plan (as defined in 29 U.S.C. 1002(32)) that complies with the tax deferral qualification requirements provided in the Internal Revenue Code; or

(3) A fund for employee benefit plans subject to ERISA that is exempt from the definition of an investment company under section 3(c)(11) of the Investment Company Act (15 U.S.C. 80a-1 *et seq.*).

Pricing model means:

(1) A valuation model used for financial reporting such as models used in reporting actual profits and losses; or

(2) A valuation model used for internal risk management.

Prime RMBS means a security that references underlying exposures that consist primarily of qualified residential mortgages as defined under 12 CFR 244.13(a).

Profit and loss attribution (PLA) means a method for assessing the robustness of a [BANKING ORGANIZATION]'s internal models used to calculate the ES-based measure in §__.215(b) by comparing the risk-theoretical profit and loss predicted by the internal models with the hypothetical profit and loss.

PSE position means a market risk covered position that is an exposure to a public sector entity (PSE).

p-value means the probability, when using the VaR-based measure for purposes of backtesting, of observing a profit that is less than, or a loss that is greater than, the profit or loss that actually occurred on a given date.

Real price means:

(1) A price at which the [BANKING ORGANIZATION] has executed a transaction;

(2) A price provided by a regulated exchange, a qualifying central counterparty, a sovereign entity, or a specified supranational entities and multilateral development banks (MDBs);

(3) A verifiable price for an actual transaction between other arm's-length parties or a bona fide competitive bid or offer by a party transacting at arm's length either made to or received by the [BANKING ORGANIZATION] itself or obtained from a third-party provider, provided that, for any transaction, bid, or offer obtained from a third-party provider:

(i) The transaction, bid, or offer has been processed through a third-party provider; or

(ii) The third-party provider agrees to provide evidence of the transaction, bid, or offer to the [BANKING ORGANIZATION] upon request.

Reference credit spread risk means the risk of loss that could arise from changes in the underlying credit spread risk factors that drive the exposure component of CVA risk.

Resecuritization position means a market risk covered position that is a resecuritization exposure.

Residential mortgage-backed security (RMBS) means a prime RMBS, mid-prime RMBS, or sub-prime RMBS.

Risk class means:

(1) For the purpose of calculating the sensitivities-based capital requirement, one of the classes specified in § __.206(a)(1);

(2) For the purpose of calculating the models-based non-default capital requirement, one of the following: interest rate risk, equity risk, foreign exchange risk, commodity risk, credit risk, and any other risk class established by the agency; and

(3) For the purpose of calculating the standardized CVA approach capital requirement, one of the classes relevant to the capital requirement specified in § __.224.

Risk factor means underlying variables, such as market rates and prices that affect the value of a market risk covered position or a CVA risk covered position. For purposes of calculating the sensitivities-based capital requirement, the risk factors are specified in § __.208. For purposes of calculating the standardized CVA approach capital requirement, the risk factors are specified in § __.225.

Risk-theoretical profit and loss means the daily trading desk-level profit and loss on the end-of-previous-day market risk covered positions generated by the [BANKING ORGANIZATION]'s internal risk management models. The risk-theoretical profit and loss must take into account all risk factors, including non-modellable risk factors that can be included in the [BANKING ORGANIZATION]'s internal risk management models.

Securitization position means a market risk covered position that is a securitization exposure.

Securitization position non-CTP means a securitization position other than a correlation trading position.

Small market cap means a market capitalization of less than $2 billion, as adjusted pursuant to § __.4.

Sovereign position means a market risk covered position that is a sovereign exposure.

Standardized CVA hedge means a CVA hedge that is an eligible CVA hedge that:

(1) Is not a basic CVA hedge; and

(2) Is included in the standardized CVA approach capital requirement.

Standardized CVA risk covered position means a CVA risk covered position that is not a basic CVA risk covered position.

Structural position in a foreign currency means a position that is not a trading position and that is:

(1) Subordinated debt, equity, or minority interest in a consolidated subsidiary that is denominated in a foreign currency;

(2) Capital assigned to foreign branches that is denominated in a foreign currency;

(3) A position related to an unconsolidated subsidiary or another item that is denominated in a foreign currency and that is deducted from the [BANKING ORGANIZATION]'s tier 1 or tier 2 capital; or

(4) A position designed to hedge a [BANKING ORGANIZATION]'s capital ratios or earnings against the effect on paragraph (1), (2), or (3) of this definition of adverse exchange rate movements.

Sub-prime RMBS means a security that references underlying exposures consisting primarily of higher-priced mortgage loans as defined in 12 CFR 1026.35, high-cost mortgages as defined in 12 CFR 1026.32, or both.

Systematic risk means the risk of loss that could arise from changes in risk factors that represent broad market movements and that are not specific to an issue or issuer.

Systematic risk factors means categories of risk factors that present systematic risk, such as economy, region, and sector.

Term repo-style transaction means a repo-style transaction that has an original maturity in excess of one business day.

Time effects means the effects on the profit and loss solely due to the passage of time.

Trading desk means a unit of organization of a [BANKING ORGANIZATION] that purchases or sells market risk covered positions that is:

(1) Structured by the [BANKING ORGANIZATION] to implement a well-defined business strategy;

(2) Organized to ensure appropriate setting, monitoring, and management review of the desk's trading and hedging limits and strategies; and

(3) Characterized by a clearly defined unit of organization that:

(i) Engages in coordinated trading activity with a unified approach to the key elements described in § __.203(b)(2) and (c);

(ii) Operates subject to a common and calibrated set of risk metrics, risk levels, and joint trading limits;

(iii) Submits compliance reports and other information as a unit for monitoring by management; and

(iv) Books its trades together.

Trading position means a position that is held by a [BANKING ORGANIZATION] for the purpose of short-term resale or with the intent of benefiting from actual or expected short-term price movements, or to lock in arbitrage profits.

Two-way market means a market where there are independent bona fide offers to buy and sell so that a price reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined within one day and settled at that price within a relatively short time frame conforming to trade custom.

Type A non-modellable risk factor means a risk factor that satisfies the risk factor qualitative test in § __.214(b)(2) but not the risk factor quantitative test in § __.214(b)(3), consistent with § __.214(b)(1).

Type B non-modellable risk factor means a risk factor that is not a modellable risk factor or a type A non-modellable risk factor, consistent with § __.214(b)(1).

Value-at-Risk (VaR) means the estimate of the maximum amount that the value of one or more market risk covered positions could decline due to market price or rate movements during a fixed holding period within a stated confidence interval.

Vega risk means the risk of loss that could arise from changes in the value of a position due to changes in the volatility of the underlying exposure. Vega risk is measured based on the sensitivities of a position to prescribed vega risk factors as specified in §§ __.207 and __.208 for purposes of calculating the sensitivities-based capital requirement and §§ __.224 and __.225 for purposes of calculating the standardized CVA approach capital requirement.

§ __.203 General requirements for market risk.

(a) *Market risk covered positions*—(1) *Identification of market risk covered positions.* A [BANKING ORGANIZATION] must have clearly defined policies and procedures for determining its market risk covered positions, which the [BANKING ORGANIZATION] must update at least annually. These policies and procedures must include:

(i) Identification of trading assets and trading liabilities that are trading positions and of trading positions that are correlation trading positions;

(ii) Identification of trading assets and trading liabilities that are positions held for the purpose of regular dealing or making a market in securities or other instruments;

(iii) Identification of equity positions in an investment fund that are market risk covered positions;

(iv) Identification of positions that are market risk covered positions, regardless of whether the position is a trading asset or trading liability, including net short risk positions (and the calculation of such positions), eligible internal risk transfer positions as described in § __.205(g), embedded derivatives on instruments issued by the [BANKING ORGANIZATION] that relate to credit or equity risk that the [BANKING ORGANIZATION] either bifurcates for accounting purposes or elects the fair value option for purposes of financial reporting, and instruments with an embedded derivative issued by the [BANKING ORGANIZATION] that

relate to credit or equity risk, for which the [BANKING ORGANIZATION] elects the fair value option for purposes of financial reporting;

(v) Consideration of the extent to which a position, or a hedge of its material risks, can be marked-to-market daily by reference to a two-way market;

(vi) Consideration of possible impairments to the liquidity of a position or its hedge;

(vii) Identification of positions that must be excluded from market risk covered positions; and

(viii) A process for determining whether a position needs to be re-designated after its initial identification as a market risk covered position or otherwise, which must include re-designation restrictions and a description of the events or circumstances under which a [BANKING ORGANIZATION] would consider a re-designation, a process for identifying such events or circumstances, and a process for obtaining senior management approval and for notifying the [AGENCY] of material re-designations.

(2) *Market risk trading and hedging strategies*. A [BANKING ORGANIZATION] must have clearly defined trading and hedging strategies for its market risk covered positions that are approved by senior management of the [BANKING ORGANIZATION].

(i) The trading strategy must articulate the expected holding period of, and the market risk associated with, each portfolio of market risk covered positions.

(ii) The hedging strategy must articulate for each portfolio of market risk covered positions the level of market risk that the [BANKING ORGANIZATION] is willing to accept and must detail the instruments, techniques, and strategies that the [BANKING ORGANIZATION] will use to hedge the risk of the portfolio.

(b) *Trading desks*—(1) *Trading desk structure.* A [BANKING ORGANIZATION] must define its trading desk structure. That structure must include:

(i) Definition of each trading desk;

(ii) Identification of model-eligible trading desks, consistent with § __.212(b);

(iii) Identification of model-ineligible trading desks used in both the standardized measure for market risk and the models-based measure for market risk (as applicable);

(iv) Identification of trading desks that are used for internal risk transfers (as applicable); and

(v) Identification of notional trading desks (as applicable).

(2) *Trading desk policies.* For each trading desk that is not a notional trading desk, a [BANKING ORGANIZATION] must have a clearly defined policy that is approved by senior management of the [BANKING ORGANIZATION] and describes the general strategy of the trading desk, the risk and position limits established for the trading desk, and the internal controls and governance structure established to oversee the risk-taking activities of the trading desk, and that includes, at a minimum:

(i) A written description of the general strategy of the trading desk that addresses the economics of the business strategy, the primary activities, and the trading and hedging strategies of the trading desk;

(ii) A clearly defined trading strategy for the trading desk's market risk covered positions, approved by senior management of the [BANKING ORGANIZATION], which details the types of market risk covered positions purchased and sold by the trading desk; indicates which of these are the main types of market risk covered positions purchased and sold by the trading desk; and

articulates the expected holding period of, and the market risk associated with, each portfolio of market risk covered positions held by the trading desk;

(iii) A clearly defined hedging strategy for the trading desk's market risk covered positions, approved by senior management of the [BANKING ORGANIZATION], which articulates for each trading desk the level of market risk the [BANKING ORGANIZATION] is willing to accept and details the instruments, techniques, and strategies that the trading desk will use to hedge the risk of the portfolio; and

(iv) A business strategy that includes regular reports on the revenue, costs, and market risk capital requirements of the trading desk.

(c) *Active management of market risk covered positions.* A [BANKING ORGANIZATION] must have clearly defined policies and procedures describing the internal controls, ongoing monitoring, management, and authorization procedures, including escalation procedures, for actively managing all market risk covered positions. At a minimum, these policies and procedures must identify the key groups and personnel responsible for overseeing the activities of the [BANKING ORGANIZATION]'s trading desks that are not notional trading desks and require:

(1) Determining the fair value of the market risk covered positions on a daily basis;

(2) Ongoing assessment of the ability of trading desks to hedge market risk covered positions and portfolio risks and of the extent of market liquidity;

(3) Establishment by each trading desk of clear trading limits with well-defined trader mandates and articulation of why the risk factors used to establish the limits appropriately reflect the general strategy of the trading desk;

(4) Establishment and daily monitoring by trading desks of the following risk-management measurements:

(i) Trading limits, usage, and remediation of breaches;

(ii) Sensitivities to risk factors;

(iii) VaR and expected shortfall (as applicable);

(iv) Backtesting and p-values at the trading desk level and at the aggregate level for all model-eligible trading desks (as applicable);

(v) Comprehensive profit and loss attribution (as applicable); and

(vi) Market risk covered positions and transaction volumes;

(5) Establishment and daily monitoring by a risk control unit independent of the trading business unit of the risk-management measurements listed in paragraph (c)(4) of this section;

(6) Strategy to appropriately mitigate risks when stress tests reveal particular vulnerabilities to a given set of circumstances;

(7) Daily monitoring by senior management of information described in paragraphs (c)(1) through (4) of this section;

(8) Reassessment of established limits on market risk covered positions, performed by senior management annually or more frequently; and

(9) Assessments of the quality of market inputs to the valuation process, the soundness of key assumptions, the reliability of parameter estimation in pricing models, and the stability and accuracy of model calibration under alternative market scenarios, performed by qualified personnel annually or more frequently.

(d) *Stress testing.* (1) A [BANKING ORGANIZATION] must stress test its market risk covered positions at the aggregate level and on each trading desk at a frequency appropriate to

manage risk, but in no case less frequently than quarterly. The stress tests must take into account concentration risk (including but not limited to concentrations in single issuers, industries, sectors, or markets), illiquidity under stressed market conditions, and risks arising from the [BANKING ORGANIZATION]'s trading activities that may not be adequately captured in the standardized measure for market risk or in the models-based measure for market risk, as applicable.

(2) The results of the stress testing must be reviewed by the [BANKING ORGANIZATION]'s senior management when available, and reflected in the policies and limits set by the [BANKING ORGANIZATION]'s management and its board of directors (or a committee thereof).

(e) *Control and oversight.* (1) A [BANKING ORGANIZATION] must have in place internal market risk management systems and processes for identifying, measuring, monitoring, and managing market risk that are conceptually sound.

(2) A [BANKING ORGANIZATION] must have a risk control unit that is responsible for the design and implementation of the [BANKING ORGANIZATION]'s market risk management system and that reports directly to senior management and is independent from the business trading units.

(3) A [BANKING ORGANIZATION] must have an internal audit function independent of business line management that at least annually assesses the effectiveness of the controls supporting the [BANKING ORGANIZATION]'s market risk measurement systems, including the activities of the business trading units and independent risk control unit, the initial designation of positions as market risk covered positions and any re-designations of positions, compliance with policies and procedures, and the calculation of the [BANKING

ORGANIZATION]'s measures for market risk under this subpart F, including the mapping of risk factors to liquidity horizons, as applicable. At least annually, the internal audit function must report its findings to the [BANKING ORGANIZATION]'s board of directors (or a committee thereof).

(f) *Valuation of market risk covered positions.* A [BANKING ORGANIZATION] must have a process for the prudent valuation of its market risk covered positions that includes policies and procedures on the valuation of its market risk covered positions, determining the fair value of its market risk covered positions, independent price verification, and independent validation of the valuation models and valuation adjustments or reserves.

(g) *Internal assessment of capital adequacy.* A [BANKING ORGANIZATION] must have a rigorous process for assessing its overall capital adequacy in relation to its market risk. The assessment must take into account risks that may not be captured fully by the standardized measure for market risk or in the models-based measure for market risk, including concentration and liquidity risk under stressed market conditions.

(h) *Due diligence requirements for securitization positions.* (1) A [BANKING ORGANIZATION] must demonstrate to the satisfaction of the [AGENCY] a comprehensive understanding of the features of a securitization position that would materially affect the performance of the position. The [BANKING ORGANIZATION]'s analysis must be commensurate with the complexity of the securitization position and the materiality of the position in relation to its regulatory capital under this part.

(2) A [BANKING ORGANIZATION] must demonstrate its comprehensive understanding of a securitization position under this paragraph (h), for each securitization position by:

(i) Conducting an analysis of the risk characteristics of a securitization position prior to acquiring the exposure and documenting such analysis promptly after acquiring the exposure, considering:

(A) Structural features of the securitization that would materially impact the performance of the exposure, which may include the contractual cash flow waterfall, waterfall-related triggers, credit enhancements, liquidity enhancements, fair value triggers, the performance of organizations that service the exposure, and deal-specific definitions of default;

(B) Relevant information regarding—

(*1*) The performance of the underlying credit exposure(s) by exposure amount, which may include the percentage of loans 30, 60, and 90 days past due; default rates; prepayment rates; loans in foreclosure; property types; occupancy; average credit score or other measures of creditworthiness; average loan-to-value ratio; and industry and geographic diversification data on the underlying exposure(s); and

(*2*) For resecuritization positions, performance information on the underlying securitization exposures by exposure amount, which may include the issuer name and credit quality, and the characteristics and performance of the exposures underlying the securitization exposures, in addition to the information described in paragraph (h)(2)(i)(B)(*1*) of this section; and

(C) Relevant market data of the securitization, which may include bid-ask spreads, most recent sales price and historical price volatility, trading volume, implied market rating, and size, depth and concentration level of the market for the securitization; and

(ii) On an ongoing basis (not less frequently than quarterly), evaluating and updating as appropriate the analysis required under this section for each securitization position.

(i) *Documentation.* (1) A [BANKING ORGANIZATION] must adequately document all material aspects of its identification, management, and valuation of market risk covered positions, including internal risk transfers and any re-designations of its positions, including market risk covered positions; its control, oversight and review processes; and its internal assessment of capital adequacy.

(2) A [BANKING ORGANIZATION] must adequately document its trading desk structure and must document policies describing how each trading desk satisfies the applicable requirements in this section.

(3) A [BANKING ORGANIZATION] that calculates the models-based measure for market risk must adequately document all material aspects of its internal models, including validation and review processes and results and an explanation of the empirical techniques used to measure market risk.

(4) A [BANKING ORGANIZATION] that calculates the models-based measure for market risk must document policies and procedures around processes related to:

(i) The risk factor qualitative and quantitative tests, including the description of the mapping of real price observations to risk factors, as described in §§ __.214(b)(2) and (3);

(ii) Data alignment of hypothetical profit and loss and risk-theoretical profit and loss time series used in PLA testing as described in § __.213(c)(1); and

(iii) The assignment of risk factors to liquidity horizons as described in § __.215(b)(1) and any empirical correlations recognized with respect to risk classes.

§ __.204 Measure for market risk.

(a) *General requirements.* (1) A [BANKING ORGANIZATION] must calculate its measure for market risk as the standardized measure for market risk in accordance with

paragraph (b) of this section, unless the [BANKING ORGANIZATION] has one or more model-eligible trading desks, in which case the [BANKING ORGANIZATION] must calculate its measure for market risk as the models-based measure for market risk in accordance with paragraph (c) of this section. A [BANKING ORGANIZATION] must calculate the standardized measure for market risk at least weekly and must calculate the models-based measure for market risk daily.

(2) Notwithstanding paragraph (a)(1) of this section, when a [BANKING ORGANIZATION] is required to calculate market risk capital for a trading desk on a stand-alone basis, the [BANKING ORGANIZATION] must calculate its measure for market risk as the sum of:

(i) The primary measure, calculated by applying the provisions of paragraph (a)(1) of this section to all market risk covered positions that are not included in a stand-alone measure for market risk in paragraph (a)(2)(ii) of this section; and

(ii) The stand-alone measure for each trading desk that is required to calculate market risk capital on a stand-alone basis, calculated by applying the provisions of paragraph (a)(1) of this section to the positions on that trading desk as if those positions were the entire portfolio of market risk covered positions.

(b) *Standardized measure for market risk.* The standardized measure for market risk equals the sum of the standardized non-default capital requirement as defined in this paragraph (b), the default risk capital requirement as defined in paragraph (d) of this section, the fallback capital requirement as defined in paragraphs (e)(1) and (2) of this section, and the capital add-ons for re-designations as defined in paragraph (f) of this section. The standardized non-default

capital requirement equals the sum of the sensitivities-based capital requirement and the residual risk add-on as defined under this paragraph (b).

(1) *Sensitivities-based capital requirement*. A [BANKING ORGANIZATION]'s sensitivities-based capital requirement equals the sensitivities-based capital requirement, as calculated in accordance with §§ __.206 through __.209 for market risk covered positions.

(2) *Residual risk add-on.* A [BANKING ORGANIZATION]'s residual risk add-on equals any residual risk add-on that is required under § __.211(a) and calculated in accordance with § __.211(c) for market risk covered positions.

(c) *Models-based measure for market risk.* The models-based measure for market risk equals:

$$Models\text{-}based\ measure\ for\ market\ risk = NDCR + DRC + fallback\ capital\ requirement + capital\ add\text{-}on\ for\ redesignations$$

Where,

(1) $NDCR$ is the non-default capital requirement under the models-based measure and is calculated as follows, except that, with supervisory approval, the non-default capital requirement under the models-based measure can instead be equal to $SA_{all\ desks}$:

$$NDCR = IMA_{G,A} + \left(SA_{all\ desks} - SA_{G,A}\right)$$

where,

(i) $IMA_{G,A}$ is the models-based non-default capital requirement calculated for model-eligible positions on model-eligible trading desks and is calculated as follows:

$$IMA_{G,A} = max\left((IMCC_{t-1} + SES_{t-1}), \left(\left(m_c \times IMCC_{average}\right) + SES_{average}\right)\right) + PLA\ add\text{-}on$$

where,

(A) $IMCC$ is the internally modelled capital calculation, which is the aggregate capital measure for modellable risk factors and type A non-modellable risk factors based on the weighted average of the constrained and unconstrained ES-based measures and calculated in accordance with § __.215(c) for the most recent outcome, denoted as $t-1$, and for the average of the previous 60 business days, denoted as $average$;

(B) SES is the stressed expected shortfall, which is the aggregate capital measure for non-modellable risk factors, calculated in accordance with § __.215(d) for the most recent outcome, denoted as $t-1$, and for the average of the previous 60 business days, denoted as $average$;

(C) The capital multiplier, m_C, equals 1.5 unless otherwise specified in paragraph (g) of this section; and

(D) $PLA\ add\text{-}on$ equals any PLA add-on that is required under § __.212(b)(2)(ii)(D), § __.212(b)(4), or § __.213(c)(3)(iii) and is calculated in accordance with § __.213(c)(4);

(ii) $SA_{all\ desks}$ equals the standardized non-default capital requirement as defined in paragraph (b) of this section for market risk covered positions on all trading desks;

(iii) $SA_{G,A}$ equals the standardized non-default capital requirement as defined in paragraph (b) of this section for model-eligible positions on model-eligible trading desks;

(2) DRC is the *default risk capital requirement* as defined in paragraph (d) of this section;

(3) $Fallback\ capital\ requirement$ is defined in paragraph (e) of this section; and

(4) $Capital\ add\text{-}on\ for\ redesignations$ is defined in paragraph (f) of this section.

(d) *Default risk capital requirement.* A [BANKING ORGANIZATION]'s default risk capital requirement equals the sum of the default risk capital requirements for non-securitization

debt or equity positions, correlation trading positions, and securitization positions non-CTP, as calculated in accordance with § __.210 for market risk covered positions.

(e) *Fallback capital requirement*—(1) *Calculation of the fallback capital requirement*. Unless the [BANKING ORGANIZATION] receives prior approval of the [AGENCY] to use alternative techniques that appropriately measure the market risk associated with those market risk covered positions, a [BANKING ORGANIZATION]'s fallback capital requirement equals the sum of:

(i) The standardized non-default capital requirement and the default risk capital requirement for any market risk covered positions described by paragraph (e)(3)(ii)(A) for which the [BANKING ORGANIZATION] is able to calculate all parts of those capital requirements; and

(ii) The sum of the absolute value of the fair values of all other market risk covered positions that must be included in the fallback capital requirement in accordance with paragraphs (e)(2)(ii) and (e)(3)(ii) of this section, respectively.

(2) *Standardized measure for market risk*—(i) *Market risk covered positions excluded from certain calculations.* Notwithstanding paragraph (b) of this section, for a [BANKING ORGANIZATION] that calculates the standardized measure for market risk, if for any reason, a [BANKING ORGANIZATION] is unable to calculate the sensitivities-based capital requirement or the default risk capital requirement for a market risk covered position, that position must be excluded from the calculation of the standardized non-default capital requirement and the default risk capital requirement.

(ii) *Market risk covered positions included in the fallback capital requirement*. A [BANKING ORGANIZATION] that calculates the standardized measure for market risk must

include all market risk covered positions excluded under paragraph (e)(2)(i) of this section in the calculation of the fallback capital requirement.

(3) *Models-based measure for market risk*—(i) *Market risk covered positions excluded from certain calculations.* Notwithstanding paragraph (c) of this section, for a [BANKING ORGANIZATION] that calculates the models-based measure for market risk: in cases where, for any reason, a [BANKING ORGANIZATION] is unable to calculate any portion of $SA_{all\ desks}$, $IMA_{G,A}$, $SA_{G,A}$, SA_i as part of the calculation of the $PLA\ add\text{-}on$, or the default risk capital requirement for a market risk covered position subject to that calculation, that market risk covered position must be excluded from the calculation of $IMA_{G,A}$, $SA_{all\ desks}$, $SA_{G,A}$, SA_i, and the default risk capital requirement, unless the [BANKING ORGANIZATION] receives prior approval from the [AGENCY].

(ii) *Market risk covered positions included in the fallback capital requirement.* A [BANKING ORGANIZATION] that calculates the models-based measure for market risk must include the following market risk covered positions in the calculation of the fallback capital requirement:

(A) All model-eligible positions excluded from the calculation of $IMA_{G,A}$ under paragraph (e)(3)(i) of this section; and

(B) All market risk covered positions excluded from the calculation of $SA_{all\ desks}$ under paragraph (e)(3)(i) of this section; and

(C) All market risk covered positions excluded from the default risk capital requirement under paragraph (e)(3)(i) of this section.

(f) *Capital add-ons for re-designations.* (1) After the initial designation of an exposure to be capitalized under subpart D or subpart E of this part or a position to be capitalized as a market

risk covered position under this subpart F, a [BANKING ORGANIZATION] may make a re-designation if:

(i) The [BANKING ORGANIZATION] receives prior approval of senior management and documents the re-designation; and

(ii) The [BANKING ORGANIZATION] sends notification within 30 days of any material re-designation to the [AGENCY].

(2) For each re-designation, a [BANKING ORGANIZATION] must calculate its capital add-on for re-designation following the provisions below.

(i) For the calculation of Expanded Total Risk-Weighted Assets, the capital add-on for re-designation is the higher of zero and the total capital requirement under subpart E of this part and under this subpart F before the re-designation minus the total capital requirement under subpart E of this part and under this subpart after the re-designation.

(ii) For the calculation of Standardized Total Risk-Weighted Assets, the capital add-on for re-designation is the higher of zero and the total capital requirement under subpart D of this part and under this subpart F before the re-designation minus the total capital requirement under subpart D of this part and under this subpart after the re-designation.

(iii) The capital add-on for re-designation must initially be calculated at the time of the re-designation.

(iv) The capital add-on for re-designation may decrease over time, proportionate to the decrease in the balance sheet value of the position from the time of re-designation.

(v) Notwithstanding paragraphs (f)(2)(i) through (iv) of this section, with prior notification to the [AGENCY], no capital add-on for re-designation is required if the re-designation is due to circumstances that are outside of the [BANKING ORGANIZATION]'s

control, including any re-designation required for accounting purposes or a change in the characteristics of the exposure or position that would change its qualification as a market risk covered position.

(3) Any re-designation is irrevocable unless the [BANKING ORGANIZATION] receives approval of the [AGENCY].

(g) *Aggregate trading portfolio backtesting and capital multiplier.* (1) Beginning on the business day a [BANKING ORGANIZATION] begins calculating the models-based measure for market risk, the [BANKING ORGANIZATION] must generate backtesting data by separately comparing each business day's aggregate actual profit and loss for transactions on model-eligible trading desks and aggregate hypothetical profit and loss for transactions on model-eligible trading desks with the corresponding aggregate VaR-based measures for that business day calibrated to a one-day holding period and at a one-tail, 99.0th percent confidence level for market risk covered positions on model-eligible trading desks, subject to § __.212(b)(1)(iii)(B) of this part. Time effects must be treated in a consistent manner in the hypothetical profit and loss used for backtesting.

(i) An exception for actual profit and loss occurs when the aggregate actual loss exceeds the corresponding aggregate VaR-based measure. An exception for hypothetical profit and loss occurs when the aggregate hypothetical loss exceeds the corresponding VaR-based measure.

(ii) If either the business day's actual or hypothetical profit and loss is not available or impossible to compute for a particular day, an exception for actual profit and loss or for hypothetical profit and loss, respectively, occurs. If the VaR-based measure for a business day is not available or impossible to compute for a particular day, exceptions for actual profit and loss

and for hypothetical profit and loss occur. No exception occurs if the unavailability or impossibility is related to an official holiday.

(iii) With approval of the [AGENCY], a [BANKING ORGANIZATION] may consider an exception not to have occurred if:

(A) The [BANKING ORGANIZATION] can demonstrate that the exception is due to technical issues that are unrelated to the [BANKING ORGANIZATION]'s internal models;

(B) The [BANKING ORGANIZATION] can demonstrate that one or more non-modellable risk factors caused the relevant loss, and the portion of the aggregate stressed expected shortfall, as described in paragraph (c)(2)(ii) of this section, that can be attributed to these non-modellable risk factors for that business day exceeds the difference between the [BANKING ORGANIZATION]'s VaR-based measure and the actual or hypothetical loss for that business day; or

(C) The [BANKING ORGANIZATION] can demonstrate that one or more model-ineligible positions caused the relevant loss, and the portion of the aggregate non-default capital requirement under the models-based measure, as described in paragraph (c)(2)(ii) of this section, that can be attributed to these model-ineligible positions for that business day exceeds the difference between the [BANKING ORGANIZATION]'s VaR-based measure and the actual or hypothetical loss for that business day.

(2) A [BANKING ORGANIZATION] must specify the scope of its model-eligible trading desks for the purposes of this paragraph (g) by determining which trading desks are model-eligible trading desks and taking into consideration any changes to the model eligibility status of trading desks as soon as practicable. A [BANKING ORGANIZATION] must use this scope of model-eligible trading desks for the purposes of this paragraph (g) unless the

[AGENCY] notifies the [BANKING ORGANIZATION] in writing that a different scope of model-eligible trading desks must be used.

(3) A [BANKING ORGANIZATION] that calculates the models-based measure for market risk must conduct aggregate trading portfolio backtesting on a quarterly basis. In order to conduct aggregate trading portfolio backtesting, a [BANKING ORGANIZATION] must count the number of exceptions that have occurred over the most recent 250 business days, provided that in the first year that the [BANKING ORGANIZATION] begins backtesting, the [BANKING ORGANIZATION] must count the number of exceptions that have occurred since the date that the [BANKING ORGANIZATION] began backtesting. A [BANKING ORGANIZATION] must count exceptions for aggregate actual profit and loss separately from exceptions for aggregate hypothetical profit and loss. The overall number of exceptions is the greater of the number of exceptions for aggregate actual profit and loss and the number of exceptions for aggregate hypothetical profit and loss.

(4) A [BANKING ORGANIZATION] must use the multiplication factor in Table 1 to § __.204 that corresponds to the overall number of exceptions identified in paragraph (g)(3) of this section to determine the multiplication factor for the models-based non-default capital requirement under paragraph (c)(2)(iii) of this section until the [BANKING ORGANIZATION] conducts aggregate trading portfolio backtesting for the next quarter, unless the [AGENCY] notifies the [BANKING ORGANIZATION] in writing that a different adjustment or other action is appropriate.

Table 1 to § __.204—Backtesting Capital Multiplier (m_c)

Number of exceptions	Multiplication factor
0	1.50
1	1.50
2	1.50

3	1.50
4	1.50
5	1.70
6	1.76
7	1.83
8	1.88
9	1.92
10 or more	2.00

(h) *Maximum loss*. Notwithstanding any other paragraph of this section, a [BANKING ORGANIZATION] may cap the market risk capital requirements of a market risk covered position at the maximum loss of that market risk covered position.

§ __.205 Treatment of certain market risk covered positions and term repo-style transactions the [BANKING ORGANIZATION] elects to include in market risk: net short risk positions; defaulted and distressed positions; hybrid instruments; index instruments and multi-underlying options; equity positions in an investment fund; certain term repo-style transactions; and internal risk transfers.

(a) *Net short risk positions.* A [BANKING ORGANIZATION] must calculate its net short risk positions on a quarterly basis.

(b) *Treatment of defaulted and distressed market risk covered positions.*

(1) For purposes of calculating the default risk capital requirement, a [BANKING ORGANIZATION] must include defaulted market risk covered positions. Notwithstanding § __.204, a [BANKING ORGANIZATION] is not required to include defaulted and distressed market risk covered positions in the standardized non-default capital requirement or the models-based non-default capital requirement.

(2) A [BANKING ORGANIZATION] may treat a distressed position as a defaulted position for the purpose of calculating market risk capital requirements.

(c) *Treatment of hybrid instruments that are market risk covered positions.* For purposes of calculating the standardized non-default capital requirement, a [BANKING ORGANIZATION] must assign risk sensitivities of hybrid instruments into the applicable risk classes such as interest rate, credit spread, and equity risk for calculating the delta, vega, and curvature capital requirements. For the default risk capital requirement, a [BANKING ORGANIZATION] must decompose a hybrid instrument into a non-securitization position and an equity position and calculate the default risk capital requirement for each position respectively.

(d) *Index instruments and multi-underlying options.* For a market risk covered position that is an index instrument or a multi-underlying option, the [BANKING ORGANIZATION] must apply:

(1) For purposes of calculating the standardized non-default capital requirement,

(i) One of the following approaches to calculate the delta capital requirement and the curvature capital requirement:

(A) The look-through approach; or

(B) The single-sensitivity approach, whereby a single sensitivity is calculated to the index and assigned to the relevant bucket in § __.209, in accordance with:

(*1*) For an equity or credit index where at least 75 percent of the market or notional value, respectively, of the underlying constituents, taking into account the weightings of such index, relate to the same sector, the sensitivity must be assigned to the corresponding sector bucket, otherwise the sensitivity must be mapped to an index bucket;

(*2*) For an equity index that is not described in paragraph (d)(1)(i)(B)(*1*) of this section, if at least 75 percent of the market value of the constituents in the index, taking into account the weightings of such index, is invested in large market cap and liquid market economy, then the sensitivity must be assigned to bucket 12 in Table 8 to § __.209; otherwise, the sensitivity must be assigned to bucket 13 in Table 8 to § __.209;

(*3*) For a credit index that is not described in paragraph (d)(1)(i)(B)(*1*) of this section, if at least 75 percent of the notional value of the constituents in the index taking into account the weightings of such index, is invested in investment grade positions, the sensitivity must be assigned to bucket 19 in Table 3 to § __.209; otherwise, the sensitivity must be assigned to bucket 20 in Table 3 to § __.209;

(*4*) For an index that is not described in paragraphs (d)(1)(i)(B)(*1*) through (*3*) of this section, the [BANKING ORGANIZATION] must allocate the index proportionately to the relevant risk classes following the methodology in paragraphs (d)(1)(i)(B)(*1*) through (*3*) of this section;

(*5*) For credit indices, the [BANKING ORGANIZATION] may calculate the delta sensitivity for interest rate risk specified in § __.207(b)(1) or the delta sensitivity for any credit spread risk specified in § __.207(b)(2) as delta sensitivity for equity risk specified in § __.207(b)(3) multiplied by effective duration; and

(*6*) For options on credit indices, the [BANKING ORGANIZATION] must calculate curvature capital requirement specified in § __.206(d) for interest rate risk and credit spread risk for non-securitization positions using the risk weights specified in § __.209(d) multiplied by the duration of the fund; and

(ii) One of the following approaches to calculate the vega capital requirement:

(A) The look-through approach;

(B) For an index, the vega capital requirement with respect to the implied volatility based on the appropriate sector specific bucket or index bucket, which is the same sector specific bucket or index bucket used to calculate the delta capital requirement and the curvature capital requirement in paragraph (d)(1)(i)(B) of this section if the [BANKING ORGANIZATION] calculates the delta capital requirement and the curvature capital requirement under paragraph (d)(1)(i)(B) of this section; or

(C) For a multi-underlying option, the vega capital requirement based on the implied volatility of the option; and

(2) For purposes of calculating the models-based non-default capital requirement, one of the following approaches:

(i) The look-through approach;

(ii) The hypothetical portfolio approach, consistent with paragraph (e)(3)(ii) of this section; or

(iii) After receiving prior approval of the [AGENCY], an alternative modelling approach; and

(3) For purposes of calculating the default risk capital requirement, one of the following approaches:

(i) The look-through approach provided that a [BANKING ORGANIZATION] must set the gross default exposure assigned to a single name, referenced by the instrument, equal to the difference between the value of the instrument assuming only the single name defaults and assuming the LGD for the single name is the appropriate LGD specified in § __.210(b)(1)(iv)

and the value of the instrument assuming none of the single names referenced by the instrument default;

(ii) A single exposure mapped to an appropriate bucket, provided that the index or option substantially meets the criteria for that bucket; or

(iii) A single sub-speculative exposure.

(e) *Treatment of equity positions in an investment fund.* For an equity position in an investment fund that is a market risk covered position, the [BANKING ORGANIZATION] must apply the following provisions.

(1) A [BANKING ORGANIZATION] must determine whether it is able to use the look-through approach to calculate market risk capital requirements for its proportional ownership share of all or a portion of the underlying positions in the fund. If a [BANKING ORGANIZATION] is able to use the look-through approach to calculate market capital requirements for only a portion of the underlying positions in the fund, the [BANKING ORGANIZATION] must treat the equity position in the investment fund as two separate market risk covered positions: one market risk covered position for which the [BANKING ORGANIZATION] is able to apply the look-through approach and one market risk covered position for which the [BANKING ORGANIZATION] is not able to apply the look-through approach, with each position representing the proportional amount of the original position corresponding to the portion of the investment fund that the [BANKING ORGANIZATION] is able to use the look-through approach or not able to use the look-through approach, respectively.

(2) With respect to a position subject to this paragraph (e) for which the [BANKING ORGANIZATION] is able to use the look-through approach to calculate market risk capital

requirements, the [BANKING ORGANIZATION] must apply the treatment specified in paragraph (d) of this section.

(3) With respect to a position subject to this paragraph (e) for which the [BANKING ORGANIZATION] is not able to use the look-through approach to calculate market risk capital requirements, the [BANKING ORGANIZATION] must apply one of the following three methods in paragraphs (e)(3)(i) through (e)(3)(iii) of this section, provided that the [BANKING ORGANIZATION] must not include such market risk covered positions in the calculation of the models-based non-default capital requirement:

(i) *Tracked index method*. For an investment fund that closely tracks an index benchmark, the [BANKING ORGANIZATION] treats the investment fund as the tracked index and calculates the standardized non-default capital requirement by applying the treatment specified in paragraphs (d)(1)(i)(B) and (d)(1)(ii)(B) of this section, and the default risk capital requirement by applying the treatment specified in paragraph (d)(3) of this section.

(ii) *Hypothetical portfolio approach*. The [BANKING ORGANIZATION] decomposes the investment fund into a hypothetical portfolio for the standardized non-default capital requirement and the default risk capital requirement, provided that the hypothetical portfolio either:

(A) Assumes the fund invests to the maximum extent permitted under the fund's investment limits in the exposure types subject to the highest applicable risk weights, provided that if more than one risk weight can be applied to a given exposure, the maximum risk weight applicable must be used, that cause the fund to be fully invested; or

(B) Is based on the most recent quarterly disclosure of the investment fund's holdings of underlying positions.

(iii) *Backstop fund method*. (A) For purposes of calculating the standardized non-default capital requirement, a [BANKING ORGANIZATION] may allocate the equity position in an investment fund to the other sector bucket 11 in Table 8 to § __.209. If an investment fund's investment mandate permits the investment fund to maintain exposure types as described in § __.211(a), the [BANKING ORGANIZATION] must apply the residual risk add-on to the portion of the fund permitted to be invested in such exposure types, assuming the fund would invest in such exposure types to the maximum extent permitted under the mandate.

(B) For purposes of calculating the default risk capital requirement, the [BANKING ORGANIZATION] must calculate the default risk capital requirement based on either:

(*1*) A hypothetical portfolio, as described in paragraph (e)(3)(ii) of this section; or

(*2*) A single sub-speculative equity exposure.

(f) *Term repo-style transactions that the [BANKING ORGANIZATION] elects to include in market risk.* A [BANKING ORGANIZATION] may elect to include a term repo-style transaction in market risk, provided that the [BANKING ORGANIZATION]:

(1) Includes all such term repo-style transactions consistently over time;

(2) Marks the transaction to market;

(3) Captures the market price risk and the issuer-default risk of the transaction by:

(i) Including the risk factor sensitivity to each applicable risk factor pursuant to § __.208; and

(ii) Calculating the default risk capital requirement under § __.210 using:

(A) For the calculation of Expanded Total Risk-Weighted Assets, the exposure amount that would apply to the transaction under §§ __.113 through __.115 multiplied by 8 percent; or

(B) For the calculation of Standardized Total Risk-Weighted Assets, the collateral haircut approach that would apply to the transaction under § __.37(c) multiplied by 8 percent;

(4) Recognizes:

(i) For the calculation of Expanded Total Risk-Weighted Assets, the credit risk mitigation benefits of collateral pursuant to § __.115; or

(ii) For the calculation of Standardized Total Risk-Weighted Assets, the credit risk mitigation benefits of collateral pursuant to § __.37(c); and

(5) Treats the term repo-style transactions the [BANKING ORGANIZATION] elects to include in market risk as market risk covered positions for the purposes of calculations under this part.

(g) *Internal risk transfers.* (1) A [BANKING ORGANIZATION] that is subject to the market risk capital requirements in this subpart F may recognize the risk mitigation benefits of an external hedge under subpart D or subpart E of this part if the internal risk transfer meets the applicable criteria in this paragraph (g).

(i) *Credit risk*. A [BANKING ORGANIZATION] may capitalize under subpart D or subpart E of this part the leg of an eligible internal risk transfer to hedge credit risk transferred by the trading desk to another unit within the [BANKING ORGANIZATION].

(A) For credit risk, an eligible internal risk transfer means an internal risk transfer for which:

(*1*) The documentation of the internal risk transfer identifies the exposure under subpart D or subpart E of this part that is being hedged and its source(s) of credit risk;

(*2*) The terms of the internal risk transfer, aside from amount, are identical to the terms of the external hedge of credit risk at trade initiation; and

(*3*) The external hedge meets the requirements of § __.36 or § __.120, as applicable.

(B) If the amount of the internal risk transfer exceeds the exposure being hedged under subpart D or subpart E of this part, the [BANKING ORGANIZATION] must treat the amount equal to the exposure being hedged under subpart D or subpart E of this part as an eligible internal risk transfer, and the excess amount as a separate internal risk transfer that is not an eligible internal risk transfer, which must be capitalized as a net short credit position.

(ii) *Interest rate risk*. A [BANKING ORGANIZATION] may capitalize the trading desk segment of an eligible internal risk transfer as a market risk covered position. For interest rate risk, an eligible internal risk transfer means an internal risk transfer:

(A) For which the documentation of the internal risk transfer identifies the exposure being hedged and its source(s) of interest rate risk;

(B) If the position is on a dedicated notional trading desk, that desk calculates market risk capital on a stand-alone basis, pursuant to § __.204(a)(2)(ii); and

(C) Is executed on a trading desk that the [BANKING ORGANIZATION] has established for conducting internal risk transfers to hedge interest rate risk and that has received approval from the [AGENCY] to execute such internal risk transfers to hedge interest rate risk.

(2) *CVA risk*. A [BANKING ORGANIZATION] that is subject to the market risk capital requirements and CVA risk-based capital requirements in this subpart F may hedge CVA risk arising from a derivative contract through internal CVA hedges executed with the [BANKING ORGANIZATION]'s trading desk, using an eligible internal risk transfer.

(i) The [BANKING ORGANIZATION] may consider the internal risk transfer of CVA risk to be an eligible internal risk transfer, if the following requirements are satisfied:

(A) The CVA segment of the transaction is an eligible CVA hedge; and

(B) The documentation of the internal risk transfer of CVA risk identifies the CVA risk being hedged and the source(s) of such risk.

(ii) The [BANKING ORGANIZATION] must designate a CVA desk or the functional equivalent to manage internal risk transfers of CVA risk to the [BANKING ORGANIZATION]'s trading desks.

§ __.206 Sensitivities-based capital requirement.

(a) *Overview of the calculation.* A [BANKING ORGANIZATION] must follow the steps below to calculate the sensitivities-based capital requirement:

(1) The [BANKING ORGANIZATION] must identify the market risks in each of its portfolios of market risk covered positions and include the relevant risk classes in its calculation of the sensitivities-based capital requirement. The risk classes are:

(i) Interest rate risk;

(ii) Credit spread risk for non-securitization positions;

(iii) Credit spread risk for correlation trading positions;

(iv) Credit spread risk for securitization positions non-CTP;

(v) Equity risk;

(vi) Commodity risk; and

(vii) Foreign exchange risk.

(2) For each market risk covered position, a [BANKING ORGANIZATION] must identify all of the relevant risk factors as described in § __.208 for which it will calculate sensitivities for delta risk and vega risk as described in § __.207 and curvature scenarios for curvature risk as described in both paragraph (d) of this section and in § __.207. A [BANKING

ORGANIZATION] must also identify the corresponding buckets related to these risk factors as described in § __.209.

(3) To calculate risk-weighted sensitivities a [BANKING ORGANIZATION] must aggregate the delta sensitivities and vega sensitivities, respectively, for each risk factor across all market risk covered positions and apply the corresponding risk weights as described in § __.209(b) and (c). To calculate the net curvature risk position, a [BANKING ORGANIZATION] must aggregate the incremental loss beyond the delta capital requirement by applying an upward and downward shock to each risk factor in accordance with paragraph (d)(1) of this section.

(4) For each bucket, a [BANKING ORGANIZATION] must calculate a bucket-level risk position separately for delta risk and vega risk by aggregating the risk-weighted sensitivities across risk factors with common characteristics as described in paragraphs (b)(2) and (c)(2) of this section. Similarly, for curvature risk, a [BANKING ORGANIZATION] must calculate a bucket-level risk position for each bucket by aggregating the net curvature risk positions within each bucket as described in paragraph (d)(2) of this section.

(5) To calculate the risk class-level capital requirement a [BANKING ORGANIZATION] must aggregate the bucket-level risk positions for each risk class for delta risk, vega risk, and curvature risk (separately) under three correlation scenarios in accordance with paragraphs (b)(3), (c)(3), and (d)(3) of this section. For each risk class, the risk class-level capital requirement is the sum of the delta capital requirement, the vega capital requirement and the curvature capital requirement for the respective correlation scenario.

(i) The delta capital requirement is described in paragraph (b) of this section.

(ii) The vega capital requirement is described in paragraph (c) of this section.

(iii) The curvature capital requirement is described in paragraph (d) of this section.

(iv) The correlation scenarios are provided in paragraph (e) of this section and § __.209.

(6) To calculate the sensitivities-based capital requirement, a [BANKING ORGANIZATION] must sum the risk class-level capital requirements for each risk class under each correlation scenario. The sensitivities-based capital requirement equals the largest capital requirement produced under the three correlation scenarios.

(b) *Delta capital requirement.* For each risk class, a [BANKING ORGANIZATION] must calculate the delta capital requirement for all of its market risk covered positions, except for market risk covered positions whose value at any point in time exclusively depends on an exotic exposure. To calculate the delta capital requirement, for each risk class, a [BANKING ORGANIZATION] must calculate its market risk covered positions' delta sensitivities in accordance with § __.207 to the relevant risk factors specified in § __.208, multiply the sensitivities by the corresponding risk weights specified in paragraph § __.209(b), and aggregate the resulting risk-weighted delta sensitivities in accordance with the following:

(1) *Weighted sensitivity calculation.* For each risk factor, a [BANKING ORGANIZATION] must calculate the delta sensitivity as described in § __.207. A [BANKING ORGANIZATION] must net the delta sensitivities of a risk factor k, irrespective of the market risk covered positions from which they derive, to produce a net delta sensitivity, s_k, across all market risk covered positions. The risk-weighted delta sensitivity, WS_k, equals the product of the net sensitivity, s_k, and the corresponding risk weight specified in paragraph § __.209(b).

(2) *Within bucket aggregation.* For each bucket, b, specified in paragraph § __.209(b), a [BANKING ORGANIZATION] must calculate the delta bucket-level risk position, K_b, by aggregating the risk-weighted delta sensitivities of all risk factors that are within the same

bucket, using the correlation parameter ρ_{kl} as specified in §§ __.206(e) and __.209(b), as follows:

$$K_b = \sqrt{max\left(\left(\sum_k WS_k^2 + \sum_k \sum_{k \neq l} \rho_{kl} WS_k WS_l\right), 0\right)}.$$

(3) *Across bucket aggregation*. A [BANKING ORGANIZATION] must calculate the delta capital requirement for each risk class by aggregating the delta bucket-level risk positions across all of the buckets within the risk class, using the cross-bucket correlation parameter γ_{bc} as specified in §§ __.206(e) and __.209(b), as follows:

$$delta\ capital\ requirement_{(risk\ class)} = \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c}.$$

Where,

(i) $S_b = \sum_k WS_k$ for all risk factors in bucket b and $S_c = \sum_k WS_k$ for all risk factors in bucket c; and

(ii) If S_b and S_c produce a negative number for the overall sum of $\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c$, the [BANKING ORGANIZATION] must calculate the delta capital requirement using an alternative specification, whereby:

(A) $S_b = max(min(\sum_k WS_k, K_b), -K_b)$ for all risk factors in bucket b; and

(B) $S_c = max(min(\sum_k WS_k, K_c), -K_c)$ for all risk factors in bucket c.

(c) *Vega capital requirement.* For each risk class, a [BANKING ORGANIZATION] must calculate the vega capital requirement for market risk covered positions that are options or are positions with embedded optionality, including positions with material prepayment risk. Callable and puttable bonds that are priced based on yield to maturity are not required to estimate

vega capital requirement. To calculate the vega capital requirement, for each risk class, a [BANKING ORGANIZATION] must calculate its market risk covered positions' vega sensitivities in accordance with § __.207 to the relevant risk factors specified in § __.208, multiply the sensitivities by the corresponding risk weights specified in § __.209(c), and aggregate the resulting risk-weighted sensitivities for vega risk in accordance with the following:

(1) *Weighted sensitivity calculation.* For each risk factor, a [BANKING ORGANIZATION] must calculate the vega sensitivity as described in § __.207(c). A [BANKING ORGANIZATION] must net the vega sensitivities of a risk factor k, irrespective of the market risk covered positions from which they derive, to produce a net vega sensitivity, s_k, across all market risk covered positions. The risk-weighted vega sensitivity, WS_k, equals the product of the net sensitivity s_k and the corresponding risk weight specified in § __.209(c).

(2) *Within bucket aggregation.* Unless otherwise specified in § __.209(c), for each bucket, b, specified in § __.209(c), a [BANKING ORGANIZATION] must calculate the vega bucket-level risk position, K_b, by aggregating the risk-weighted vega sensitivities of all risk factors that are within the same bucket, using the correlation parameter, ρ_{kl}, as specified in §§ __.206(e) and __.209(c), as follows:

$$K_b = \sqrt{max\left(\left(\sum_k WS_k^2 + \sum_k \sum_{k \neq l} \rho_{kl} WS_k WS_l\right), 0\right)}.$$

(3) *Across bucket aggregation.* A [BANKING ORGANIZATION] must calculate the vega capital requirement for each risk class by aggregating the vega bucket-level risk positions across all of the buckets within the risk class, using the cross-bucket correlation parameter, γ_{bc}, specified in §§ __.206(e) and __.209(c), as follows:

$$vega\ capital\ requirement_{(risk\ class)} = \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c}.$$

Where,

(i) $S_b = \sum_k WS_k$ for all risk factors in bucket b and $S_c = \sum_k WS_k$ for all risk factors in bucket c; and

(ii) If S_b and S_c produce a negative number for the overall sum of $\sum_b K_b^2 + \sum_b \sum_{c \neq b} \gamma_{bc} S_b S_c$, the [BANKING ORGANIZATION] must calculate the vega capital requirement using an alternative specification, whereby:

(A) $S_b = max(min(\sum_k WS_k, K_b), -K_b)$ for all risk factors in bucket b; and

(B) $S_c = max(min(\sum_k WS_k, K_c), -K_c)$ for all risk factors in bucket c.

(d) *Curvature capital requirement.* For each risk class, a [BANKING ORGANIZATION] must calculate the curvature capital requirement by applying an upward shock and a downward shock to each risk factor and calculate the incremental loss in excess of that already captured by the delta capital requirement for all market risk covered positions that are options or positions with embedded optionality, including positions with material prepayment risk, using the approach in paragraph (d)(1) of this section and in accordance with §§ __.207 and __.209(d). A [BANKING ORGANIZATION] may, on a trading desk by trading desk basis, choose to include market risk covered positions without optionality in the calculation of its curvature capital requirement, provided that the [BANKING ORGANIZATION] does so consistently through time.

(1) *Curvature risk position calculation*. For each market risk covered position for which the curvature capital requirement is calculated, an upward shock and a downward shock must be

applied to risk factor, k. The size of the shock, i.e., the risk weight, is specified in § __.209(d). The net curvature risk position for the portfolio is calculated as,

$$CVR_k^+ = -\sum_i \left(V_i(x_k^{RW(Curvature)^+}) - V_i(x_k) - (RW_k^{Curvature} \times s_{ik}) \right)$$

$$CVR_k^- = -\sum_i \left(V_i\left(x_k^{RW(Curvature)^-}\right) - V_i(x_k) + (RW_k^{Curvature} \times s_{ik}) \right)$$

where,

(i) i is a market risk covered position subject to curvature risk for risk factor k;

(ii) x_k is the current level of risk factor k;

(iii) $V_i(x_k)$ is the value of market risk covered position i at the current level of risk factor k;

(iv) $V_i\left(x_k^{(RW^{(curvature)}+)}\right)$ and $V_i\left(x_k^{(RW^{(curvature)}-)}\right)$ denote the value of market risk covered position i after x_k is shifted (i.e., "shocked") upward and downward, respectively;

(v) $RW_k^{(curvature)}$ is the risk weight for curvature risk for factor k and market risk covered position i; and

(vi) s_{ik} is the delta sensitivity of market risk covered position i with respect to curvature risk factor k, such that:

(A) For the following risk classes, s_{ik} is the delta sensitivity of market risk covered position i*:*

(*1*) Foreign exchange risk; and

(*2*) Equity risk;

(B) For the following risk classes, s_{ik} is the sum of the delta sensitivities to all tenors of the relevant curve of market risk covered position i with respect to curvature risk factor k:

(*1*) Interest rate risk;

(*2*) Credit spread risk for non-securitization positions;

(*3*) Credit spread risk for correlation trading positions;

(*4*) Credit spread risk for securitization positions non-CTP; and

(*5*) Commodity risk; and

(C) The delta sensitivity s_{ik} must be the delta sensitivity described in § __.207 used in calculating the delta capital requirement.

(2) *Within bucket aggregation*. Unless otherwise specified in § __.209(d), for each bucket specified in § __.209(d), a [BANKING ORGANIZATION] must calculate a curvature bucket-level risk position by aggregating the net curvature risk positions within the bucket using the correlation parameter, ρ_{kl}, as specified in §§ __.206(e) and __.209(d) as follows:

$$K_b = max(K_b^+, K_b^-)$$

$$\text{where} \begin{cases} K_b^+ = \sqrt{max\left(\left(\sum_k max(CVR_k^+, 0)^2 + \sum_{l \neq k}\sum_k \rho_{kl} CVR_k^+ CVR_l^+ \psi(CVR_k^+, CVR_l^+)\right), 0\right)} \\ K_b^- = \sqrt{max\left(\left(\sum_k max(CVR_k^-, 0)^2 + \sum_{l \neq k}\sum_k \rho_{kl} CVR_k^- CVR_l^- \psi(CVR_k^-, CVR_l^-)\right), 0\right)} \end{cases};$$

and

(i) The bucket-level capital requirement, K_b, is calculated as the greater of the capital requirement under the upward scenario, K_b^+, or the capital requirement under the downward scenario, K_b^-;

(ii) In the specific case where $K_b^+ = K_b^-$, if $\sum_k CVR_k^+ > \sum_k CVR_k^-$, the upward scenario is selected, otherwise the downward scenario is selected; and

(iii) $\psi(CVR_k, CVR_l) = 0$ if CVR_k and CVR_l both have negative signs;

and $\psi(CVR_k, CVR_l) = 1$ otherwise.

(3) *Across bucket aggregation.* A [BANKING ORGANIZATION] must calculate the curvature capital requirement for each risk class by aggregating the curvature bucket-level risk positions across buckets within each risk class, using the prescribed cross-bucket correlation parameter, γ_{bc}, as specified in §§ __.206(e) and __.209(d), as follows:

$$curvature\ capital\ requirement_{(risk\ class)}$$

$$= \sqrt{max\left(\left(\sum_b K_b^2 + \sum_{c \neq b}\sum_b \gamma_{bc} S_b S_c \psi(S_b, S_c)\right), 0\right)}$$

where,

(i) $S_b = \sum_k CVR_k^+$ for all risk factors in bucket b when the upward scenario has been selected for bucket b, and $S_b = \sum_k CVR_k^-$ otherwise; and

(ii) $\psi(S_b,\ S_c) = 0$ if S_b and S_c both have negative signs, and $\psi(S_b,\ S_c) = 1$ otherwise.

(e) *Correlation scenarios.* A [BANKING ORGANIZATION] must repeat the aggregation of the bucket-level risk positions and risk class-level capital requirements for delta risk, vega risk, and curvature risk for three different values of the correlation parameters ρ_{kl} (correlation between risk factors within a bucket) and γ_{bc} (correlation across buckets within a risk class) as specified below:

(1) For the medium correlation scenario, the correlation parameters ρ_{kl} and γ_{bc} specified in § __.209 apply;

(2) For the high correlation scenario, the specified correlation parameters ρ_{kl} and γ_{bc} are uniformly multiplied by 1.25, with ρ_{kl} and γ_{bc} subject to a cap at 100 percent; and

(3) For the low correlation scenario, the specified correlation parameters ρ_{kl} and γ_{bc} are replaced by,

$\rho_{kl}^{low} = max\big((2 \times \rho_{kl}) - 100\%, 75\% \times \rho_{kl}\big)$, and

$\gamma_{bc}^{low} = max\big((2 \times \gamma_{bc}) - 100\%, 75\% \times \gamma_{bc}\big)$.

§ __.207 Sensitivities-based capital requirement: calculation of delta sensitivities, vega sensitivities and curvature scenarios.

(a) *General requirements.* For purposes of calculating the delta capital requirement, the vega capital requirement, and the curvature capital requirement, a [BANKING ORGANIZATION] must calculate the delta sensitivities, vega sensitivities, and curvature scenarios in accordance with the requirements set forth in this section.

(1) To calculate delta sensitivities, a [BANKING ORGANIZATION] must use the sensitivity definitions for delta risk as provided in paragraph (b) of this section.

(2) To calculate its vega sensitivities, a [BANKING ORGANIZATION] must use the sensitivity definitions for vega risk as provided in paragraph (c) of this section.

(3) A [BANKING ORGANIZATION] must calculate delta sensitivities, vega sensitivities, and curvature scenarios based on pricing models.

(4) For each risk factor as provided in § __.208, a [BANKING ORGANIZATION] must calculate the delta sensitivities, vega sensitivities, and curvature scenarios as the change in the value of a market risk covered position as a result of applying a specified shift to each risk factor, assuming all other relevant risk factors are held at the current level. In cases where applying this assumption is ambiguous, a [BANKING ORGANIZATION] must perform the calculation consistently with the models specified in paragraph (a)(3) of this section. With prior approval

from the [AGENCY], a [BANKING ORGANIZATION] may calculate delta sensitivities, vega sensitivities, and curvature scenarios using an alternative basis.

(5) When calculating delta sensitivities for market risk covered positions that are options or positions with embedded options, a [BANKING ORGANIZATION] must use one of the following assumptions:

(i) The dynamics of the implied volatility are such that when the price of the underlying changes, the implied volatility of an option or a market risk covered position with an embedded option will remain unchanged for any given moneyness (sticky delta rule); or

(ii) When the price of the underlying changes, the implied volatility of an option or a market risk covered position with an embedded option will remain unchanged for any given strike price (sticky strike rule); or

(iii) With prior approval from the [AGENCY], another assumption.

(6) The curvature scenarios and sensitivities to the delta risk factors for credit spread risk for securitization positions non-CTP (as specified in § __.208(d)) must be calculated with respect to the spread of the tranche rather than the spread of the underlying position.

(7) The curvature scenarios and sensitivities to the delta risk factors for credit spread risk for correlation trading positions (as specified in § __.208(e)) must be computed with respect to the underlying names of the securitization position or nth-to-default position.

(8) A [BANKING ORGANIZATION] must calculate the delta sensitivities, vega sensitivities, and curvature scenarios for each risk class in the reporting currency of the [BANKING ORGANIZATION], except for the foreign exchange risk class where, with prior approval of the [AGENCY], the [BANKING ORGANIZATION] may calculate sensitivities and

curvature scenarios relative to a base currency instead of the reporting currency as specified in § __.208(h).

(9) A [BANKING ORGANIZATION] must calculate all sensitivities ignoring the impact of CVA on fair values.

(b) *Sensitivity definitions for delta risk*—(1) *Interest rate risk*. The delta sensitivity for interest rate risk is calculated by changing the interest rate at tenor t of the relevant interest rate curve in a given currency by one basis point (0.0001 in absolute terms) and dividing the resulting change in the value of the market risk covered position, V_i, by 0.0001 as follows:

$$s_{k,r_t} = \frac{V_i(r_t + 0.0001, cs_t) - V_i(r_t, cs_t)}{0.0001}$$

where,

(i) k is a given risk factor;

(ii) i is a given market risk covered position;

(iii) r_t is the interest rate curve at tenor t;

(iv) cs_t is the credit spread curve at tenor t; and

(v) V_i is the value of the market risk covered position i as a function of the interest rate curve and credit spread curve.

(2) *Credit spread risk.* The delta sensitivity for credit spread risk for non-securitization positions, credit spread risk for securitization positions non-CTP, and credit spread risk for correlation trading positions is calculated by changing the relevant credit spread at tenor t by one basis point (0.0001 in absolute terms) and dividing the resulting change in the value of the market risk covered position, V_i, by 0.0001 as follows:

$$s_{k,cs_t} = \frac{V_i(r_t, cs_t + 0.0001) - V_i(r_t, cs_t)}{0.0001}$$

where,

(i) k is a given risk factor;

(ii) i is a given market risk covered position;

(iii) r_t is the interest rate curve at tenor t;

(iv) cs_t is the credit spread curve at tenor t; and

(v) V_i is the value of the market risk covered position i as a function of the interest rate curve and credit spread curve.

(3) *Equity risk.* A [BANKING ORGANIZATION] must calculate the delta sensitivity for equity risk using the equity spot price and the equity repo rate as follows:

(i) A [BANKING ORGANIZATION] must calculate the delta sensitivity for equity spot price by changing the relevant equity spot price by one percentage point (0.01 in relative terms) and dividing the resulting change in the value of the market risk covered position, V_i, by 0.01 as follows:

$$s_k = \frac{V_i(1.01\ EQ_k) - V_i(EQ_k)}{0.01}$$

where,

(A) k is a given equity;

(B) i is a given market risk covered position;

(C) EQ_k is the value of equity k; and

(D) V_i is the value of market risk covered position i as a function of the price of equity k.

(ii) A [BANKING ORGANIZATION] must calculate the delta sensitivity for equity repo rate by applying a parallel shift to the equity repo rate term structure by one basis point (0.0001 in absolute terms) and dividing the resulting change in the value of the market risk covered position, V_i, by 0.0001 as follows:

$$s_k = \frac{V_i(RTS_k + 0.0001) - V_i(RTS_k)}{0.0001}$$

where,

(A) k is a given equity;

(B) RTS_k is the repo term structure of equity k; and

(C) V_i is the value of market risk covered position i as a function of the repo term structure of equity k.

(4) *Commodity risk.* A [BANKING ORGANIZATION] must calculate the delta sensitivity for commodity risk by changing the relevant commodity spot price by one percentage point (0.01 in relative terms) and dividing the resulting change in the value of the market risk covered position (Vi) by 0.01 as follows:

$$s_k = \frac{V_i(1.01\ CTY_k) - V_i(CTY_k)}{0.01}$$

where,

(i) k is a given commodity;

(ii) CTY_k is the value of commodity k; and

(iii) V_i is the value of market risk covered position i as a function of the spot price of commodity k:

(5) *Foreign exchange risk.* A [BANKING ORGANIZATION] must calculate the delta sensitivity for foreign exchange risk by changing the relevant exchange rate by one percentage point (0.01 in relative terms) and dividing the resulting change in the value of the market risk covered position, V_i, by 0.01 as follows:

$$s_k = \frac{V_i(1.01\ FX_k) - V_i(FX_k)}{0.01}$$

where,

(i) k is a given currency;

(ii) FX_k is the exchange rate between a given currency and a [BANKING ORGANIZATION]'s reporting currency or base currency, as applicable, where the foreign exchange spot rate is the current market price of one unit of another currency expressed in the units of the [BANKING ORGANIZATION]'s reporting currency or base currency, as applicable; and

(iii) V_i is the value of market risk covered position i as a function of the exchange rate k.

(c) *Sensitivity definitions for vega risk.* (1) A [BANKING ORGANIZATION] must calculate the vega sensitivity to a given risk factor (provided in § __.208) by multiplying vega by the volatility of the option as follows:

$$s_k = vega \times volatility$$

where,

(i) $vega$ is defined as the change in the value of the option V_i as a result of a small amount of change to the volatility σ_i, which can be represented as $\frac{\partial V_i}{\partial \sigma_i}$; and

(ii) $volatility$ is defined as either the implied volatility or at-the-money volatility of the option, depending on which is used by the models used to calculate vega sensitivity to determine the intrinsic value of volatility in the price of the option.

(2) For interest rate risk, a [BANKING ORGANIZATION] must map the implied volatility of the option to one or more tenors specified in the risk factors definitions in § __.208(b)(2).

(3) A [BANKING ORGANIZATION] must assign market risk covered positions that are options or positions with embedded options that do not have a maturity to the longest prescribed maturity tenor.

(4) A [BANKING ORGANIZATION] must map market risk covered positions that are options or positions with embedded options that do not have a strike price, that have multiple strike prices, or are barrier options, to the strike prices and maturities used for models used to calculate vega sensitivity to value these positions.

§ __.208 Sensitivities-based capital requirement: risk factor definitions.

(a) For purposes of calculating the sensitivities-based capital requirement, a [BANKING ORGANIZATION] must identify all of the relevant risk factors in accordance with the requirements in this section for its market risk covered positions. Where specified, a [BANKING ORGANIZATION] must use the tenors or maturities specified in this section and assign risk factors and corresponding sensitivities to specified tenors or maturities by linear interpolation or a method that is most consistent with the pricing functions used by the internal risk management models.

(b) *Risk factors for interest rate risk*—(1) *Delta risk factors for interest rate risk.* The delta risk factors for interest rate risk are defined for each currency and consist of interest rate risk factors as well as inflation rate risk factors and cross-currency basis risk factors, as applicable.

(i) For each currency, the delta risk factors for interest rate risk are defined along two dimensions:

(A) An interest rate curve, for the currency, in which interest rate-sensitive market risk covered positions are denominated; and

(B) Tenor: 0.25 years, 0.5 years, 1 year, 2 years, 3 years, 5 years, 10 years, 15 years, 20 years, and 30 years.

(ii) For each currency (each interest rate risk bucket), a [BANKING ORGANIZATION] must calculate, in addition to paragraph (b)(1)(i) of this section, separate delta sensitivities for each of the following delta risk factors, as applicable:

(A) *Inflation rate risk factors*. Inflation rate risk factors apply to any market risk covered position whose cash flows are functionally dependent on a measure of inflation (inflation positions). Inflation rate risk factors must be based on the market-implied inflation rates for each currency where term structure is not recognized. All inflation rate risk for a given currency must be aggregated as the sum of the delta sensitivities to the inflation rate risk factors of all inflation positions.

(B) *Cross-currency basis risk factors.* The delta risk factors for interest rate risk include one of two possible cross-currency basis risk factors for each currency where term structure is not recognized. The two cross-currency basis risk factors are basis of each currency over USD or basis of each currency over EUR. Cross-currency bases that do not relate to either basis over USD or basis over EUR must be computed either on "basis over USD" or "basis over EUR," but not both.

(2) *Vega risk factors for interest rate risk*. The vega risk factors for interest rate risk are defined for each currency and consist of:

(i) The implied volatilities of inflation rate risk-sensitive options as defined along paragraph (b)(2)(iii)(A) of this section;

(ii) The implied volatilities of cross-currency basis risk-sensitive options as defined along paragraph (b)(2)(iii)(A) of this section; and

(iii) The implied volatilities of interest rate risk-sensitive options as defined along paragraphs (b)(2)(iii)(A) and (B) of this section.

(A) The maturity of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years; and

(B) The residual maturity of the underlying instrument at the expiry date of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(3) *Curvature risk factors for interest rate risk.* The curvature risk factors for interest rate risk are defined along one dimension, the relevant interest rate curve, per currency, where term structure is not recognized. To calculate curvature scenarios, a [BANKING ORGANIZATION] must shift all tenors provided in paragraph (b)(1)(i)(B) of this section, in parallel. There is no curvature capital requirement for inflation risk and cross-currency basis risks.

(c) *Risk factors for credit spread risk for non-securitization positions*—(1) *Delta risk factors for credit spread risk for non-securitization positions.* The delta risk factors for credit spread risk for non-securitization positions are defined along two dimensions:

(i) The issuer credit spread curve; and

(ii) Tenor: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(2) *Vega risk factors for credit spread risk for non-securitization positions*. For each credit spread curve, the vega risk factors for credit spread risk for non-securitization positions are the implied volatilities of options as defined along one dimension for the maturity of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(3) *Curvature risk factors for credit spread risk for non-securitization positions*. The curvature risk factors for credit spread risk for non-securitization positions are defined along the relevant issuer credit spread curves. For purposes of calculating curvature scenarios, a [BANKING ORGANIZATION] must ignore the bond-CDS basis and treat the bond-inferred spread curve of an issuer and the CDS-inferred spread curve of that same issuer as a single

spread curve. To calculate curvature scenarios, a [BANKING ORGANIZATION] must shift all tenors provided in paragraph (c)(1)(ii) of this section, in parallel.

(d) *Risk factors for credit spread risk for securitization positions non-CTP*—(1) *Delta risk factors for credit spread risk for securitization positions non-CTP*. The delta risk factors for credit spread risk for securitization positions non-CTP are defined along two dimensions:

(i) The tranche credit spread curve; and

(ii) Tenor of the tranche: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(2) *Vega risk factors for credit spread risk for securitization positions non-CTP.* For each tranche credit spread curve, the vega risk factors for credit spread risk for securitization positions non-CTP are the implied volatilities of options as defined along one dimension for the maturity of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(3) *Curvature risk factors for credit spread risk for securitization positions non-CTP*. The curvature risk factors for credit spread risk for securitization positions non-CTP are defined along one dimension, the relevant tranche credit spread curves. For purposes of calculating curvature scenarios, a [BANKING ORGANIZATION] must ignore the bond-CDS basis and treat the bond-inferred spread curve of a tranche and the CDS-inferred spread curve of that same tranche as a single spread curve. To calculate curvature scenarios, a [BANKING ORGANIZATION] must shift all tenors provided in paragraph (d)(1)(ii) of this section in parallel.

(e) *Risk factors for credit spread risk for correlation trading positions*—(1) *Delta risk factors for credit spread risk for correlation trading positions*. The delta risk factors for credit spread risk for correlation trading positions are defined along two dimensions:

(i) The underlying credit spread curve; and

(ii) Tenor of the underlying name: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(2) *Vega risk factors for credit spread risk for correlation trading positions*. For each underlying credit spread curve, the vega risk factors for the credit spread risk for correlation trading positions are the implied volatilities of options as defined along one dimension for the maturity of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(3) *Curvature risk factors for credit spread risk for correlation trading positions*. The curvature risk factors for credit spread risk for correlation trading positions are defined along one dimension, the relevant underlying credit spread curves. For purposes of calculating curvature scenarios, a [BANKING ORGANIZATION] must disregard the bond-CDS basis and treat the bond-inferred spread curve of a given name in an index and the CDS-inferred spread curve of that same underlying name as a single spread curve. To calculate curvature scenarios, a [BANKING ORGANIZATION] must shift all tenors provided in paragraph (e)(1)(ii) of this section in parallel.

(f) *Risk factors for equity risk*—(1) *Delta risk factors for equity risk*. The delta risk factors for equity risk are defined for each issuer and consist of equity spot prices and equity repo rates, as appropriate.

(2) *Vega risk factors for equity risk*. The vega risk factors for equity risk are defined for each issuer and consist of the implied volatilities of the spot prices of equity risk-sensitive options as defined along the maturity of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(3) *Curvature risk factors for equity risk*. The curvature risk factors for equity risk are defined for each issuer and consist of all equity spot prices. There are no curvature risk factors for equity repo rates.

(g) *Risk factors for commodity risk*—(1) *Delta risk factors for commodity risk*. The delta risk factors for commodity risk are all commodity spot prices or forward prices and are defined along two dimensions for each commodity:

(i) The contracted delivery location of the commodity; and

(ii) Remaining maturity of the contract: 0 years, 0.25 years, 0.5 years, 1 year, 2 years, 3 years, 5 years, 10 years, 15 years, 20 years, and 30 years.

(2) *Vega risk factors for commodity risk*. The vega risk factors for commodity risk are the implied volatilities of commodity-sensitive options as defined along one dimension for each commodity, the maturity of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(3) *Curvature risk factors for commodity risk.* The curvature risk factors for commodity risk are defined along one dimension per commodity, the constructed curve per commodity spot prices or forward prices, consistent with the delta risk factor, where term structure is not recognized. For the calculation of sensitivities, all tenors provided in paragraph (g)(1)(ii) of this section, are to be shifted in parallel.

(h) *Risk factors for foreign exchange risk*—(1) *Delta risk factors for foreign exchange risk.* The delta risk factors for foreign exchange risk are all the exchange rates between the currency in which a market risk covered position is denominated and the reporting currency.

(i) For market risk covered positions that reference an exchange rate between a pair of non-reporting currencies, the delta risk factors for foreign exchange risk are all the exchange rates between:

(A) The reporting currency; and

(B) The currency in which a market risk covered position is denominated and any other currencies referenced by the market risk covered position.

(ii) Alternatively, a [BANKING ORGANIZATION] may calculate delta risk factors for foreign exchange risk relative to a base currency instead of the reporting currency if approved by the [AGENCY]. In such case a [BANKING ORGANIZATION] must account for the foreign exchange risk against the base currency and the foreign exchange risk between the reporting currency and the base currency (i.e., translation risk). The resulting foreign exchange risk calculated relative to the base currency must be converted to the capital requirements in the reporting currency using the spot reporting/base exchange rate reflecting the foreign exchange risk between the base currency and the reporting currency.

(A) To use this alternative, a [BANKING ORGANIZATION] may only consider a single currency as its base currency; and

(B) A [BANKING ORGANIZATION] must demonstrate to the [AGENCY] that calculating foreign exchange risk relative to its base currency provides an appropriate risk representation of the [BANKING ORGANIZATION]'s market risk covered positions and that the translation risk between the base currency and the reporting currency is addressed.

(2) *Vega risk factors for foreign exchange risk.* The vega risk factors for foreign exchange risk-sensitive options are the implied volatility of options that reference exchange rates between currency pairs defined along the maturity of the option: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(3) *Curvature risk factors for foreign exchange risk*. The curvature risk factors for foreign exchange risk are all the exchange rates between the currency in which a market risk covered position is denominated and the reporting currency.

(i) For market risk covered positions that reference an exchange rate between a pair of non-reporting currencies, the curvature risk factors for foreign exchange risk are all the exchange rates between:

(A) The reporting currency; and

(B) The currency in which a market risk covered position is denominated and any other currencies referenced by the market risk covered position.

(ii) If the [BANKING ORGANIZATION] has received prior approval of the [AGENCY] to use the base currency approach in paragraph (h)(1)(ii) of this section, curvature risk factors for foreign exchange risk must be calculated relative to the base currency instead of the reporting currency, and then converted to the capital requirements in the reporting currency using the spot reporting/base exchange rate.

§ __.209 Sensitivities-based method: definitions of buckets, risk weights and correlation parameters.

(a) For the purpose of calculating the sensitivities-based capital requirement, a [BANKING ORGANIZATION] must identify all of the relevant buckets, corresponding risk weights and correlation parameters for each risk class as provided in paragraph (b) of this section (delta capital requirement), paragraph (c) of this section (vega capital requirement), and paragraph (d) of this section (curvature capital requirement), for its market risk covered positions.

(b) *Delta capital requirement*—(1) *Delta buckets, risk weights, and correlations for interest rate risk*. (i) A [BANKING ORGANIZATION] must establish a separate interest rate risk bucket for each currency.

(ii) For calculating risk-weighted delta sensitivities, the risk weights for each tenor of an interest rate curve are set out in Table 1 to § __.209.

Table 1 to § __.209—Delta Risk Weights for Interest Rate Risk

Tenor	0.25 year	0.5 year	1 year	2 year	3 year
Risk weight	1.7%	1.7%	1.6%	1.3%	1.2%
Tenor	5 year	10 year	15 year	20 year	30 year
Risk weight	1.1%	1.1%	1.1%	1.1%	1.1%

(iii) The risk weight for inflation rate risk factors and cross-currency basis risk factors equals 1.6 percent.

(iv) For United States Dollar, Australian Dollar, Canadian Dollar, Euro, Japanese Yen, Swedish Krona, and United Kingdom Pound, and any other currencies specified by the [AGENCY], a [BANKING ORGANIZATION] may divide the risk weights in paragraphs (b)(1)(ii) and (iii) of this section by $\sqrt{2}$.

(v) For purposes of aggregating risk-weighted delta sensitivities of interest rate risk within a bucket as specified in § __.206(b)(2), a [BANKING ORGANIZATION] must use the following correlation parameters:

(A) The correlation parameter ρ_{kl} between risk-weighted delta sensitivities WS_k and WS_l within the same bucket, with the same tenor but different interest rate curves equals 99.9 percent.

(B) The correlation parameter ρ_{kl} between risk-weighted delta sensitivities WS_k and WS_l within the same bucket, with different tenors and the same interest rate curve are set out in Table 2 to § __.209.

Table 2 to § __.209—Interest Rate Risk Correlation Parameter (ρ_{kl}) within the Same Bucket, with Different Tenors and the Same Interest Rate Curve

	0.25 year	0.5 year	1 year	2 year	3 year	5 year	10 year	15 year	20 year	30 year
0.25 year	100.0%	97.0%	91.4%	81.1%	71.9%	56.6%	40.0%	40.0%	40.0%	40.0%
0.5 year		100.0%	97.0%	91.4%	86.1%	76.3%	56.6%	41.9%	40.0%	40.0%
1 year			100.0%	97.0%	94.2%	88.7%	76.3%	65.7%	56.6%	41.9%
2 year				100.0%	98.5%	95.6%	88.7%	82.3%	76.3%	65.7%
3 year					100.0%	98.0%	93.2%	88.7%	84.4%	76.3%
5 year						100.0%	97.0%	94.2%	91.4%	86.1%
10 year							100.0%	98.5%	97.0%	94.2%
15 year								100.0%	99.0%	97.0%
20 year									100.0%	98.5%
30 year										100.0%

(C) The correlation parameter ρ_{kl} between risk-weighted delta sensitivities WS_k and WS_l within the same bucket, with different tenors and different interest rate curves equals the correlation parameter ρ_{kl} specified in Table 2 to § __.209 multiplied by 99.9 percent.

(D) The correlation parameter ρ_{kl} between risk-weighted delta sensitivities WS_k and WS_l to different inflation curves within the same bucket equals 99.9 percent.

(E) The correlation parameter ρ_{kl} between a risk-weighted delta sensitivity WS_k to the inflation curve and a risk weighted delta sensitivity WS_l to a given tenor of the relevant interest rate curve equals 40 percent.

(F) The correlation parameter ρ_{kl} equals zero percent between risk-weighted delta sensitivity WS_k to a cross-currency basis curve and a risk weighted delta sensitivity WS_l to each of the following curves:

(*1*) A given tenor of the relevant interest rate curve;

(*2*) The inflation curve; and

(*3*) Any other cross-currency basis curve.

(vi) For purposes of aggregating delta bucket-level risk positions across buckets within the interest rate risk class as specified in § __.206(b)(3), the cross-bucket correlation parameter γ_{bc} equals 50 percent.

(2) *Delta buckets, risk weights, and correlations for credit spread risk for non-securitizations*. (i) For credit spread risk for non-securitizations, a [BANKING ORGANIZATION] must establish buckets along two dimensions, credit quality and sector, as set out in Table 3 to § __.209. In assigning a delta sensitivity to a sector, a [BANKING ORGANIZATION] must follow market convention. A [BANKING ORGANIZATION] must assign each delta sensitivity to one and only one of the sector buckets in Table 3 to § __.209. Delta sensitivities that a [BANKING ORGANIZATION] cannot assign to a sector must be assigned to the other sector, bucket 18 in Table 3 to § __.209.

(ii) For calculating risk weighted delta sensitivities for credit spread risk for non-securitizations, a [BANKING ORGANIZATION] must use the risk weights in Table 3 to § __.209. The risk weights are the same for all tenors within a bucket.

Table 3 to § __.209—Delta Buckets and Risk Weights for Credit Spread Risk for Non-Securitizations

Bucket number	Credit quality category	Sector	Risk weight
1	Investment grade	Sovereign exposures, MDBs, and specified supranational entities	0.5%
2		PSEs, government-backed non-financials, GSE debt, education, and public administration	1.0%
3		Financials including government-backed financials and real estate activities	5.0%
4		Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	3.0%
5		Consumer goods and services, transportation and storage, and administrative and support service activities	3.0%
6		Technology and telecommunications	2.0%
7		Health care, utilities, and professional and technical activities	1.5%
8		Covered bonds	1.5%
9	Speculative grade	Sovereign exposures, MDBs, and specified supranational entities	3.0%
10	Speculative grade and sub-speculative grade	PSEs, government-backed non-financials, education, and public administration	4.0%
11		Financials including government-backed financials and real estate activities	12.0%
12		Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	7.0%
13		Consumer goods and services, transportation and storage, and administrative and support service activities	8.5%
14		Technology and telecommunications	5.5%
15		Health care, utilities, and professional and technical activities	5.0%
16		Covered bonds	2.5%

17	Sub-speculative grade	Sovereign exposures, MDBs, and specified supranational entities	7.0%
18	Other sector		12.0%
19	Investment grade indices		1.5%
20	Speculative grade and sub-speculative grade indices		5.0%

(iii) For purposes of aggregating risk weighted delta sensitivities of credit spread risk for non-securitizations within a bucket as specified in § __.206(b)(2), a [BANKING ORGANIZATION] must use the following correlation parameters:

(A) For buckets 1 to 17, the correlation parameter ρ_{kl} between risk weighted delta sensitivities WS_k and WS_l equals:

$$\rho_{kl} = \rho_{kl}^{(name)} \times \rho_{kl}^{(tenor)} \times \rho_{kl}^{(basis)}$$

where,

(*1*) $\rho_{kl}^{(name)}$ equals 100 percent if the two names of the delta sensitivities to risk factors k and l are identical, and 35 percent otherwise;

(*2*) $\rho_{kl}^{(tenor)}$ equals 100 percent if the two tenors of the delta sensitivities to risk factors k and l are identical, and 65 percent otherwise; and

(*3*) $\rho_{kl}^{(basis)}$ equals 100 percent if the two delta sensitivities are related to the same curve, and 99.9 percent otherwise.

(B) For bucket 18, the risk delta bucket level risk position equals the sum of the absolute values of the risk weighted delta sensitivities allocated to this bucket,

$$K_{b(other\ bucket)} = \sum_k |WS_k|.$$

(C) For buckets 19 and 20, the correlation parameter ρ_{kl} between risk weighted delta sensitivities WS_k and WS_l equals:

$$\rho_{kl} = \rho_{kl}^{(name)} \times \rho_{kl}^{(tenor)} \times \rho_{kl}^{(basis)}$$

where,

(*1*) $\rho_{kl}^{(name)}$ equals 100 percent if the two names of the delta sensitivities to risk factors k and l are identical, and 80 percent otherwise;

(*2*) $\rho_{kl}^{(tenor)}$ equals 100 percent if the two tenors of the delta sensitivities to risk factors k and l are identical, and 65 percent otherwise; and

(*3*) $\rho_{kl}^{(basis)}$ equals 100 percent if the two delta sensitivities are related to the same curves, and 99.9 percent otherwise.

(iv) For purposes of aggregating delta bucket-level risk positions across buckets within the credit spread risk for non-securitizations risk class as specified in § __.206(b)(3), a [BANKING ORGANIZATION] must calculate the cross-bucket correlation parameter γ_{bc} as follows::

$$\gamma_{bc} = \gamma_{bc}^{(credity\ quality)} \times \gamma_{bc}^{(sector)}$$

where,

(A) $\gamma_{bc}^{(credit\ quality)}$ equals 50 percent where the two buckets b and c are both in the set of buckets 1 to 17, and have a different credit quality category, where speculative and sub-speculative grade is treated as one credit quality category; $\gamma_{bc}^{(credit\ quality)}$ equals 100 percent otherwise; and

(B) $\gamma_{bc}^{(sector)}$ equals 100 percent if the two buckets belong to the same sector, and the specified values set out in Table 4 to § __.209 otherwise.

TABLE 4 TO § __.209—Credit spread risk for non-securitizations correlation parameter $\gamma_{bc}^{(sector)}$ where the buckets do not belong to the same sector

Bucket	1, 9, or 17	2 or 10	3 or 11	4 or 12	5 or 13	6 or 14	7 or 15	8 or 16	18	19	20
1, 9, or 17		75%	10%	20%	25%	20%	15%	10%	0%	45%	45%
2 or 10			5%	15%	20%	15%	10%	10%	0%	45%	45%
3 or 11				5%	15%	20%	5%	20%	0%	45%	45%
4 or 12					20%	25%	5%	5%	0%	45%	45%
5 or 13						25%	5%	15%	0%	45%	45%
6 or 14							5%	20%	0%	45%	45%
7 or 15								5%	0%	45%	45%
8 or 16									0%	45%	45%
18										0%	0%
19											75%
20											

(3) *Delta buckets, risk weights, and correlations for credit spread risk for correlation trading positions*. (i) For credit spread risk for correlation trading positions, a [BANKING ORGANIZATION] must establish buckets along two dimensions, credit quality and sector as set out in Table 5 to § __.209. In assigning a delta sensitivity to a sector, a [BANKING ORGANIZATION] must follow market convention. A [BANKING ORGANIZATION] must assign each delta sensitivity to one and only one of the sector buckets in Table 5 to § __.209. Delta sensitivities that a [BANKING ORGANIZATION] cannot assign to a sector must be assigned to the other sector, bucket 16 in Table 5 to § __.209.

(ii) For calculating risk weighted delta sensitivities for credit spread risk for correlation trading positions, a [BANKING ORGANIZATION] must use the risk weights in Table 5 to § __.209. The risk weights are the same for all tenors within a bucket.

Table 5 to § __.209—Delta Buckets and Risk Weights for Credit Spread Risk for Correlation Trading Positions

Bucket number	Credit quality category	Sector	Risk weight
1	Investment grade	Sovereign exposures, MDBs, and specified supranational entities	4.0%
2		PSEs, government-backed non-financials, GSE debt, education, and public administration	4.0%
3		Financials including government-backed financials	8.0%
4		Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	5.0%
5		Consumer goods and services, transportation and storage, and administrative and support service activities	4.0%
6		Technology and telecommunications	3.0%
7		Health care, utilities, and professional and technical activities	2.0%
8	Speculative grade	Sovereign exposures, MDBs, and specified supranational entities	13.0%
9	Speculative grade and sub-speculative grade	PSEs, government-backed non-financials, education, and public administration	13.0%
10		Financials including government-backed financials	16.0%
11		Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	10.0%
12		Consumer goods and services, transportation and storage, and administrative and support service activities	12.0%
13		Technology and telecommunications	12.0%
14		Health care, utilities, and professional and technical activities	12.0%
15	Sub-speculative grade	Sovereign exposures, MDBs, and specified supranational entities	16.0%
16	Other sector		13.0%

(iii) For purposes of aggregating risk weighted delta sensitivities of credit spread risk for correlation trading positions within a bucket as specified in § __.206(b)(2), a [BANKING ORGANIZATION] must use the following correlation parameters:

(A) For buckets 1 to 15, the correlation parameter ρ_{kl} between risk weighted delta sensitivities WS_k and WS_l equals:

$$\rho_{kl} = \rho_{kl}^{(name)} \times \rho_{kl}^{(tenor)} \times \rho_{kl}^{(basis)}$$

where,

(*1*) $\rho_{kl}^{(name)}$ equals 100 percent if the two names of delta sensitivities to risk factors k and l are identical, and 35 percent otherwise;

(*2*) $\rho_{kl}^{(tenor)}$ equals 100 percent if the two tenors of the delta sensitivities to risk factors k and l are identical, and 65 percent otherwise; and

(*3*) $\rho_{kl}^{(basis)}$ equals 100 percent if the two delta sensitivities are related to same curve, and 99 percent otherwise.

(B) For bucket 16, the delta bucket-level risk position equals the sum of the absolute values of the risk weighted delta sensitivities allocated to this bucket,

$$K_{b(other\ bucket)} = \sum_k |WS_k|.$$

(C) For purposes of aggregating delta bucket-level risk positions across buckets within the credit spread risk for correlation trading positions risk class as specified in § __.206(b)(3), a [BANKING ORGANIZATION] must calculate the cross-bucket correlation parameter γ_{bc} as follows:

$$\gamma_{bc} = \gamma_{bc}^{(credity\ quality)} \times \gamma_{bc}^{(sector)}$$

where,

(*1*) $\gamma_{bc}^{(credit\ quality)}$ equals 50 percent where the two buckets b and c are both in buckets 1 to 16 and have a different credit quality category, where speculative and sub-speculative grade is treated as one credit quality category; $\gamma_{bc}^{(credit\ quality)}$ equals 100 percent otherwise; and

(*2*) $\gamma_{bc}^{(sector)}$ equals 100 percent if the two buckets belong to the same sector, and the specified values set out in Table 6 to § __.209 otherwise.

TABLE 6 to § __.209—Credit spread risk for correlation trading positions correlation parameter $\gamma_{bc}^{(sector)}$ where the buckets do not belong to the same sector

Bucket	1, 8, or 15	2 or 9	3 or 10	4 or 11	5 or 12	6 or 13	7 or 14	16
1, 8, or 15		75%	10%	20%	25%	20%	15%	0%
2 or 9			5%	15%	20%	15%	10%	0%
3 or 10				5%	15%	20%	5%	0%
4 or 11					20%	25%	5%	0%
5 or 12						25%	5%	0%
6 or 13							5%	0%
7 or 14								0%
16								

(4) *Delta buckets, risk weights, and correlations for credit spread risk for securitization positions non-CTP*. (i) For credit spread risk for securitization positions non-CTP, a [BANKING ORGANIZATION] must establish buckets along two dimensions, credit quality and sector, as set out in Table 7 to § __.209. In assigning a delta sensitivity to a credit quality, a [BANKING ORGANIZATION] must take into account the structural features of the securitization position non-CTP. In assigning a delta sensitivity to a sector, a [BANKING ORGANIZATION] must follow market convention. Delta sensitivities of any tranche that a [BANKING ORGANIZATION] cannot assign to a sector must be assigned to the other sector bucket.

(ii) For calculating risk weighted delta sensitivities for credit spread risk for securitization positions non-CTP, a [BANKING ORGANIZATION] must use the risk weights in Table 7 to § __.209.

TABLE 7 TO § __.209—DELTA Buckets and Risk Weights for Credit Spread Risk for Securitization Positions Non-CTP

Bucket number	Credit quality category	Sector	Risk weight
1	Senior investment grade	Prime RMBS	0.90%
2		Mid-prime RMBS	1.50%
3		Sub-prime RMBS	2.00%
4		Commercial mortgage-backed securities	2.00%
5		Asset-backed securities – Student loans	0.80%
6		Asset-backed securities – Credit cards and personal loans	1.20%
7		Asset-backed securities – Auto and dealer floorplan	1.20%
8		Collateralized loan obligation non-CTP	1.40%
9	Non-senior investment grade	Prime RMBS	1.13%
10		Mid-prime RMBS	1.88%
11		Sub-prime RMBS	2.50%
12		Commercial mortgage-backed securities	2.50%
13		Asset-backed securities – Student loans	1.00%
14		Asset-backed securities – Credit cards and personal loans	1.50%
15		Asset-backed securities – Auto and dealer floorplan	1.50%
16		Collateralized loan obligation non-CTP	1.75%
17	Speculative and sub-speculative grade	Prime RMBS	1.58%
18		Mid-prime RMBS	2.63%
19		Sub-prime RMBS	3.50%
20		Commercial mortgage-backed securities	3.50%
21		Asset-backed securities – Student loans	1.40%
22		Asset-backed securities – Credit cards and personal loans	2.10%

23		Asset-backed securities – Auto and dealer floorplan	2.10%
24		Collateralized loan obligation non-CTP	2.45%
25	Other sector		3.50%

(iii) For purposes of aggregating risk weighted delta sensitivities of credit spread risk for securitization positions non-CTP within a bucket as specified in § __.206(b)(2), a [BANKING ORGANIZATION] must use the following correlation parameters:

(A) For buckets 1 through 24, the correlation parameter ρ_{kl} between risk weighted delta sensitivities WS_k and WS_l, equals:

$$\rho_{kl} = \rho_{kl}^{(tranche)} \times \rho_{kl}^{(tenor)} \times \rho_{kl}^{(basis)}$$

where,

(*1*) $\rho_{kl}^{(tranche)}$ equals 100 percent where the two delta sensitivities to risk factors k and l are within the same bucket and related to the same tranche, with more than 80 percent overlap in notional terms and 40 percent otherwise;

(*2*) $\rho_{kl}^{(tenor)}$ equals 100 percent if the two tenors of the delta sensitivities to risk factors k and l are identical, and 80 percent otherwise; and

(*3*) $\rho_{kl}^{(basis)}$ equals 100 percent if the two delta sensitivities reference the same curve, and 99.9 percent otherwise.

(B) For bucket 25, the delta bucket-level risk position equals the sum of the absolute values of the risk weighted delta sensitivities allocated to this bucket,

$$K_{b(other\ bucket)} = \sum_k |WS_k|.$$

(iv) For purposes of aggregating delta bucket-level risk positions across buckets within the credit spread risk for securitization positions non-CTP risk class as specified in § __.206(b)(3), the cross-bucket correlation parameter γ_{bc} equals zero percent.

(5) *Delta buckets, risk weights, and correlations for equity risk*. (i) For equity risk, a [BANKING ORGANIZATION] must establish buckets along three dimensions, market capitalization, economy and sector as set out in Table 8 to § __.209. To assign a delta sensitivity to an economy, a [BANKING ORGANIZATION], at least annually, must review and update the countries and territorial entities that satisfy the requirements of a liquid market economy using the most recent economic data available. To assign a delta sensitivity to a sector, a [BANKING ORGANIZATION] must follow market convention by using classifications that are commonly used in the market for grouping issuers by industry sector. A [BANKING ORGANIZATION] must assign each issuer to one of the sector buckets and must assign all issuers from the same industry to the same sector. Delta sensitivities of any equity issuer that a [BANKING ORGANIZATION] cannot assign to a sector must be assigned to the other sector. For multinational, multi-sector equity issuers, the allocation to a particular bucket must be done according to the most material economy and sector in which the issuer operates.

(ii) For calculating risk weighted delta sensitivities for equity risk, a [BANKING ORGANIZATION] must use the risk weights in Table 8 to § __.209.

Table 8 to § __.209—Delta Buckets and Risk Weights for Equity Risk

Bucket number	Market cap	Economy	Sector	Risk weight for equity spot price	Risk weight for equity repo rate
1			Consumer goods and services, transportation and storage, administrative and support	55%	0.55%

	Large market cap	Emerging market economy	service activities, healthcare, and utilities		
2			Telecommunications and industrials	60%	0.60%
3			Basic materials, energy, agriculture, manufacturing, and mining and quarrying	45%	0.45%
4			Financials including government-backed financials, real estate activities, and technology	55%	0.55%
5		Liquid market economy	Consumer goods and services, transportation and storage, administrative and support service activities, healthcare, and utilities	30%	0.30%
6			Telecommunications and industrials	35%	0.35%
7			Basic materials, energy, agriculture, manufacturing, and mining and quarrying	40%	0.40%
8			Financials including government-backed financials, real estate activities, and technology	50%	0.50%
9	Small market cap	Emerging market economy	All sectors described under bucket numbers 1, 2, 3 and 4	70%	0.70%
10		Liquid market economy	All sectors described under bucket numbers 5, 6, 7 and 8	50%	0.50%
11	Other sector			70%	0.70%
12	Equity indices that are both large market cap and liquid market economy (non-sector specific)			15%	0.15%
13	Other equity indices (non-sector specific)			25%	0.25%

(iii) For purposes of aggregating risk weighted delta sensitivities of equity risk within a bucket as specified in § __.206(b)(2), a [BANKING ORGANIZATION] must use the following correlation parameters:

(A) For buckets 1 through 10 and 12 through 13, the correlation parameter ρ_{kl} between two risk weighted delta sensitivities WS_k and WS_l is as follows:

(*1*) ρ_{kl} equals 99.9 percent, where one delta sensitivity is to an equity spot price and the other delta sensitivity is to an equity repo rate, and both are related to the same equity issuer;

(*2*) Where both delta sensitivities are to equity spot prices, or both delta sensitivities are to equity repo rates, ρ_{kl} equals:

(*i*) 15 percent between delta sensitivities assigned to buckets 1, 2, 3, and 4 of Table 8 to § __.209 (large market cap, emerging market economy);

(*ii*) 25 percent between delta sensitivities assigned to buckets 5, 6, 7, or 8 of Table 8 to § __.209 (large market cap, liquid market economy);

(*iii*) 7.5 percent between delta sensitivities assigned to bucket 9 of Table 8 to § __.209 (small market cap, emerging market economy);

(*iv*) 12.5 percent between delta sensitivities assigned to bucket 10 of Table 8 to § __.209 (small market cap, liquid market economy); and

(*v*) 80 percent between delta sensitivities assigned to buckets 12 or 13 of Table 8 to § __.209 (either index bucket); and

(*3*) Where one delta sensitivity is to an equity spot price and the other delta sensitivity is to an equity repo rate, and each delta sensitivity is related to a different equity issuer, the applicable correlation parameter equals ρ_{kl}, as defined in paragraph (b)(5)(iii)(A)(*2*) of this section, multiplied by 99.9 percent; and

(B) For bucket 11, the delta bucket-level risk position equals the sum of the absolute values of the risk weighted delta sensitivities allocated to this bucket,

$$K_{b(other\ bucket)} = \sum_k |WS_k|.$$

(iv) For purposes of aggregating delta bucket-level risk positions across buckets within the equity risk class as specified in § __.206(b)(3), the cross-bucket correlation parameter γ_{bc} equals:

(A) 15 percent if bucket b and bucket c fall within buckets 1 to 10 of Table 8 to § __.209;

(B) Zero percent if either of bucket b and bucket c is bucket 11 of Table 8 to § __.209;

(C) 75 percent if bucket b and bucket c are buckets 12 and 13 of Table 8 to § __.209 (i.e., one is bucket 12 and one is bucket 13); and

(D) 45 percent otherwise.

(6) *Delta buckets, risk weights, and correlations for commodity risk*.

(i) For commodity risk, a [BANKING ORGANIZATION] must establish buckets for each commodity type as set out in Table 9 to § __.209. A [BANKING ORGANIZATION] must assign each contract to one of the commodity buckets and must assign all contracts with the same underlying commodity to the same bucket. Delta sensitivities of any contract that a [BANKING ORGANIZATION] cannot assign to a commodity type must be assigned to the other commodity bucket.

(ii) For calculating risk weighted delta sensitivities for commodity risk, a [BANKING ORGANIZATION] must use the risk weights in Table 9 to § __.209.

Table 9 TO § __.209—Delta Buckets and Risk Weights for Commodity Risk

Bucket number	Commodity bucket	Examples of commodities allocated to each commodity bucket (non-exhaustive)	Risk weight
1	Energy - solid combustibles	Coal, charcoal, wood pellets, and nuclear fuel	30%
2	Energy - liquid combustibles	Light-sweet crude oil, heavy crude oil, West Texas Intermediate (WTI) crude, Brent crude, etc. (i.e., various types of crude oil) Bioethanol, biodiesel, etc. (i.e., various biofuels)	35%

		Propane, ethane, gasoline, methanol, butane, etc. (i.e., various petrochemicals) Jet fuel, kerosene, gasoil, fuel oil, naphtha, heating oil, diesel, etc. (i.e., various refined fuels)	
3	Energy - carbon trading	Certified emissions reductions, in-delivery month EU allowance, Regional Greenhouse Gas Initiative CO2 allowance, renewable energy certificates, etc. (i.e., various carbon trading emissions)	60%
4	Freight	Capesize, Panamax, Handysize, Supramax, etc. (i.e., various types of dry-bulk route) Suezmax, Aframax, very large crude carriers (i.e., various liquid-bulk/gas shipping route)	80%
5	Metals – non-precious	Aluminum, copper, lead, nickel, tin, zinc, etc. (i.e., various base metals) Steel billet, steel wire, steel coil, steel scrap, steel rebar, iron ore, tungsten, vanadium, titanium, tantalum, etc. (i.e., steel raw materials) Cobalt, manganese, molybdenum, etc. (i.e., various minor metals)	40%
6	Gaseous combustibles and electricity	Natural gas and liquefied natural gas Spot electricity, day-ahead electricity, peak electricity, off-peak electricity, etc. (i.e., various electricity types)	45%
7	Precious metals (including gold)	Gold, silver, platinum and palladium	20%
8	Grains and oilseed	Corn, wheat, soybean seed, soybean oil, soybean meal, oats, palm oil, canola, barley, rapeseed seed, rapeseed oil, rapeseed meal, red bean, sorghum, coconut oil, olive oil, peanut oil, sunflower oil, and rice	35%
9	Livestock and dairy	Live cattle, feeder cattle, hog, poultry, lamb, fish, shrimp, milk, whey, eggs, butter, and cheese	25%
10	Forestry and agriculturals	Cocoa, arabica coffee, robusta coffee, tea, citrus juice, orange juice, potatoes, sugar, cotton, wool, lumber, pulp, and rubber	35%
11	Other commodity	Potash, fertilizer, phosphate rocks, etc. (i.e., various industrial materials) Rare earths, terephthalic acid, flat glass	50%
12	Commodity index		30%

(iii) For purposes of aggregating risk weighted delta sensitivities of commodity risk within a bucket as specified in § __.206(b)(2), a [BANKING ORGANIZATION] must use the following correlation parameters:

(A) For buckets 1 through 12, the correlation parameter ρ_{kl} between two risk weighted delta sensitivities WS_k and WS_l equals:

$$\rho_{kl} = \rho_{kl}^{(cty)} \times \rho_{kl}^{(tenor)} \times \rho_{kl}^{(basis)}$$

where,

(*1*) $\rho_{kl}^{(cty)}$ equals 100 percent where the two delta sensitivities to risk factors k and l are identical, and the intra-bucket correlation parameters set out in Table 10 to § __.209 otherwise;

(*2*) $\rho_{kl}^{(tenor)}$ equals 100 percent if the two tenors of the delta sensitivities to risk factors k and l are identical, and 99 percent otherwise; and

(*3*) $\rho_{kl}^{(basis)}$ equals 100 percent if the two delta sensitivities are identical in the delivery location of a commodity, and 99.9 percent otherwise.

Table 10 to § __.209—Commodity Risk Correlation Parameter $\rho_{kl}^{(cty)}$ for Intra-Bucket Correlations

Bucket number	Commodity bucket	Correlation ($\rho_{kl}^{(cty)}$)
1	Energy – Solid combustibles	55%
2	Energy – Liquid combustibles	95%
3	Energy – Carbon trading	40%
4	Freight	80%
5	Metals – non-precious	60%
6	Gaseous combustibles and electricity	65%
7	Precious metals (including gold)	55%
8	Grains and oilseed	45%
9	Livestock and dairy	15%
10	Forestry and other agriculturals	40%

11	Other commodity	15%
12	Commodity index	50%

(iv) For purposes of aggregating delta bucket-level risk positions across buckets within the commodity risk class as specified in § __.206(b)(3), the cross-bucket correlation parameter γ_{bc} equals:

(A) 20 percent if bucket b and bucket c fall within buckets 1 to 10 or 12 of Table 10 to § __.209; and

(B) Zero percent if either bucket b or bucket c is bucket number 11 of Table 10 to § __.209.

(7) *Delta buckets, risk weights, and correlations for foreign exchange risk.* (i) For foreign exchange risk, a [BANKING ORGANIZATION] must establish buckets for each exchange rate between the currency in which a market risk covered position is denominated and the reporting currency (or alternative base currency).

(ii) For calculating risk weighted delta sensitivities for foreign exchange risk, a [BANKING ORGANIZATION] must apply a risk weight equal to 15 percent, except for any currency pair formed by the following list of currencies, a [BANKING ORGANIZATION] may divide the above risk weight by the $\sqrt{2}$: United States Dollar, Australian Dollar, Brazilian Real, Canadian Dollar, Chinese Yuan, Euro, Hong Kong Dollar, Indian Rupee, Japanese Yen, Mexican Peso, New Zealand Dollar, Norwegian Krone, Singapore Dollar, South African Rand, South Korean Won, Swedish Krona, Swiss Franc, Turkish Lira, United Kingdom Pound, and any additional currencies specified by the [AGENCY].

(iii) For purposes of aggregating delta bucket-level risk positions across buckets within the foreign exchange risk class, the cross-bucket correlation parameter γ_{bc} equals 60 percent.

(c) *Vega capital requirement*—(1) *Vega buckets.* For each risk class, a [BANKING ORGANIZATION] must use the same buckets as specified in paragraph (b) of this section for the calculation of the vega capital requirement.

(2) *Vega risk weights.* For calculating risk weighted sensitivities for vega risk as described in § __.206(c)(1), a [BANKING ORGANIZATION] must use the corresponding risk weight for each risk class specified in Table 11 to § __.209.

(i) Equity risk (large market cap and indices) applies to vega risk factors that correspond to buckets 1 to 8, 12 and 13 of Table 8 to § __.209.

(ii) Equity risk (small market cap and other sector) applies to vega risk factors that correspond to buckets 9 to 11 of Table 8 to § __.209.

Table 11 to § __.209—Vega Risk Weights

	Risk class	Risk weights
1	Interest rate risk	100%
2	Credit spread risk for non-securitizations	100%
3	Credit spread risk for correlation trading positions	100%
4	Credit spread risk for securitization positions non-CTP	100%
5	Equity risk (large market cap and indices)	77.78%
6	Equity risk (small market cap and other sector)	100%
7	Commodity risk	100%
8	Foreign exchange risk	100%

(3) *Vega correlation parameters*. For purposes of aggregating risk weighted vega sensitivities within a bucket as specified in § __.206(c)(2) a [BANKING ORGANIZATION] must use the following correlation parameters:

(i) For interest rate risk, where tenor is a dimension of the risk factor, correlation parameter r_{kl} equals:

$$\rho_{kl} = min\left(\left(\rho_{kl}^{(option\ maturity)} \times \rho_{kl}^{(underlying\ maturity)}\right), 1\right)$$

where,

(A) $\rho_{kl}^{(option\ maturity)}$ equals $e^{-\alpha \times \frac{|T_k - T_l|}{min\{T_k, T_l\}}}$, with α set at 1 percent and T_k (respectively T_l) denoting the maturity of the option from which the vega sensitivity VR_k (VR_l) is derived, expressed as a number of years; and

(B) $\rho_{kl}^{(underlying\ maturity)}$ equals $e^{-\alpha \times \frac{|T_k^U - T_l^U|}{min\{T_k^U, T_l^U\}}}$, with α set at 1 percent and T_k^U (respectively T_l^U) denoting the maturity of the underlying of the option from which the sensitivity VR_k (VR_l) is derived, expressed as a number of years after the maturity of the option.

(ii) Except as noted in paragraph (c)(3)(iii) of this section, for purposes of aggregating risk weighted vega sensitivities within a bucket of:

(A) Interest rate risk, where term structure is not recognized (inflation rate risk factors and cross-currency basis risk factors); and

(B) The other risk classes (numbered 2 through 8 in Table 11 to § __.209), the correlation parameter ρ_{kl} equals:

$$\rho_{kl} = min\left(\left(\rho_{kl}^{(delta)} \times \rho_{kl}^{(option\ maturity)}\right), 1\right)$$

where,

(A) $\rho_{kl}^{(option\ maturity)}$ equals $e^{-\alpha \times \frac{|T_k - T_l|}{min\{T_k, T_l\}}}$, with α set at 1 percent and T_k (respectively T_l) denoting the maturity of the option from which the vega sensitivity VR_k (VR_l) is derived, expressed as a number of years; and

(2) $\rho_{kl}^{(delta)}$ equals the correlation between the delta risk factors that correspond to vega risk factors k and l. For instance, if k is the vega risk factor from equity option X and l is the vega risk factor from equity option Y then $\rho_{kl}^{(delta)}$ is the delta correlation applicable between X and Y. Specifically:

(*i*) For the risk classes of credit spread risk for non-securitization positions and credit spread risk for correlation trading positions, the vega risk correlation parameter, $\rho_{kl}^{(delta)}$, equals the corresponding delta correlation parameter, $\rho_{kl}^{(name)}$, as specified in paragraphs (b)(2)(iii)(A)(*1*) and (b)(3)(iii)(A)(*1*) of this section, respectively;

(*ii*) For the risk class of credit spread risk for securitization positions non-CTP, the vega risk correlation parameter, $\rho_{kl}^{(delta)}$, equals the corresponding delta correlation parameter, $\rho_{kl}^{(tranche)}$, as specified in paragraph (b)(4)(iii)(A)(*1*) of this section; and

(*iii*) For the risk class of commodity risk, the vega risk correlation parameter, $\rho_{kl}^{(delta)}$, equals the corresponding delta correlation parameter, $\rho_{kl}^{(cty)}$, as specified in paragraph (b)(6)(iii)(A)(*1*) of this section.

(iii) For purposes of aggregating risk weighted vega sensitivities within the other sector buckets (for credit spread risk for non-securitizations, bucket 18 in Table 3 to § __.209, for credit spread risk for correlation trading positions, bucket 16 in Table 5 to § __.209, for credit spread risk for securitization positions non-CTP, bucket 25 in Table 7 to § __.209, and for equity risk, bucket 11 in Table 8 to § __.209), the vega bucket-level risk position equals the sum of the absolute values of the risk weighted vega sensitivities allocated to this bucket.

(iv) For purposes of aggregating vega bucket-level risk positions across different buckets within a risk class as specified in § __.206(c)(3), a [BANKING ORGANIZATION] must use the

same cross-bucket correlation parameters γ_{bc} as specified for delta risk in paragraph (b) of this section.

(d) *The curvature capital requirement*—(1) *Curvature buckets*. For each risk class, a [BANKING ORGANIZATION] must use the same buckets as specified in paragraph (b) of this section for the calculation of the curvature capital requirement.

(2) *Curvature risk weights*. (i) For calculating the net curvature risk position CVR_k, as described in § __.206(d)(1), for the risk classes of foreign exchange risk and equity risk, the curvature risk weight that represents a shock to risk factor k is a relative shift equal to the delta risk weight corresponding to risk factor k.

(A) For options that do not reference a [BANKING ORGANIZATION]'s reporting currency or base currency as an underlying exposure, a [BANKING ORGANIZATION] may divide the net curvature risk positions CVR_k^+ and CVR_k^- for foreign exchange risk by a scalar of 1.5.

(B) A [BANKING ORGANIZATION] may apply the scalar of 1.5 consistently to all market risk covered positions subject to foreign exchange risk, provided curvature scenarios are calculated for all currencies, including curvature scenarios calculated by shocking the reporting currency (or base currency where used) relative to all other currencies.

(ii) For calculating the net curvature risk position CVR_k, as described in § __.206(d)(1), for the risk classes below, the curvature risk weight corresponding to risk factor k is the consistent, relative shock to all tenor points for each curve based on the highest prescribed delta risk weight for each bucket:

(A) Interest rate risk;

(B) Credit spread risk for non-securitization positions;

(C) Credit spread risk for correlation trading positions;

(D) Credit spread risk for securitization positions non-CTP; and

(E) Commodity risk.

(iii) A [BANKING ORGANIZATION] may floor credit spreads at zero in cases where applying the delta risk weight described in paragraph (d)(2)(ii) of this section results in negative credit spreads for the credit spread risk classes referenced in paragraphs (d)(2)(ii)(B) through (D) of this section.

(3) *Curvature correlation parameters*. For purposes of aggregating the net curvature risk positions within a bucket as described in § __.206(d)(2), a [BANKING ORGANIZATION] must use the following correlation parameters:

(i) Except as noted in paragraph (d)(3)(vi) of this section, for the risk class of interest rate risk, the curvature risk correlation parameter, ρ_{kl}, equals 99.8 percent where risk factors k and l relate to different interest rate curves and 100 percent otherwise;

(ii) Except as noted in paragraph (d)(3)(vi) of this section, for the risk classes of credit spread risk for non-securitization positions and credit spread risk for correlation trading positions, the curvature risk correlation parameter, ρ_{kl}, equals the corresponding delta correlation parameter, $\rho_{kl}^{(name)}$, as specified in paragraphs (b)(2)(iii)(A)(*1*) and (b)(3)(iii)(A)(*1*) of this section, respectively, squared.

(iii) Except as noted in paragraph (d)(3)(vi) of this section, for the risk class of credit spread risk for securitization positions non-CTP, the curvature risk correlation parameter, ρ_{kl}, equals the corresponding delta correlation parameter, $\rho_{kl}^{(tranche)}$, as specified in paragraph (b)(4)(iii)(A) of this section, squared;

(iv) Except as noted in paragraph (d)(3)(vi) of this section, for the risk class of commodity risk, the curvature risk correlation parameter, ρ_{kl}, equals the corresponding delta correlation parameter, $\rho_{kl}^{(cty)}$, as specified in paragraph (b)(6)(iii)(A)(*1*) of this section, squared;

(v) Except as noted in paragraph (d)(3)(vi) of this section, for the risk class of equity risk, the curvature risk correlation parameter ρ_{kl} equals the corresponding delta correlation parameters, ρ_{kl}, as specified in paragraph (b)(5)(iii)(A)(*2*) of this section, squared;

(vi) For purposes of aggregating the net curvature risk positions within the other sector buckets (for credit spread risk for non-securitizations, bucket 18 in Table 3 to § __.209, for credit spread risk for correlation trading positions, bucket 16 in Table 5 to § __.209, for credit spread risk for securitization positions non-CTP, bucket 25 in Table 7 to § __.209, and for equity risk, bucket 11 in Table 8 to § __.209), the curvature bucket-level risk position equals:

$$K_{b(other\ bucket)} = max\left(\sum_k max(CVR_k^+, 0), \sum_k max(CVR_k^-, 0)\right).$$

(4) For purposes of aggregating curvature bucket-level risk positions across buckets within each risk class as specified in § __.206(d)(3), a [BANKING ORGANIZATION] must calculate the cross-bucket correlation parameters γ_{bc} for curvature risk by squaring the corresponding delta correlation parameters γ_{bc}.

(5) In applying the high and low correlations scenarios in § __.206(e), a [BANKING ORGANIZATION] must calculate the curvature capital requirements by applying the correlation parameters ρ_{kl} as calculated in paragraph (d)(3) of this section and the cross-bucket correlation parameter γ_{bc} as calculated in paragraph (d)(4) of this section.

§ __.210 Default risk capital requirement.

(a) *Overview of the default risk capital requirements.* (1) A [BANKING ORGANIZATION] must calculate default risk capital requirements for its default risk positions across the following default risk categories:

(i) Non-securitization debt or equity positions, other than U.S. sovereign exposures, specified supranational entities, or MDBs;

(ii) Securitization positions non-CTP; and

(iii) Correlation trading positions.

(2) For each default risk category, the default risk capital requirement must be calculated as follows:

(i) Assign each default risk position to one of the prescribed buckets.

(ii) Calculate the gross default exposure for each default risk position.

(iii) Calculate obligor-level net default exposure by offsetting, where permissible, the gross default exposure amounts of long and short default risk positions.

(A) To account for defaults within the one-year capital horizon, a [BANKING ORGANIZATION] must scale the gross default exposures for default risk positions of maturity less than one year, and their hedges, by the corresponding fraction of a year. The maturity weighting applied to the gross default exposure for any default risk position with a maturity of less than three months (such as short-term lending) must be floored at three months. No scaling is applied to the gross default exposures for default risk positions with maturities of one year or greater.

(*1*) A [BANKING ORGANIZATION] may assign unhedged cash equity positions to a maturity of either three months or one year. For cash equity positions that hedge derivative

contracts, a [BANKING ORGANIZATION] may assign the same maturity to the cash equity position as the maturity of the derivative contract it hedges.

(*2*) For derivative transactions, eligibility for offsetting treatment is determined by the maturity of the derivative contract, not the maturity of the underlying. In the case where a default risk position can be delivered into a derivative contract that it hedges in fulfillment of the contract, a [BANKING ORGANIZATION] may align the maturity of the default risk position with the derivative contract it hedges to permit full offsetting.

(B) A [BANKING ORGANIZATION] may offset gross default exposures of different maturities that meet the offsetting criterion specified for the default risk category as follows:

(*1*) Gross default exposures with maturities longer than the one-year capital horizon may be fully offset;

(*2*) Gross default exposures with a mix of long and short exposures where some maturities are less than the one-year capital horizon must be weighted by the ratio of each gross default exposure's maturity relative to the one-year capital horizon. In the case where long and short gross default exposures both have maturities under the one-year capital horizon, scaling must be applied to both the long and short gross default exposure.

(iv) Within a bucket, a [BANKING ORGANIZATION] must:

(A) Calculate a hedge benefit ratio (HBR) to recognize hedging between long and short net default exposures within a bucket as follows:

$$HBR = \frac{\sum net\ default\ exposure_{(long)}}{\sum net\ default\ exposure_{(long)} + \sum \left| net\ default\ exposure_{(short)} \right|}$$

where,

(*1*) $Net\ default\ exposure_{(long)}$ equals the aggregate net long default exposure, calculated as the simple sum of the net long default exposures across obligors;

(*2*) $Net\ default\ exposure_{(short)}$ equals the aggregate net short default exposure, calculated as the simple sum of the net short default exposures across obligors.

(B) Assign risk weights to the obligor-level net default exposures using the corresponding risk weights specified for the default risk category; and

(C) Generate bucket-level default risk capital requirements by aggregating risk weighted obligor-level net default exposures according to the specified aggregation formulas in paragraphs (b)(3)(ii), (c)(3)(iii) and (d)(3)(iv) of this section.

(v) The default risk capital requirement for non-securitization debt and equity positions or securitization positions non-CTP equals the sum of the bucket-level default risk capital requirements.

(3) The default risk capital requirement for correlation trading positions must be calculated in accordance with the aggregation formula in paragraph (d)(3)(v) of this section, provided that such positions may be decomposed into single positions, applying the appropriate loss given default rates and risk weights for non-securitization debt or equity positions, specified below.

(4) A [BANKING ORGANIZATION] may not recognize any diversification benefits across default risk categories. The overall default risk capital requirement is the sum of the default risk capital requirement for each default risk category.

(b) *Default risk capital requirement for non-securitization debt or equity positions*—(1) *Gross default exposure*. (i) A [BANKING ORGANIZATION] must calculate the gross default exposure for each non-securitization debt or equity position.

(ii) A [BANKING ORGANIZATION] must determine the long and short direction of a gross default exposure with respect to whether there would be a loss (long) or a gain (short) in the event of a default.

(iii) A [BANKING ORGANIZATION] must calculate the gross default exposure based on the loss given default (LGD) rate, notional amount (or face value) and the cumulative profit and loss (P&L) already realized on the non-securitization position, as follows:

$$Gross\ default\ exposure_{(long)} = max\big((LGD\ rate \times notional\ amount + P\&L), 0\big),$$

$$Gross\ default\ exposure_{(short)} = min\big((LGD\ rate \times notional\ amount + P\&L), 0\big).$$

(iv) A [BANKING ORGANIZATION] must assign LGD rates to non-securitization debt or equity positions as follows:

(A) 100 percent for equity, non-senior debt and defaulted positions;

(B) 75 percent for senior debt, unless a lower LGD is assigned;

(C) 75 percent for GSE debt issued, but not guaranteed, by GSEs;

(D) 50 percent for positions in a PSE that is organized under the laws of the United States or any state or political subdivision thereof;

(E) 25 percent for GSE debt guaranteed by GSEs;

(F) 25 percent for covered bonds; and

(G) Zero percent if the value of the non-securitization debt or equity position is not linked to the recovery rate of the defaulter.

(v) For credit derivatives, a [BANKING ORGANIZATION] must use the LGD rate of the reference exposure.

(vi) A [BANKING ORGANIZATION] must reflect the notional amount of a non-securitization debt or equity position that gives rise to a long (short) gross default exposure as a

positive (negative) value and the loss (gain) as a negative (positive) value. If the contractual or legal terms of the derivative contract allow for the unwinding of the instrument, with no exposure to default risk, the gross default exposure equals zero.

(vii) For all non-securitization debt or equity positions, the notional amount equals the amount of the non-securitization debt or equity position relative to which the loss of principal is calculated. For a call option on a non-securitization position, the notional amount to be used in the gross default exposure calculation is zero.

(2) *Net default exposure*. To calculate the net default exposure to an obligor, a [BANKING ORGANIZATION] must sum the maturity-weighted default exposures to the issuer and in doing so, may offset long and short gross default exposures to the same obligor, provided the short gross default exposures have the same or lower seniority relative to the long gross default exposures. In determining whether a market risk covered position that has an eligible guarantee is an exposure to the underlying obligor or an exposure to the eligible guarantor, the credit risk mitigation requirements set out in § __.36 and § __.120 apply. For purposes of this section, GSEs may be considered eligible guarantors and each GSE must be considered a separate obligor, provided that a [BANKING ORGANIZATION] may fully offset long and short gross default exposures to Uniform Mortgage-Backed Securities that are issued by two different obligors.

(3) *Calculation of the default risk capital requirement for non-securitization debt or equity positions*. (i) To calculate the default risk capital requirement for non-securitization debt or equity positions, a [BANKING ORGANIZATION] must assign each non-securitization debt or equity position to one of four buckets:

(A) Non-U.S. sovereign exposures;

(B) PSE and GSE debt positions;

(C) Corporate positions; and

(D) Defaulted positions.

(ii) A [BANKING ORGANIZATION] must calculate the bucket-level default risk capital requirement, DRC_b, for each bucket, b, for non-securitization debt or equity positions as follows:

$$DRC_b = max\left(\left(\left(\sum_{i \in long} RW_i \times net\ default\ exposure_i\right)\right.\right.$$

$$\left.\left. - HBR \times \left(\sum_{i \in short} RW_i \times |net\ default\ exposure_i|\right)\right), 0\right)$$

where, i refers to a non-securitization debt or equity position belonging to bucket b and the corresponding risk weights, RW_i, are set out in Table 1 to § __.210:

Table 1 to § __.210—Default Risk Weights for Non-Securitization Debt or Equity Positions by Credit Quality Category

Bucket	Credit quality category		
	Investment grade	Speculative grade	Sub-speculative grade
Non-U.S. sovereign positions	0.6%	22.0%	50.0%
PSE and GSE debt positions	2.1%	22.0%	50.0%
Corporate positions	4.1%	22.0%	50.0%
Defaulted positions	100%		

(iii) The default risk capital requirement for non-securitization debt or equity positions equals the sum of the four bucket-level default risk capital requirements.

(c) *Default risk capital requirement for securitization positions non-CTP*— (1) *Gross default exposure*. A [BANKING ORGANIZATION] must determine the gross default exposure for each securitization position non-CTP using the approach for non-securitization debt or equity positions in paragraphs (b)(1)(i) and (ii) of this section, treating each securitization position non-CTP as a non-securitization debt or equity position. The gross default exposure for a securitization position non-CTP equals the position's market value.

(2) *Net default exposure*. (i) A [BANKING ORGANIZATION] may offset long and short securitization positions non-CTP if the positions have the same underlying asset pools and belong to the same tranche.

(ii) A [BANKING ORGANIZATION] may offset long and short securitization positions non-CTP with one or more long and short non-securitization positions by decomposing the exposures of the non-tranched index instruments. To recognize offsetting for securitization positions non-CTP, a [BANKING ORGANIZATION] must sum the equivalent underlying assets of the decomposed non-tranche index instruments to the equivalent replicating tranches that span the entire capital structure of the securitized instrument. Non-securitization positions that are recognized as offsetting in this way must be excluded from the calculation of the default risk capital requirement for non-securitization debt or equity positions under paragraph (b) of this section.

(iii) Securitization positions non-CTP that can be replicated through decomposition may offset. Specifically, if a collection of long securitization positions non-CTP can be replicated by a collection of short securitization positions non-CTP, then the long and short securitization positions non-CTP may offset.

(3) *Calculation of the default risk capital requirement for securitization positions non-CTP*. (i) To calculate the default risk capital requirement for securitization positions non-CTP, a [BANKING ORGANIZATION] must assign each securitization position non-CTP to one of the following buckets:

(A) Corporate positions;

(B) Asset class buckets defined along two dimensions:

(*1*) Asset class: asset-backed commercial paper, auto loans/leases, RMBS, credit cards, commercial mortgage-backed securities, collateralized loan obligations, collateralized debt obligations squared, small and medium enterprises, student loans, other retail, and other wholesale; and

(*2*) Region: Asia, Europe, North America, and other.

(ii) When assigning securitization positions non-CTP to a bucket, a [BANKING ORGANIZATION] must rely on market convention for classifying securitization positions non-CTP by asset class and region of the underlying assets. In addition, a [BANKING ORGANIZATION] must assign:

(A) Each securitization position non-CTP to exactly one bucket and must assign all securitization positions non-CTP with underlying exposures in the same asset class and region to the same bucket;

(B) Any securitization position non-CTP that is not a corporate position and that a [BANKING ORGANIZATION] cannot assign to a specific asset class or region, must be assigned to one of the "other" buckets.

(iii) A [BANKING ORGANIZATION] must calculate the bucket-level default risk capital requirement, DRC_b, for each bucket, b, for securitization positions non-CTP as follows:

$$DRC_b = max\left(\left(\left(\sum_{i \in long} RW_i \times net\ default\ exposure_i\right)\right.\right.$$

$$\left.\left. - HBR \times \left(\sum_{i \in short} RW_i \times |net\ default\ exposure_i|\right)\right), 0\right)$$

where,

(A) *i* refers to a securitization position non-CTP belonging to bucket b;

(B) HBR equals the hedge benefit ratio specified in paragraph (a)(3)(i) of this section; and

(C) RW_i equals:

(*1*) For the calculation of Expanded Total Risk-Weighted Assets, the corresponding risk weight that would apply to the securitization exposure under § __.132 or § __.133 multiplied by 8 percent; or

(*2*) For the calculation of Standardized Total Risk-Weighted Assets, the corresponding risk weight that would apply to the securitization exposure under §__. 42, § __.43, or § __.44 multiplied by 8 percent.

(*3*) Provided that a [BANKING ORGANIZATION] may cap the default risk capital requirement for an individual cash securitization position non-CTP at its fair value.

(iv) The default risk capital requirement for securitization positions non-CTP equals the sum of the bucket-level default risk capital requirements.

(d) *Default risk capital requirement for correlation trading positions*—(1) *Gross default exposure.* (i) A [BANKING ORGANIZATION] must determine the gross default exposure for

each correlation trading position using the approach for non-securitization debt or equity positions in paragraphs (b)(1)(i) and (ii) of this section, including the determination of the direction (long or short) of the correlation trading position, provided that the gross default exposure for a correlation trading position is its market value.

(ii) A [BANKING ORGANIZATION] must treat a Nth-to-default position as a tranched position with attachment and detachment points calculated as:

$$Attachment\ point = \frac{(N-1)}{Total\ names},$$

$$Detachment\ point = \frac{N}{Total\ names}.$$

where "total names" is the total number of single names in the underlying basket or pool.

(2) *Net default exposure*. (i) A [BANKING ORGANIZATION] may recognize offsetting for correlation trading positions that are otherwise identical, except for maturity, including index tranches of the same series.

(ii) A [BANKING ORGANIZATION] may offset combinations of long gross default exposures and combinations of short gross default exposures of tranches that are perfect replications of non-tranched correlation trading positions.

(iii) A [BANKING ORGANIZATION] may offset long and short gross default exposures of the types of exposures listed in paragraphs (d)(2)(i) and (ii) through decomposition of a correlation trading position, including an equivalent exposure that arises from decomposition, provided that the long and short gross default exposures are otherwise equivalent except for a residual component and that a [BANKING ORGANIZATION] must account for the residual exposure in the calculation of the net default exposure.

(iv) A [BANKING ORGANIZATION] may offset long and short gross default exposures of different tranches of the same index and series through replication and decomposition, if the

residual component has the attachment and detachment point nested with the original tranche or the combination of tranches. A [BANKING ORGANIZATION] must account for the residual component of the unhedged tranche.

(3) *Calculation of the default risk capital requirement for correlation trading positions*. (i) To calculate the default risk capital requirement for a correlation trading position, a [BANKING ORGANIZATION] must assign each index to a bucket of its own.

(ii) A [BANKING ORGANIZATION] must assign a bespoke correlation trading position that is substantially similar to an index to the bucket corresponding to the index. A [BANKING ORGANIZATION] must assign each bespoke correlation trading position that is not substantially similar to an index to a bucket of its own.

(iii) For a non-securitization position that hedges a correlation trading position, a [BANKING ORGANIZATION] must assign such position and the related correlation trading position to the same bucket.

(iv) A [BANKING ORGANIZATION] must calculate the bucket-level default risk capital requirement, DRC_b, for each bucket, b, for correlation trading positions as follows:

$$DRC_b = \left(\sum_{i \in long} RW_i \times net\ default\ exposure_i \right) - HBR_{CTP} \times \left(\sum_{i \in short} RW_i \times |net\ default\ exposure_i| \right)$$

where,

(A) i refers to a correlation trading position belonging to bucket b.

(B) HBR_{CTP} equals the hedge benefit ratio specified in paragraph (a)(2)(iv)(A) of this section, but calculated using the combined long and short net default exposures across all indices in the correlation trading position default risk category.

(C) The summation of risk-weighted net default exposures in the formula spans all exposures relating to the index.

(D) RW_i equals:

(*1*) For tranched correlation trading positions:

(*i*) For the calculation of Expanded Total Risk-Weighted Assets, the corresponding risk weight that would apply to the securitization exposure under § __.132 or § __.133 multiplied by 8 percent; or

(*ii*) For the calculation of Standardized Total Risk-Weighted Assets, the corresponding risk weight that would apply to the securitization exposure under § __. 42, § __.43, or § __.44 multiplied by 8 percent.

(*2*) For non-tranched hedges of correlation trading positions or decomposed single name exposures, the same loss given default rates and risk weights as for non-securitization debt or equity positions, provided that such hedges or decomposed single exposures must be excluded from the calculation of the default risk capital requirement for non-securitization debt or equity positions.

(v) A [BANKING ORGANIZATION] must calculate the default risk capital requirement for correlation trading positions by aggregating the bucket-level capital requirements as follows:

$$DRC_{CTP} = max\left(\sum_{b}\left(max(DRC_b, 0) + 0.5 \times min(DRC_b, 0)\right), 0\right).$$

§ __.211 Residual risk add-on.

(a) *Included positions*. A [BANKING ORGANIZATION] must calculate the residual risk add-on for all market risk covered positions identified as follows:

(1) Market risk covered positions that have an exotic exposure.

(2) Market risk covered positions that are:

(i) Correlation trading positions with three or more underlying exposures, except for market risk covered positions that are hedges of correlation trading positions;

(ii) Subject to the curvature capital requirement, but are not market risk covered positions without optionality that a [BANKING ORGANIZATION] chooses to include in the calculation of its curvature capital requirement as described under § __.206(d), or subject to the vega capital requirements and have pay-offs that cannot be replicated as a finite linear combination of vanilla options or the underlying instrument;

(iii) Options or positions with embedded options that do not have a maturity; and

(iv) Options or positions with embedded options that do not have a strike price or barrier, or that have multiple strike prices or barriers;

(3) The portion of the exposure amount resulting from an equity position in an investment fund required to be included in the residual risk add-on under § __.205(e)(3)(iii); and

(4) Any other market risk covered positions that the [AGENCY] determines must be subject to the residual risk add-on in order to capture the material risks of the position.

(b) *Excluded positions.* (1) Notwithstanding paragraph (a)

(2) of this section, a [BANKING ORGANIZATION] may exclude the following market risk covered positions from the residual risk add-on:

(i) Market risk covered position that are listed;

(ii) Market risk covered position that are eligible to be cleared by a CCP or QCCP; and

(iii) Market risk covered position that are options without path dependent pay-offs or with two or fewer underlyings.

(2) Notwithstanding paragraphs (a)(1) and (2) of this section, a [BANKING ORGANIZATION] may exclude the following market risk covered positions from the residual risk add-on:

(i) In the case where a market risk covered position is a transaction that exactly matches that with a third-party transaction (back-to-back transactions), both transactions;

(ii) In the case where a market risk covered position can be delivered into a derivative contract that it hedges in fulfillment of the contract, both the market risk covered position and the derivative contract;

(iii) Securities issued or guaranteed by the U.S. government or GSE debt;

(iv) Any market risk covered position that is subject to the fallback capital requirement;

(v) Internal transactions between two trading desks, if only one trading desk is a model-eligible trading desk; and

(vi) Any other market risk covered positions that the [AGENCY] determines are not required to be subject to the residual risk add-on because the material risks are sufficiently capitalized under this subpart F.

(c) *Calculation of the residual risk add-on.* (1) The residual risk add-on equals the sum of the gross effective notional amounts of market risk covered positions identified in paragraph (a) of this section, multiplied by the prescribed risk weight as set out as follows:

(i) The risk weight for market risk covered positions identified in paragraph (a)(1) of this section is 1.0 percent.

(ii) The risk weight for market risk covered positions identified in paragraph (a)(2) of this section is 0.1 percent.

(2) For purposes of calculating the residual risk add-on, the gross effective notional amount means the notional amount as a [BANKING ORGANIZATION] reports in the most recent Call Report or FR Y-9C.

Models-based non-default capital requirement

§ __.212 Operational requirements for the models-based measure for market risk.

(a) *General requirements.* In order to calculate the models-based measure for market risk, a [BANKING ORGANIZATION] must:

(1) Have at least one model-eligible trading desk; and

(2) Receive prior approval from the [AGENCY] of the [BANKING ORGANIZATION]'s trading desk structure.

(b) *Trading desk identification and approval process*—(1) *Identification of trading desks.* A [BANKING ORGANIZATION] must identify a trading desk for which the [BANKING ORGANIZATION] will seek approval to be a model-eligible trading desk and in making this identification must:

(i) Consider whether having the trading desk be a model-eligible trading desk would better reflect the market risk of the market risk covered positions on the trading desk;

(ii) Exclude any trading desk that includes more than de minimis amounts of model-ineligible positions; and

(iii) For any trading desk that includes de minimis amounts of model-ineligible positions:

(A) Not consider model-ineligible positions on model-eligible trading desks to be model-eligible positions for the calculations in § __.215; and

(B) Exclude model-ineligible positions on model-eligible trading desks from aggregate trading portfolio backtesting, under § __.204(g), and the relevant trading desks' backtesting and PLA-testing, under § __.213, unless the [BANKING ORGANIZATION] receives approval from the [AGENCY] to include such positions for backtesting and PLA-testing purposes.

(2) *Approval process for trading desks.* A [BANKING ORGANIZATION] must receive prior approval of the [AGENCY] for a trading desk to be a model-eligible trading desk. To receive such approval, a [BANKING ORGANIZATION] must:

(i) Receive approval by [AGENCY] of the internal models to be used by the trading desk pursuant to § __.212(c); and

(ii) Comply with one of the following:

(A) Provide at least 250 business days of trading desk level backtesting and, beginning [THREE YEARS AFTER EFFECTIVE DATE], PLA test results for the trading desk to the [AGENCY];

(B) Provide at least 125 business days of trading desk level backtesting and, beginning [THREE YEARS AFTER EFFECTIVE DATE], PLA test results for the trading desk to the [AGENCY] and demonstrate to the satisfaction of the [AGENCY] that the internal models will be able to meet the backtesting and, beginning [THREE YEARS AFTER EFFECTIVE DATE], PLA testing on an ongoing basis;

(C) Demonstrate that the trading desk consists of similar market risk covered positions to another trading desk of the [BANKING ORGANIZATION], which has been approved by the [AGENCY] and has provided at least 250 business days of trading desk level backtesting and, beginning [THREE YEARS AFTER EFFECTIVE DATE], PLA test results to the [AGENCY]; or

(D) Beginning [THREE YEARS AFTER EFFECTIVE DATE], subject the trading desk to the PLA add-on until the trading desk provides at least 250 business days of trading desk-level backtesting and PLA test results, produces results in the PLA test green zone, and passes trading desk-level backtesting.

(3) *Changes to trading desk structure*. (i) A [BANKING ORGANIZATION] must receive prior approval from the [AGENCY] before the [BANKING ORGANIZATION] implements any change to its trading desk structure that would result in a material change in the [BANKING ORGANIZATION]'s market risk capital requirements for a portfolio of market risk covered positions.

(ii) A [BANKING ORGANIZATION] must promptly notify the [AGENCY] when the [BANKING ORGANIZATION] makes any change to its trading desk structure that would result in a non-material change in the [BANKING ORGANIZATION]'s market risk capital requirements for a portfolio of market risk covered positions.

(4) The [AGENCY] may rescind its approval of a model-eligible trading desk or subject such trading desk to the PLA add-on if the [AGENCY] determines that the trading desk no longer complies with any of the applicable requirements of this subpart F, provided that the trading desk may not be subjected to the PLA add-on if the approval for a stressed expected shortfall methodology used by the trading desk was rescinded. A model-eligible trading desk that becomes subject to the PLA add-on under this paragraph (b)(4) shall remain subject to the PLA add-on until the [AGENCY] determines that the trading desk is no longer subject to the PLA add-on under this paragraph (b)(4).

(c) *Approval of internal models and stressed expected shortfall methodologies*—(1) *Initial approval.* A [BANKING ORGANIZATION] must receive prior approval of the

[AGENCY] to use an internal model for the ES-based measure in § __.215(b), and the stressed expected shortfall methodologies in § __.215(d). To receive [AGENCY] approval of an internal model or methodology, a [BANKING ORGANIZATION] must demonstrate:

(i) The internal model properly measures all the material risks of the market risk covered positions to which it is applied;

(ii) The internal model has been properly validated, consistent with paragraph (d)(3) of this section;

(iii) The level of sophistication of the internal model or methodology is commensurate with the complexity and amount of its market risk covered positions; and

(iv) The internal model or methodology meets the applicable requirements of this subpart F.

(2) *Changes to internal models and stressed expected shortfall methodologies*. (i) A [BANKING ORGANIZATION] must receive prior approval from the [AGENCY] before the [BANKING ORGANIZATION] implements any change to an approved model, including any change to its modelling assumptions, that would result in a material change in the [BANKING ORGANIZATION]'s ES-based measure for a trading desk, the [BANKING ORGANIZATION]'s $IMCC$, or the [BANKING ORGANIZATION]'s stressed expected shortfall.

(ii) A [BANKING ORGANIZATION] must promptly notify the [AGENCY] when the [BANKING ORGANIZATION] makes any change to an approved model, including any change to its modelling assumptions, that would result in a non-material change in the [BANKING ORGANIZATION]'s ES-based measure for a trading desk, the [BANKING

ORGANIZATION]'s $IMCC$, or the [BANKING ORGANIZATION]'s stressed expected shortfall.

(3) If the [AGENCY] determines that the [BANKING ORGANIZATION] no longer complies with this subpart F or that the [BANKING ORGANIZATION]'s internal models or methodologies fail to accurately reflect the risks of any of the [BANKING ORGANIZATION]'s market risk covered positions, the [AGENCY] may rescind its approval of an internal model or methodology previously approved under paragraph (c)(1) of this section, or impose the PLA add-on on the trading desk using the internal model for the ES-based measure pursuant to paragraph (b)(4) of this section. When approval for an internal model or methodology is rescinded, any trading desk that had used that internal model or methodology must be a model-ineligible trading desk.

(d) *Review, risk management, and validation.* (1) A [BANKING ORGANIZATION] must, no less frequently than annually, review its internal models in light of developments in financial markets and modeling technologies, and enhance those internal models as appropriate to ensure that they continue to meet the [AGENCY]'s standards for model approval and employ risk measurement methodologies that are the most appropriate for the [BANKING ORGANIZATION]'s market risk covered positions.

(2) A [BANKING ORGANIZATION] must integrate the internal models used for calculating the ES-based measure in § __.215(b) into its daily risk management process.

(3) A [BANKING ORGANIZATION] must validate its internal models initially and on an ongoing basis. A [BANKING ORGANIZATION] must revalidate its internal models when it makes any material changes to the models or when there have been significant structural changes in the market or changes in the composition of the [BANKING ORGANIZATION]'s market risk

covered positions that might lead to the [BANKING ORGANIZATION]'s internal models to be no longer adequate. The [BANKING ORGANIZATION]'s validation process must be independent of the internal models' development, implementation, and operation, or the validation process must be subjected to an independent review of its adequacy and effectiveness. Validation must include:

(i) An evaluation of the conceptual soundness of the internal models;

(ii) An evaluation that the internal models adequately reflect all material risks and that assumptions are appropriate and do not underestimate risk;

(iii) An ongoing monitoring process that includes verification of processes and the comparison of the [BANKING ORGANIZATION]'s model outputs with relevant internal and external data sources or estimation techniques;

(iv) An outcomes analysis process that includes backtesting and PLA testing at the trading desk level; and

(v) Backtesting conducted at the aggregate level for all model-eligible trading desks.

(e) *Supervisory action for model-eligible trading desks.* If required by the [AGENCY], a [BANKING ORGANIZATION] that has one or more model-eligible trading desks must calculate the standardized measure for market risk for one or more specified model-eligible trading desks as if that trading desk were a stand-alone regulatory portfolio, as directed by the [AGENCY].

§ __.213 Trading desk-level backtesting and PLA testing.

(a) A model-eligible trading desk must conduct backtesting as described in paragraph (b) of this section and PLA testing as described in paragraph (c) of this section at the trading desk level on a quarterly basis.

(b) *Trading desk-level backtesting requirements.* (1) Beginning on the business day a trading desk becomes a model-eligible trading desk, the [BANKING ORGANIZATION] must generate backtesting data by separately comparing each business day's actual profit and loss and hypothetical profit and loss with the corresponding VaR-based measure calculated by the [BANKING ORGANIZATION]'s internal models for that business day, at both the 97.5th percentile and the 99.0th percentile one-tail confidence levels at the trading desk level. Time effects must be treated in a consistent manner in the hypothetical profit and loss used for backtesting.

(i) An exception for actual profit and loss at either percentile occurs when the actual loss of the model-eligible trading desk exceeds the corresponding VaR-based measure calculated at that percentile. An exception for hypothetical profit and loss at either percentile occurs when the hypothetical loss of the model-eligible trading desk exceeds the corresponding VaR-based measure calculated at that percentile.

(ii) If either the business day's actual or hypothetical profit and loss is not available or the [BANKING ORGANIZATION] is unable to compute the business day's actual or hypothetical profit and loss, an exception for actual profit and loss or for hypothetical profit and loss, respectively, at each percentile occurs. If the VaR-based measure for a business day is not available or the [BANKING ORGANIZATION] is unable to compute the VaR-based measure for a particular business day, exceptions for actual profit and loss and for hypothetical profit and loss at each percentile occur. No exception will occur if the unavailability or inability is related to an official holiday.

(iii) With approval of the [AGENCY], a [BANKING ORGANIZATION] may consider an exception not to have occurred if:

(A) The [BANKING ORGANIZATION] can demonstrate that the exception is due to technical issues that are unrelated to the [BANKING ORGANIZATION]'s internal models; or

(B) The [BANKING ORGANIZATION] can demonstrate that one or more non-modellable risk factors caused the relevant loss, and the portion of the stressed expected shortfall, as defined in § __.204(c)(2)(ii), that can be attributed to these non-modellable risk factors on that business day exceeds the difference between the [BANKING ORGANIZATION]'s VaR-based measure and the actual or hypothetical loss for that business day.

(2) In order to conduct backtesting, a [BANKING ORGANIZATION] must count the number of exceptions over the most recent 250 business days. A [BANKING ORGANIZATION] must count exceptions for actual profit and loss at each percentile separately from exceptions for hypothetical profit and loss.

(3) If any given model-eligible trading desk experiences either more than 12 exceptions for actual profit and loss or 12 exceptions for hypothetical profit and loss at the 99.0th percentile, or 30 exceptions for actual profit and loss or 30 exceptions for hypothetical profit and loss at the 97.5th percentile in the most recent 250 business day period, then the trading desk becomes a model-ineligible trading desk, upon the completion of the [AGENCY]'s quarterly review of the relevant backtesting data.

(4) Notwithstanding paragraphs (b)(2) and (3) of this section, in cases where a model-eligible trading desk is approved pursuant to § __.212(b)(2)(ii)(B), (C) or (D):

(i) The model-eligible trading desk that has fewer than 250 business days of backtesting data available must use all available backtesting data; and

(ii) The [BANKING ORGANIZATION] must prorate the number of allowable exceptions under paragraph (b)(3) of this section by the number of business days for which backtesting data are available for the model-eligible trading desk.

(5) A trading desk that becomes a model-ineligible trading desk under paragraph (b)(3) of this section becomes a model-eligible trading desk when:

(i) The trading desk experiences less than or equal to 12 exceptions for actual profit and loss and 12 exceptions for hypothetical profit and loss at the 99.0th percentile, and 30 exceptions for actual profit and loss and 30 exceptions for hypothetical profit and loss at the 97.5th percentile in the most recent 250 business day period and, beginning [THREE YEARS AFTER EFFECTIVE DATE], the trading desk produces results in the PLA test green zone or PLA test amber zone; or

(ii) The [BANKING ORGANIZATION] receives approval of the [AGENCY].

(c) *Trading desk level PLA test requirements*—(1) *General requirements*. At the trading desk level, the [BANKING ORGANIZATION] must compare each of its most recent 250 business days' hypothetical profit and loss with the corresponding daily risk-theoretical profit and loss. Time effects must be treated in a consistent manner in the hypothetical profit and loss and the risk-theoretical profit and loss.

(i) For the purpose of PLA testing, the [BANKING ORGANIZATION] may align risk-theoretical profit and loss input data for its risk factors with the data used in hypothetical profit and loss, where the [BANKING ORGANIZATION] is able to demonstrate that hypothetical profit and loss input data can be used appropriately for risk-theoretical profit and loss purposes.

(ii) The [BANKING ORGANIZATION] may adjust risk-theoretical profit and loss input data when the input data for a given risk factor that is included in both the risk-theoretical profit

and loss and the hypothetical profit and loss differs due to different market data sources, time fixing of market data sources, or transformations of market data into input data suitable for the risk factors of the underlying valuation engines. When transforming input data into a format that can be applied to the risk factors used in internal risk management models, the [BANKING ORGANIZATION] must demonstrate that no differences in the risk factors or in the valuation models have been omitted.

(iii) The [BANKING ORGANIZATION] must be able to assess the effect that input data alignments would have on the risk-theoretical profit and loss. The [BANKING ORGANIZATION] must be able to compare the risk-theoretical profit and loss based on the hypothetical profit and loss aligned market data with the risk-theoretical profit and loss based on market data without alignment. This comparison must be performed when designing or changing the input data alignment process or at the request of the [AGENCY].

(2) *PLA test metric*. (i) A [BANKING ORGANIZATION] must calculate the Kolmogorov-Smirnov metric in this paragraph (c)(2) at the trading desk level, using the most recent 250 business days of the risk-theoretical profit and loss and the hypothetical profit and loss.

(ii) A [BANKING ORGANIZATION] must calculate the empirical cumulative distribution function of the risk-theoretical profit and loss where, for any value of risk-theoretical profit and loss, the empirical cumulative distribution is the product of 0.004 and the number of risk-theoretical profit and loss observations that are less than or equal to the specified risk-theoretical profit and loss.

(iii) A [BANKING ORGANIZATION] must calculate the empirical cumulative distribution function of hypothetical profit and loss where, for any value of hypothetical profit

and loss, the empirical cumulative distribution is the product of 0.004 and the number of hypothetical profit and loss observations that are less than or equal to the specified hypothetical profit and loss.

(iv) A [BANKING ORGANIZATION] must calculate the Kolmogorov-Smirnov metric as the largest absolute difference observed between these two empirical cumulative distribution functions at any profit and loss value.

(3) *PLA test evaluation*. (i) A [BANKING ORGANIZATION] must identify the PLA test zone of the trading desk's PLA test results as set out in Table 1 to § __.213.

Table 1 to § __.213—PLA Test Zones

PLA test zone	Kolmogorov-Smirnov (KS) metric
Green zone	$KS < 0.09$
Amber zone	$0.09 \leq KS \leq 0.12$
Red zone	$KS > 0.12$

(ii) Notwithstanding paragraph (c)(3)(i) of this section, the [AGENCY] may determine that a [BANKING ORGANIZATION] must identify the PLA test zone of a trading desk's PLA test results as a different PLA test zone.

(iii) Beginning [THREE YEARS AFTER EFFECTIVE DATE], upon the completion of the quarterly review of the relevant PLA test data, a trading desk that produces results in the PLA test amber zone, pursuant to paragraph (c)(3)(i) or (c)(3)(ii) of this section, is subject to the PLA add-on.

(iv) Beginning [THREE YEARS AFTER EFFECTIVE DATE], upon the completion of the quarterly review of the relevant PLA test data, a trading desk that produces results in the PLA test red zone, pursuant to paragraph (c)(3)(i) or (c)(3)(ii) of this section, is a model-ineligible trading desk.

(v) A trading desk that becomes a model-ineligible trading desk under paragraph (c)(3)(iv) of this section will become a model-eligible trading desk when:

(A) The trading desk produces results in the PLA test green zone or PLA test amber zone; and in the most recent 250 business day period, the trading desk experiences less than or equal to 12 backtesting exceptions for actual profit and loss and 12 exceptions for hypothetical profit and loss at the 99.0th percentile, or less than or equal to 30 backtesting exceptions for actual profit and loss and 30 backtesting exceptions for hypothetical profit and loss at the 97.5th percentile; or

(B) The [BANKING ORGANIZATION] receives approval of the [AGENCY].

(4) *PLA add-on*. The PLA add-on, if required under paragraph (c)(3)(iii) of this section, § __.212(b)(2)(ii)(D), or § __.212(b)(4), equals:

$$PLA\ add\text{-}on = k \times max\left(\left(SA_{G,A} - max\left((IMCC_{t-1} + SES_{t-1}), \left(\left(m_c \times IMCC_{average}\right) + SES_{average}\right)\right)\right), 0\right)$$

where,

(i) $k = 0.5 \times \frac{\sum_{i \in A} SA_i}{\sum_{i \in G,A} SA_i}$; where

(A) SA_i denotes the standardized non-default capital requirement for market risk covered positions on trading desk, i;

(B) $\sum_{i \in A} SA_i$ equals the sum of the standardized non-default capital requirement, calculated separately, for each trading desk i that is subject to the PLA add-on; and

(C) $\sum_{i\in G,A} SA_i$ equals the sum of the standardized non-default capital requirement, calculated separately, for each model-eligible trading desk i (including trading desks subject to the PLA add-on); and

(ii) All other terms have the meaning specified in § __.204(c)(2).

§ __.214 Risk factor identification.

(a) *Identification of risk factors.* A [BANKING ORGANIZATION] must identify an appropriate set of risk factors to be used for purposes of calculating the internally modelled capital calculation, $IMCC$, and the stressed expected shortfall, SES, subject to the requirements below:

(1) The set of risk factors must be sufficient to represent the risks inherent in the market risk covered positions held by model-eligible trading desks;

(2) The [BANKING ORGANIZATION] must include all risk factors included in the [BANKING ORGANIZATION]'s internal risk management models or models used in reporting actual profits and losses; and

(3) The [BANKING ORGANIZATION] must include all risk factors that are specified in § __.208 for each corresponding risk class, unless the [BANKING ORGANIZATION] is able to support the omission of specific risk classes to the satisfaction of the [AGENCY].

(b) *Risk factor eligibility tests*. (1) *Conduct of tests and classification of risk factors.* A [BANKING ORGANIZATION] must classify each risk factor according to the risk factor qualitative test specified in paragraph (b)(2) of this section and the risk factor quantitative test specified in paragraph (b)(3) of this section as follows:

(i) A risk factor that passes both the risk factor quantitative test and the risk factor qualitative test is a modellable risk factor;

(ii) A risk factor that passes the risk factor qualitative test but fails the risk factor quantitative test is a type A non-modellable risk factor; and

(iii) A risk factor that is not a modellable risk factor or a type A non-modellable risk factor is a type B non-modellable risk factor.

(2) *Risk factor qualitative test.* To pass the risk factor qualitative test, the data that a [BANKING ORGANIZATION] uses to calculate the models-based non-default capital requirement corresponding to a risk factor must be consistent with each of the standards in this paragraph (b)(2).

(i) The data must allow the internal models used to calculate the ES-based measure to capture both idiosyncratic risk and systematic risk, if applicable.

(ii) The data must allow the internal models used to calculate the ES-based measure to reflect volatility and correlation of risk factors of market risk covered positions.

(iii) The data must be reflective of prices observed or quoted in the market. Where data used are not derived from real price observations, the [BANKING ORGANIZATION] must be able to demonstrate that the data used are reasonably representative of real price observations.

(iv) The data must be updated at a sufficient frequency to adequately reflect the performance of the risk factor, and at a minimum on a weekly basis. Where the [BANKING ORGANIZATION] uses regressions to estimate risk factor parameters, these must be re-estimated on a regular basis. The [BANKING ORGANIZATION] must have clear policies and procedures for backfilling and gap-filling missing data and for updating the sources of data used.

(v) The data to determine the liquidity horizon-adjusted ES-based measure must be reflective of market prices observed or quoted in the period of stress specified in § __.215(b)(5). The data should be sourced directly from the historical period whenever possible. The

[BANKING ORGANIZATION] must empirically justify any instances where the market prices used in the period of stress are different from the market prices actually observed during that period. In cases where market risk covered positions that are currently traded did not exist during a period of significant financial stress, the [BANKING ORGANIZATION] must demonstrate that the prices used match changes in prices or spreads of similar instruments during the stress period.

(vi) The data may include proxies provided the [BANKING ORGANIZATION] can demonstrate to the satisfaction of the [AGENCY] that the proxies are appropriate and that the following standards are satisfied:

(A) There is sufficient evidence demonstrating the appropriateness of the proxies, such as an appropriate track record for their representation of a market risk covered position;

(B) The proxies have sufficiently similar characteristics to the transactions they represent in terms of volatility level and correlations; and

(C) The proxies are appropriate for the region, credit spread, quality and type of instrument they are intended to represent.

(vii) The [AGENCY] has not determined that the data is unsuitable to calibrate the [BANKING ORGANIZATION]'s ES-based measure.

(3) *Risk factor quantitative test*. To conduct the risk factor quantitative test, a [BANKING ORGANIZATION] must identify real price observations that meet the requirements set forth in paragraph (b)(3)(i) and allocate each real price observation into a bucket for a risk factor, as specified in paragraph (b)(3)(ii). To pass the risk factor quantitative test, a [BANKING ORGANIZATION] must identify real price observations in the bucket corresponding to the risk

factor over the prior 12 months equal to or greater than the minimum number of real price observations specified in paragraph (b)(3)(iii).

(i) *Requirements for real price observations*.

(A) A real price is representative of a risk factor provided it can be used by the [BANKING ORGANIZATION] to inform the value of the risk factor.

(B) The [BANKING ORGANIZATION] must not count more than one real price observation in a single day.

(C) When a [BANKING ORGANIZATION] uses real prices from a third-party provider:

(1) The third-party provider must provide a minimum necessary set of identifier information to enable the [BANKING ORGANIZATION] to map real prices observed to risk factors;

(2) The third-party provider that is not a U.S. Government agency, an exchange, or a QCCP must be subject to an audit regarding the validity of its pricing information and the results and reports of this audit must be made public or available on request to the [BANKING ORGANIZATION], provided that if the audit of a third-party provider is not satisfactory to the [AGENCY], the data from the third-party provider may not be used for purposes of the risk factor quantitative test; and

(3) When the real price observations are provided with a time lag, the period used for the risk factor quantitative test may differ from the period used to calibrate the [BANKING ORGANIZATION]'s ES-based measure, provided that the difference is no greater than one month.

(ii) *Bucketing approaches.* For the risk factor quantitative test, a [BANKING ORGANIZATION] must allocate real price observations into buckets corresponding to risk factors and must count all real price observations allocated to a bucket in order to establish whether the risk factors in the bucket pass the risk factor quantitative test. To allocate real price observations into buckets, the [BANKING ORGANIZATION] must group risk factors on a curve or surface level. Real price observations may be mapped to more than one risk factor. Each bucket may be defined by using either of the bucketing approaches specified in this paragraph (b)(3)(ii).

(A) *Own bucketing approach*. Under this approach, each bucket must include only one risk factor. Each risk factor must correspond to a risk factor included in the risk-theoretical profit and loss of the [BANKING ORGANIZATION].

(B) *Standard bucketing approach*. Under this approach, the [BANKING ORGANIZATION] must use the standard buckets as set out as follows:

(*1*) For interest rate, foreign exchange and commodity risk factors with a single maturity dimension (excluding implied volatilities), (t, where t is measured in years), the buckets corresponding to the t values in row (A) of Table 1 to § __.214 must be used.

(*2*) For interest rate, foreign exchange and commodity risk factors with several maturity dimensions (excluding implied volatilities) (t, where t is measured in years), the buckets corresponding to the t values in row (B) of Table 1 to § __.214 must be used.

(*3*) Credit spread and equity risk factors with one or several maturity dimensions (excluding implied volatilities) (t, where t is measured in years), the buckets corresponding to the t values in row (C) of Table 1 to § __.214 must be used.

(*4*) For any risk factors with one or several strike dimensions (the probability that an option is "in the money" at maturity, δ), the buckets corresponding to the δ values in row (D) of Table 1 to § __.214 must be used.

(*5*) For expiry and strike dimensions of implied volatility risk factors (excluding those of interest rate swaptions), only the buckets corresponding to the t or δ values in rows (C) and (D), respectively, of Table 1 to § __.214 must be used.

(*6*) For maturity, expiry and strike dimensions of implied volatility risk factors from options on swaps, only the buckets corresponding to the t or δ values in row (B), (C) and (D), respectively, of Table 1 to § __.214 must be used.

(*7*) For options markets where alternative definitions of moneyness are customary, a [BANKING ORGANIZATION] must convert the standard buckets to the market-standard convention using the [BANKING ORGANIZATION]'s own pricing models.

Table 1 To § __.214—Standard Bucketing Approach: Standard Buckets

Row	Bucket								
	1	2	3	4	5	6	7	8	9
(A)	$0 \le t < 0.75$	$0.75 \le t < 1.5$	$1.5 \le t < 4.0$	$4 \le t < 7$	$7 \le t < 12$	$12 \le t < 18$	$18 \le t < 25$	$25 \le t < 35$	$35 \le t < \infty$
(B)	$0 \le t < 0.75$	$0.75 \le t < 4.0$	$4 \le t < 10$	$10 \le t < 18$	$18 \le t < 30$	$30 \le t < \infty$			
(C)	$0 \le t < 1.50$	$1.5 \le t < 3.5$	$3.5 \le t < 7.5$	$7.5 \le t < 15$	$15 \le t < \infty$				
(D)	$0 \le \delta < 0.05$	$0.05 \le \delta < 0.3$	$0.3 \le \delta < 0.7$	$0.7 \le \delta < 0.95$	$0.95 \le \delta < 1.00$				

(C) For purposes of the risk factor quantitative test, a real price observation must be counted in a single bucket based on the maturity or based on the probability that an option is "in

the money" at maturity associated with the position, provided that real price observations that have been identified within the prior 12 months must be either:

(*1*) Counted in the maturity bucket to which they were initially allocated; or

(*2*) Re-allocated to the shorter maturity bucket that reflects the market risk covered position's remaining maturity.

(D) A [BANKING ORGANIZATION] may decompose risks associated with credit or equity indices into systematic risk factors within its internal models designed to capture market-wide movements for a given economy, region or sector.

(iii) *Minimum sufficient number of real price observations*.

(A) The minimum sufficient number of real price observations is 24 if the liquidity horizon is 10 or 20 days, and 16 otherwise.

(B) Notwithstanding other provisions of this paragraph (b)(3), for new issuances, the observation period for the risk factor quantitative test may begin on the issuance date and the number of real price observations required to pass the risk factor quantitative test may be prorated until 12 months after the issuance date.

(c) *Calibration*. The [BANKING ORGANIZATION] must choose the most appropriate data for modellable risk factors and type A non-modellable risk factors to calibrate the ES-based measure. For the calibration of the ES-based measure, the [BANKING ORGANIZATION] may use different data than the data used to pass the risk factor quantitative test.

§ __.215 The models-based non-default capital requirement.

(a) A [BANKING ORGANIZATION] that calculates the models-based non-default capital requirement must calculate the ES-based measure, the internally modelled capital calculation, $IMCC$, and the stressed expected shortfall, SES, in accordance with this section.

(b) *ES-based measure.* Any internal model used by a [BANKING ORGANIZATION] to calculate the ES-based measure must meet the following minimum requirements.

(1) The ES-based measure must be computed for each business day at the trading desk level, at the aggregate level, and on the aggregate for each risk class for all model-eligible trading desks.

(2) The ES-based measure must be calculated using a one-tail, 97.5th percentile confidence level.

(3) A liquidity horizon-adjusted ES-based measure must be calculated from an ES-based measure at a base liquidity horizon of 10 days, with scaling applied to this base horizon result as specified below:

$$ES = \sqrt{\left(ES_T(P)\right)^2 + \sum_{j \geq 2} \left(ES_T(P,j) \sqrt{\frac{\left(LH_j - LH_{j-1}\right)}{T}} \right)^2}$$

where,

(i) ES is the liquidity horizon-adjusted ES-based measure;

(ii) T is the length of the base liquidity horizon, 10 days;

(iii) $ES_T(P)$ is ES at base liquidity horizon T of a portfolio with market risk covered positions P;

(iv) $ES_T(P,j)$ is the ES at base liquidity horizon T of a portfolio with market risk covered positions P for all risk factors whose liquidity horizon is at least as long as the liquidity horizon corresponding to the index value j, LH_j, as specified in Table 1 to § __.215;

(v) LH_j is the liquidity horizon corresponding to the index value, j, specified in Table 1 to § __.215.

Table 1 to § __.215—Liquidity Horizons, j

j	LH_j *(lengths in days)*
1	10
2	20
3	40
4	60
5	120

(4) The time series of changes in risk factors over the base liquidity horizon T may be calculated using observations of price differentials from overlapping 10-day periods, provided, a [BANKING ORGANIZATION] must not scale up from a shorter horizon.

(5) *Stress period.* A [BANKING ORGANIZATION] must identify a 12-month period of stress over the observation horizon in which the [BANKING ORGANIZATION]'s model-eligible positions would experience the largest loss, pursuant to policies and procedures approved by the [AGENCY]. Such policies and procedures must:

(i) Base the identification of the period of stress using either the full set of risk factors or a reduced set of risk factors;

(ii) Provide that when using a reduced set of risk factors to identify the period of stress the [BANKING ORGANIZATION] must:

(A) Specify a reduced set of risk factors for which there is a sufficiently long history of observations that meet requirements of the risk factor qualitative test specified in §__.214(b)(2) and for which:

(*1*) The [BANKING ORGANIZATION] uses data that are reflective of market prices observed or quoted in the historical stress period used by the expected shortfall model and sourced from the historical stress period, when possible;

(*2*) Where the market prices used for the historical stress period in the expected shortfall calculation differ from the market prices actually observed for that period, the [BANKING ORGANIZATION] empirically justifies the selection of the stress period; and

(*3*) For model-eligible positions that did not exist during the historical stress period, the [BANKING ORGANIZATION] demonstrates that the prices used match changes in the prices or spreads of instruments that traded during that period and that are similar to the model-eligible positions;

(B) Update the reduced set of risk factors whenever the [BANKING ORGANIZATION] updates its 12-month period of stress; and

(C) Ensure that the variation of the full ES-based measure explained by the ES-based measure for the reduced set of risk factors over the previous 60 business days is at least 75 percent, where, on date *t*, the variation explained equals

$$1 - \frac{\sum_{h=t-60}^{t-1}\left(ES_{F,C,h} - ES_{R,C,h}\right)^2}{\sum_{h=t-60}^{t-1}\left(ES_{F,C,h} - Mean\left(ES_{F,C}\right)\right)^2}$$

where,

(*1*) $ES_{F,\mathrm{C,h}}$ is the liquidity horizon-adjusted ES-based measure based on the most recent 12-month observation period (the current ES-based measure) using the full set of risk factors calculated at date *h*, which ranges from one day prior to date *t* to 60 days prior to date *t*;

(*2*) $ES_{R,\mathrm{C,h}}$ is the current liquidity horizon-adjusted ES-based measure using the reduced set of risk factors calculated at date *h*, which ranges from one day prior to date *t* to 60 days prior to date *t*; and

(*3*) $Mean\left(ES_{F,C}\right)$ is the mean of $ES_{F,\mathrm{C}}$ over the previous 60 business days.

(iii) Consider 12-month periods going back to, at a minimum, 2007;

(iv) Equally weight observations within the 12-month period; and

(v) Provide for updating, as appropriate, the 12-month stressed period at least quarterly, or whenever there are material changes in the risk factors in the portfolio.

(6) *Liquidity horizon-adjusted ES-based measure.* A [BANKING ORGANIZATION] must calibrate the liquidity horizon-adjusted ES-based measure to a period of stress for its entire portfolio of model-eligible positions using one of the two approaches set forth in this paragraph (b)(6).

(i) *Direct approach*. A [BANKING ORGANIZATION] using the direct approach must use the full set of risk factors to calculate the liquidity horizon-adjusted ES-based measure, provided a [BANKING ORGANIZATION] may use proxies to fill in data on missing risk factors in accordance with § __.214(b)(2)(vi).

(ii) *Indirect approach.* A [BANKING ORGANIZATION] using the indirect approach must follow the steps below to calculate the liquidity horizon-adjusted ES-based measure:

(A) Calculate a liquidity horizon-adjusted ES-based measure in accordance with paragraph (b)(3) of this section;

(B) Convert the three types of liquidity horizon-adjusted ES-based measures defined below into one liquidity horizon-adjusted ES-based measure, as follows:

$$ES = ES_{R,S} \cdot max\left(1, \frac{ES_{F,C}}{ES_{R,C}}\right)$$

where,

(*1*) $ES_{R,S}$ is the liquidity horizon-adjusted ES-based measure for the [BANKING ORGANIZATION]'s model-eligible positions using the reduced set of risk factors, calculated based on the 12-month period of stress;

(*2*) $ES_{F,C}$ is the liquidity horizon-adjusted ES-based measure based on the most recent 12-month observation period (the current ES-based measure) using the full set of risk factors; and

(*3*) $ES_{R,C}$ is the liquidity horizon-adjusted ES-based measure for the [BANKING ORGANIZATION]'s model-eligible positions using the reduced set of risk factors.

(7) *Input data.* A [BANKING ORGANIZATION] must update its input data for internal models used to calculate the ES-based measure no less frequently than quarterly and reassess its input data whenever market prices are subject to material changes. This updating process must be flexible enough to allow for updates when warranted by material changes in market prices.

(8) *Risk capture.* Internal models used to calculate the ES-based measure must address non-linearities, as well as correlation and relevant basis risks, such as basis risk between credit default swaps and bonds.

(9) *Empirical correlations.* A [BANKING ORGANIZATION] may recognize empirical correlations within risk classes. Empirical correlations across risk classes are constrained by the aggregation scheme as described in paragraph (c) of this section.

(10) *Options.* With respect to options, a [BANKING ORGANIZATION]'s internal models used to calculate the ES-based measure must:

(i) Capture the risks associated with options, including non-linear price characteristics, within each of the risk classes;

(ii) Have a set of risk factors that captures the volatilities of the underlying rates and prices of options; and

(iii) Model the volatility surface across both strike price and maturity.

(11) *Assignment of liquidity horizons.* At a minimum on a quarterly basis, a [BANKING ORGANIZATION] must map each of its risk factors to one of the risk factor categories and

corresponding liquidity horizons, n, in Table 2 to § __.215 and must assign a liquidity horizon of 10, 20, 40, 60, or 120 days to each of its risk factors, in accordance with the requirements of this paragraph (b)(11).

(i) A [BANKING ORGANIZATION] must assign a liquidity horizon to a risk factor on a particular trading desk, which must be greater than or equal to the minimum liquidity horizon corresponding to the value, n, for the risk factor category in Table 2 to § __.215, unless otherwise specified in paragraphs (b)(11)(ii) and (iii) of this section.

(ii) If the maturity of a market risk covered position is shorter than the respective liquidity horizon, n, of the risk factor category as set forth in Table 2 to § __.215, the minimum liquidity horizon is the next longer liquidity horizon, n, from the maturity of the market risk covered position.

(iii) The minimum liquidity horizon for credit and equity indices and other similar multi-underlying instruments must be the shortest liquidity horizon, n, that is equal to or longer than the weighted average of the liquidity horizons of the underlyings, calculated by multiplying the respective liquidity horizon, n, of the risk factor category as set forth in Table 2 to § __.215 of each individual underlying by its weight in the index and summing the weighted liquidity horizons across all underlyings.

Table 2 to § __.215—Liquidity Horizon n by Risk Factor Category

Risk factor category	n	Risk factor category	n
Interest rate and inflation: United States Dollar, Australian Dollar, Canadian Dollar, Euro, Japanese Yen, Swedish Krona, and United Kingdom Pound and the domestic currency of a [BANKING ORGANIZATION]	10	Equity (small market cap): volatility	60

Interest rate and inflation: unspecified currencies	20	Equity: other types	60
Interest rate: volatility	60	Foreign exchange rate: specified currency pairs[1]	10
Interest rate: other types	60	Foreign exchange rate: currency pairs	20
Credit spread: sovereign exposures, MDBs, and specified supranational entities (investment grade)	20	Foreign exchange: volatility	40
Credit spread: sovereign exposures, MDBs, and specified supranational entities (speculative grade and sub-speculative grade)	40	Foreign exchange: other types	40
Credit spread: GSE debt	40		
Credit spread: corporate positions (investment grade)	40	Energy and carbon emissions trading price	20
Credit spread: corporate positions (speculative grade and sub-speculative grade)	60	Precious metals and non-ferrous metals price	20
Credit spread: volatility	120	Other commodities	60
Credit spread: other types	120	Energy and carbon emissions trading price: volatility	60
Equity (large market cap or index)	10	Precious metals and non-ferrous metals price: volatility	60
Equity (small market cap)	20	Other commodities: volatility	120
Equity (large market cap or index): volatility	20	Commodity: other types	120

(c) *Internally modelled capital calculation.* A [BANKING ORGANIZATION] must calculate an internally modelled capital calculation, $IMCC$, on each business day in accordance with the below:

[1] Any currency pair formed by the following list of currencies: United States Dollar, Australian Dollar, Brazilian Real, Canadian Dollar, Chinese Yuan, Euro, Hong Kong Dollar, Indian Rupee, Japanese Yen, Mexican Peso, New Zealand Dollar, Norwegian Krone, Singapore Dollar, South African Rand, South Korean Won, Swedish Krona, Swiss Franc, Turkish Lira, United Kingdom Pound, and any additional currencies specified by the [AGENCY] under § __.209(b)(7)(ii).

(1) For all model-eligible trading desks, a [BANKING ORGANIZATION] must include in its internal models used to calculate the aggregate liquidity horizon-adjusted ES-based measure all modellable risk factors and type A non-modellable risk factors.

(2) The [BANKING ORGANIZATION] must calculate its aggregate liquidity horizon-adjusted ES-based measure, $IMCC(C)$, using the liquidity horizon-adjusted ES-based measure specified in paragraph (b) of this section, with no supervisory constraints on cross-risk class correlations.

(3) The [BANKING ORGANIZATION] must also calculate a series of partial liquidity horizon-adjusted ES-based measures (with risk factors of all other risk classes held constant) for each risk class using the liquidity horizon-adjusted ES-based measure specified in paragraph (b) of this section. These partial, non-diversifiable liquidity horizon-adjusted ES-based measures, $IMCC(C_i)$, must be summed to provide an aggregated risk class ES-based measure. The stress period used to calculate $IMCC(C)$ and $IMCC(C_i)$ must be the same.

(4) The internally modelled capital calculation, $IMCC$, must be calculated as the weighted average of the constrained and unconstrained ES-based measures as follows:

$$IMCC = \omega\big(IMCC(C)\big) + (1-\omega)\left(\sum_i IMCC(C_i)\right)$$

where,

(i) ω equals 0.5;

(ii) i is the index of risk classes, which are the following: interest rate risk, credit spread risk, equity risk, commodity risk and foreign exchange risk;

(iii) $IMCC(C)$ equals the aggregate liquidity horizon-adjusted ES-based measure specified in paragraph (c)(2) of this section; and

(iv) $IMCC(C_i)$ equals the partial liquidity horizon-adjusted ES-based measure specified in paragraph (c)(3) of this section for risk class i.

(d) *Stressed expected shortfall.* (1) *General.* A [BANKING ORGANIZATION] must calculate a stressed expected shortfall, SES, that meets the following requirements:

(i) The [BANKING ORGANIZATION] must calculate a capital measure for each non-modellable risk factor using a stress scenario that is calibrated to be at least as conservative as the ES-based measure, as described in paragraph (b), used for the internally modelled capital calculation, as described in paragraph (c), provided that:

(A) To determine the applicable stress scenario, the [BANKING ORGANIZATION] must select a common 12-month period of stress for all non-modellable risk factors in the same risk class,

(B) In determining the stress scenario, a [BANKING ORGANIZATION] may use proxies, provided the proxies meet the standards in § __.214(b)(2)(vi),

(C) Methodologies used to calculate any stressed expected shortfall must address non-linearities, as well as correlation and relevant basis risks, such as basis risk between credit default swaps and bonds; and

(D) For each non-modellable risk factor, the liquidity horizon of the stress scenario must be the greater of (1) the risk factor's liquidity horizon assigned pursuant to paragraph (b)(1) of this section and (2) 20 days; and

(E) When the [BANKING ORGANIZATION] cannot determine a stress scenario capital measure for any risk factor under paragraph (d)(1)(i) of this section, the [BANKING ORGANIZATION] must use the scenario capital requirement that produces the maximum

possible loss for each risk factor as the stress scenario capital requirement, for purposes of calculating the stressed expected shortfall.

(ii) Notwithstanding paragraph (d)(i) of this section, with approval of the [AGENCY], a [BANKING ORGANIZATION] also may use an alternative approach to determine the stress scenario.

(2) *Stressed expected shortfall calculation.* A [BANKING ORGANIZATION] must calculate the stressed expected shortfall, SES, for all non-modellable risk factors, as follows:

$$SES = \sqrt{\left(\sum_{k=1}^{K} SES_{NM,k}^2\right) + \left((1-\rho_b)\sum_{j=1}^{J} SES_{NM,j}^2 + \rho_b\left(\sum_{j=1}^{J} SES_{NM,j}\right)^2\right)}$$

where,

(i) $SES_{NM,k}$ is the stress scenario capital measure for the type A non-modellable risk factor k;

(ii) K is the number of type A non-modellable risk factors;

(iii) ρ_b is 0.36;

(iv) $SES_{NM,\mathrm{j}}$ is the stress scenario capital measure for the type B non-modellable risk factor j; and

(v) J is the number of type B non-modellable risk factors.

§ __.216 [RESERVED]

§ __.217 Market risk reporting and disclosures.

(a) *Scope.* Paragraphs (b) through (f) of this section apply to [BANKING ORGANIZATIONS] subject to the market risk capital requirements as described in § __.201(b)(1) and paragraphs (b) through (e) and (g) of this section apply to [BANKING

ORGANIZATIONS] subject to the CVA risk-based capital requirements as described in § __.201(b)(2), provided that a [BANKING ORGANIZATION] that is a consolidated subsidiary of a bank holding company, a covered savings and loan holding company that is a banking organization as defined in 12 CFR 238.2, or a depository institution that is subject to these requirements or of a non-U.S. banking organization that is subject to comparable public disclosure requirements in its home jurisdiction is not required to make the disclosures required by paragraphs (f) or (g) of this section.

(b) *Timing.* A [BANKING ORGANIZATION] must make the reports and disclosures described herein beginning on [THE FIRST DATE OF THE QUARTER THE RULE TAKES EFFECT]. A [BANKING ORGANIZATION] must make timely public reports and disclosures each calendar quarter. If a significant change occurs, such that the most recent reporting amounts are no longer reflective of the [BANKING ORGANIZATION]'s capital adequacy and risk profile, then a brief discussion of this change and its likely impact must be provided in a public disclosure as soon as practicable thereafter. Qualitative disclosures that typically do not change each quarter may be disclosed annually, provided any significant changes are disclosed in the interim.

(c) *Reporting and disclosure policy.* The [BANKING ORGANIZATION] must have a formal reporting and disclosure policy approved by the board of directors that addresses the [BANKING ORGANIZATION]'s approach for determining its market risk and CVA risk reports and disclosures. The policy must address the associated internal controls and reporting and disclosure controls and procedures. The board of directors and senior management must ensure that appropriate verification of the reports and disclosures takes place and that effective internal controls and reporting and disclosure controls and procedures are maintained. One or

more senior officers of the [BANKING ORGANIZATION] must attest that the reports and disclosures meet the requirements of this subpart F, and the board of directors and senior management are responsible for establishing and maintaining an effective internal control structure over financial reporting, including the reports and disclosures required by this section.

(d) *Proprietary and confidential information.* If a [BANKING ORGANIZATION] reasonably believes that reporting or disclosure of specific commercial or financial information would materially prejudice its position by making public certain information that is either proprietary or confidential in nature, the [BANKING ORGANIZATION] is not required to publicly report or disclose these specific items, but must report or disclose more general information about the subject matter of the requirement, together with the fact that, and the reason why, the specific items of information have not been disclosed.

(e) *Location*. The [BANKING ORGANIZATION] must either provide all of the public reports and disclosures required by this section in one place on the [BANKING ORGANIZATION]'s public website or provide the reporting and disclosures in more than one public financial report or other public regulatory reports, provided that the [BANKING ORGANIZATION] publicly provides a summary table specifically indicating the location(s) of all such reporting and disclosures.

(f) *Market risk disclosures and reports*—(1) *Quarterly public disclosures*. A [BANKING ORGANIZATION] must disclose publicly the following information at least quarterly:

(i) The aggregate amount of on-balance sheet and off-balance sheet securitization positions by exposure type;

(ii) The soundness criteria on which the [BANKING ORGANIZATION]'s internal capital adequacy assessment is based and a description of each methodology used to achieve a

capital adequacy assessment that is consistent with the required soundness criteria, including, for a [BANKING ORGANIZATION] that calculates the models-based measure for market risk, for categories of non-modellable risk factors;

(iii) The aggregate amount of correlation trading positions; and

(iv) For a [BANKING ORGANIZATION] that calculates the models-based measure for market risk, a comparison of VaR-based estimates with actual gains or losses experienced by the [BANKING ORGANIZATION] for each material portfolio of market risk covered positions, including an analysis of important outliers.

(2) *Annual public disclosures.* A [BANKING ORGANIZATION] must provide timely public disclosures of the following information at least annually:

(i) A description of the structure and organization of the market risk management system, including a description of the market risk governance structure established to implement the strategies and processes of the [BANKING ORGANIZATION] described in this paragraph (f);

(ii) A description of the policies and processes for determining whether a position is designated as a market risk covered position and the risk management policies for monitoring market risk covered positions;

(iii) The composition of material portfolios of market risk covered positions;

(iv) A description of the scope and nature of risk reporting and/or measurement systems and the strategies and processes implemented by the [BANKING ORGANIZATION] to identify, measure, monitor and control the [BANKING ORGANIZATION]'s market risks, including policies for hedging;

(v) A description of the trading desk structure and the types of market risk covered positions included on the trading desks or in trading desk categories, which must include:

(A) A description of the model-eligible trading desks for which a [BANKING ORGANIZATION] calculates the models-based non-default capital requirement; and

(B) Any changes in the scope of model-ineligible trading desks and the market risk covered positions on those trading desks.

(vi) The [BANKING ORGANIZATION]'s valuation policies, procedures, and methodologies for each material portfolio of market risk covered positions including, for securitization positions, the methods and key assumptions used for valuing such securitization positions, any significant changes since the last reporting period, and the impact of such change;

(vii) The characteristics of the internal models used for purposes of calculating the models-based measure for market risk and the specific approaches used in the validation of these models. For the models-based non-default capital requirement, this must include a general description of the model(s) used to calculate the ES-based measure in § __.215(b), the frequency by which data is updated, and a description of the calculation based on current and stressed observations.

(viii) A description of the approaches used for validating and evaluating the accuracy of internal models and modeling processes for purposes of this subpart F;

(ix) For each market risk category (that is, interest rate risk, credit spread risk, equity risk, foreign exchange risk, and commodity risk), a description of the stress tests applied to the market risk covered positions subject to the category;

(x) The results of the comparison of the [BANKING ORGANIZATION]'s internal estimates for purposes of this subpart F with actual outcomes during a sample period not used in model development;

(xi) A description of the [BANKING ORGANIZATION]'s processes for monitoring changes in the credit and market risk of securitization positions, including how those processes differ for resecuritization positions; and

(xii) A description of the [BANKING ORGANIZATION]'s policy governing the use of credit risk mitigation to mitigate the risks of securitization positions and resecuritization positions.

(3) *Public reports.* A [BANKING ORGANIZATION] subject to the market risk capital requirements as described in § __.201(b)(1) must provide, in the manner and form prescribed by the [AGENCY], a public report of its measure for market risk, on a quarterly basis. A [BANKING ORGANIZATION] must report additional information and reports as the [AGENCY] may require.

(4) *Confidential supervisory reports.* (i) A [BANKING ORGANIZATION] that calculates the models-based measure for market risk must provide to the [AGENCY], in the manner and form prescribed by the [AGENCY], a confidential supervisory report of backtesting and PLA testing information, on a quarterly basis.

(ii) A [BANKING ORGANIZATION] must report to the [AGENCY] the following information at the aggregate level for all model-eligible trading desks for each business day over the previous 500 business days, or all available business days, if 500 business days are not available, with no more than a 20-day lag:

(A) Daily VaR-based measures calibrated to the 99.0th percentile as described in § __.204(g)(1);

(B) Daily ES-based measure calculated in accordance with § __.215(b) calibrated at the 97.5th percentile;

(C) The actual profit and loss;

(D) The hypothetical profit and loss; and

(E) The p-value of the profit or loss on each day, which is the probability of observing a profit that is less than, or a loss that is greater than, the amount reported for purposes of paragraph (f)(4)(ii)(C) of this section based on the model used to calculate the VaR-based measure described in paragraph (f)(4)(ii)(A) of this section.

(iii) A [BANKING ORGANIZATION] must report to the [AGENCY] the following information for each trading desk for each business day over the previous 500 business days, or all available business days, if 500 business days are not available, with no more than a 20-day lag:

(A) Daily VaR-based measures for the trading desk calibrated at both the 97.5th percentile and the 99.0th percentile as described in § __.213(b)(1);

(B) Daily ES-based measure calculated in accordance with § __.215(b) calibrated at the 97.5th percentile;

(C) The actual profit and loss;

(D) The hypothetical profit and loss;

(E) Risk-theoretical profit and loss; and

(F) The p-values of the profit or loss on each day (that is, the probability of observing a profit that is less than, or a loss that is greater than, the amount reported for purposes of paragraph (f)(4)(iii)(C) of this section based on the model used to calculate the VaR-based measure described in paragraph (f)(4)(iii)(A) of this section).

(g) *CVA risk disclosures and reports*—(1) *Risk management-related disclosure requirements*. Except as provided in paragraphs (a) and (d) of this section, a [BANKING ORGANIZATION] subject to the CVA risk-based capital requirements as described in § __.201(b)(2) must make the disclosures described in Tables 1 and 2 to § __.217. The [BANKING ORGANIZATION] must make these disclosures publicly available for each of the last twelve quarters, or such shorter period beginning in the quarter in which the [BANKING ORGANIZATION] becomes subject to subpart F of this part.

Table 1 to § __.217—General Qualitative Disclosure Requirements Related To CVA

Qualitative Disclosures	The [BANKING ORGANIZATION] must describe its risk management objectives and policies for CVA risk as follows: (a) An explanation and/or a description of the [BANKING ORGANIZATION]'s processes implemented to identify, measure, monitor and control the [BANKING ORGANIZATION]'s CVA risks, including policies for hedging CVA risk and the processes for monitoring the continuing effectiveness of hedges.

Table 2 to § __.217—Qualitative Disclosures for Banks Using the SA-CVA

Qualitative Disclosures	The [BANKING ORGANIZATION] must provide the following information on its CVA risk management framework: (a) A description of the [BANKING ORGANIZATION]'s CVA risk management framework. (b) A description of how senior management is involved in the CVA risk management framework. (c) An overview of the governance of the CVA risk management framework (e.g., documentation, independent risk control unit, independent review, independence of the data acquisition from the lines of business).

CVA Risk-Based Capital Requirements

§ __.220 General requirements for CVA risk.

(a) *Identification of CVA risk covered positions and eligible CVA hedges.* A [BANKING ORGANIZATION] must:

(1) Identify all CVA risk covered positions and all transactions that hedge or are intended to hedge CVA risk;

(2) Identify all eligible CVA hedges and ineligible CVA hedges; and

(3) For a [BANKING ORGANIZATION] that has approval to use the standardized measure for CVA risk, identify all eligible CVA hedges for the purposes of calculating the basic CVA approach capital requirement and all eligible CVA hedges for the purpose of calculating the standardized CVA approach capital requirement.

(b) *CVA hedging policy.* A [BANKING ORGANIZATION] that hedges its CVA risk must have a clearly defined hedging policy for CVA risk that is reviewed and approved by senior management at least annually. The hedging policy must quantify the level of CVA risk that the [BANKING ORGANIZATION] is willing to accept and must detail the instruments, techniques, and strategies that the [BANKING ORGANIZATION] will use to hedge CVA risk.

(c) *Documentation.* A [BANKING ORGANIZATION] must have policies and procedures for determining its CVA risk-based capital requirement. A [BANKING ORGANIZATION] must adequately document all material aspects of its identification and management of CVA risk covered positions and eligible CVA hedges, and control, oversight, and review processes. A [BANKING ORGANIZATION] that calculates the standardized measure for CVA risk must adequately document:

(1) Policies and procedures of the CVA desk, or similar dedicated function, and the independent risk control unit;

(2) The internal auditing process;

(3) The internal policies, controls, and procedures concerning the [BANKING ORGANIZATION]'s CVA calculations for financial reporting purposes;

(4) The initial and ongoing validation of the [BANKING ORGANIZATION]'s models used for calculating regulatory CVA under § __.224(d), including exposure models; and

(5) The [BANKING ORGANIZATION]'s process to assess the performance of models used for calculating regulatory CVA under § __.224(d), including exposure models, and implement remedies.

§ __.221 Measure for CVA risk.

(a) *General requirements.* A [BANKING ORGANIZATION] must calculate its measure for CVA risk as the basic measure for CVA risk in accordance with paragraph (b) of this section, unless the [BANKING ORGANIZATION] has prior approval of the [AGENCY] and chooses to calculate its measure for CVA risk as the standardized measure for CVA risk in accordance with paragraph (c) of this section.

(b) *Basic measure for CVA risk.* The basic measure for CVA risk equals the basic CVA approach capital requirement as provided in § __.222 for all CVA risk covered positions and eligible CVA hedges, plus any additional capital requirement for CVA risk established by the [AGENCY] pursuant to § __.201(c).

(c) *Standardized measure for CVA risk.* The standardized measure for CVA risk equals the sum of the standardized CVA approach capital requirement as provided in paragraph (c)(1) of this section for all standardized CVA risk covered positions and standardized CVA hedges, the basic CVA approach capital requirement as provided in § __.222 for all basic CVA risk covered positions and basic CVA hedges, and any additional capital requirement for CVA risk established by the [AGENCY] pursuant to § __.201(c).

(1) The standardized CVA approach capital requirement equals the sum of the CVA delta capital requirement and the CVA vega capital requirement as calculated in accordance with § __.224.

(2) A [BANKING ORGANIZATION] that has received approval from the [AGENCY] to use the standardized measure for CVA risk must include the following CVA risk covered positions as basic CVA risk covered positions to be included in the calculation of the basic CVA approach capital requirement:

(i) Any CVA risk covered position that the [AGENCY] specifies must be included in the basic CVA approach capital requirement pursuant to § __.223(a)(1);

(ii) Any CVA risk covered position in a netting set that the [BANKING ORGANIZATION] chooses to exclude from the calculation of the standardized CVA approach capital requirement; and

(iii) Any CVA risk covered position in a partial netting set designated for inclusion in the basic CVA approach.

(3) A [BANKING ORGANIZATION] that has received approval from the [AGENCY] to use the standardized measure for CVA risk must include the following eligible CVA hedges as basic CVA hedges to be included in the calculation of the basic CVA approach capital requirement:

(i) Any eligible CVA hedge that the [AGENCY] specifies must be included in the basic CVA approach capital requirement pursuant to § __.223(a)(1); and

(ii) Any CVA hedge that is an eligible CVA hedge for purposes of calculating the basic CVA approach capital requirement that the [BANKING ORGANIZATION] chooses to include in the basic CVA approach capital requirement.

§ __.222 Basic CVA approach.

(a) *Basic CVA approach capital requirement.* The basic CVA approach capital requirement equals K_{basic}, which is calculated as follows:

$$K_{basic} = 0.65 \cdot (\beta \cdot K_{unhedged} + (1 - \beta) \cdot K_{hedged})$$

Where,

(1) The parameter, β, equals 0.25;

(2) $K_{unhedged}$ is calculated as follows:

$$K_{unhedged} = \sqrt{\left(\rho \cdot \sum_c SCVA_c\right)^2 + (1 - \rho^2) \cdot \sum_c SCVA_c^2}$$

Where,

(i) The correlation parameter, ρ, equals 50 percent;

(ii) $\sum_c(\quad)$ refers to a summation across all counterparties, c, of CVA risk covered positions;

(iii) $SCVA_c$ is equal to:

$$SCVA_c = \frac{1}{\alpha} \cdot RW_c \cdot \sum_{NS}(M_{NS} \cdot EAD_{NS} \cdot DF_{NS})$$

Where,

(A) α equals:

(*1*) 1 for counterparties for which the [BANKING ORGANIZATION] calculates exposure amount under § __.114(e)(4); and

(*2*) 1.4 for all other counterparties.

(B) $\sum_{NS}(\quad)$ refers to a summation across all netting sets with the counterparty;

(C) M_{NS} is the effective maturity for the netting set, NS, measured in years, calculated as the weighted-average remaining maturity of the individual CVA risk covered positions within the netting set, with the weight of each individual position equal to the notional amount of the position divided by the aggregate notional amount of all positions in the netting set;

(D) EAD_{NS} is the EAD of the netting set, NS, which must be determined using the same methodology it uses to calculate the exposure amount for counterparty credit risk for its OTC derivative contracts under § __.34 or §§ __.113 through __.114, as applicable;

(E) DF_{NS} is a discount factor equal to $\frac{1-e^{-0.05 \cdot M_{NS}}}{0.05 \cdot M_{NS}}$; and

(F) RW_c is the risk weight for counterparty c, based on the sector and credit quality of the counterparty, as specified in Table 1 to § __.222.

Table 1 to § __.222—Supervisory Risk Weights, RW_c

Sector of counterparty	Credit quality of counterparty		
	Investment grade	Speculative grade / sub-speculative grade	
Sovereign exposures, MDBs, and specified supranational entities	0.5%	3.0%	7.0%
PSEs, government-backed non-financials, GSEs, education, and public administration	1.0%	4.0%	
Financials, including government-backed financials	5.0%	12.0%	
Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	3.0%	7.0%	
Consumer goods and services, transportation and storage, and administrative and support service activities	3.0%	8.5%	
Technology and telecommunications	2.0%	5.5%	
Health care, utilities, and professional and technical activities	1.5%	5.0%	
Other sector	5.0%	12.0%	

(3) K_{hedged} is calculated as follows:

$$K_{hedged} = \sqrt{\left(\rho \cdot \sum_c (SCVA_c - SNH_c) - IH\right)^2 + (1-\rho^2) \cdot \sum_c (SCVA_c - SNH_c)^2 + \sum_c HMA_c}$$

Where,

(i) The correlation parameter, ρ, is defined in paragraph (a)(2)(i) of this section;

(ii) $\sum_c(\quad)$ refers to a summation across all counterparties, c, of CVA risk covered positions, $SCVA_c$, as defined in paragraph (a)(2)(iii) of this section;

(iii) SNH_c is calculated as follows:

$$SNH_c = \sum_{h \in c} (r_{hc} \cdot RW_h \cdot M_h^{SN} \cdot B_h^{SN} \cdot DF_h^{SN})$$

Where,

(A) $\sum_{h\in}(\quad)$ refers to a summation across all single-name eligible CVA hedges, h, that the [BANKING ORGANIZATION] uses to hedge the CVA risk of counterparty, c;

(B) r_{hc} is the correlation between the credit spread of counterparty, c, and the credit spread of a single-name hedge, h, of counterparty, c, as specified in Table 2 to § __.222;

(C) RW_h is the risk weight of single-name hedge, h, as prescribed in Table 1 to § __.222, for the sector and credit quality of the reference name of the hedge;

(D) M_h^{SN} is the remaining maturity of single-name hedge, h, measured in years;

(E) B_h^{SN} is the notional amount of single-name hedge, h, provided that, for single-name contingent CDS, the notional amount is determined by the current market value of the reference portfolio or instrument; and

(F) DF_h^{SN} is the discount factor and is calculated as $\frac{1-e^{\left(-0.05 \cdot M_h^{SN}\right)}}{0.05 \cdot M_h^{SN}}$.

Table 2 to § __.222—Correlations Between Credit Spread of Counterparty, c, and a Single-Name Hedge, h

Single-name hedge, h, of counterparty, c	Value of r_{hc}
References counterparty, c, directly	100%
References an affiliate of counterparty, c	80%
References an entity that belongs to the same sector and region as the counterparty, c	50%

(iv) IH is calculated as follows:

$$IH = \sum_i \left(RW_i \cdot M_i^{ind} \cdot B_i^{ind} \cdot DF_i^{ind}\right)$$

Where,

(A) $\sum_i(\quad)$ refers to a summation across all eligible CVA hedges that are index hedges, i, that the [BANKING ORGANIZATION] uses to hedge CVA risk;

(B) RW_i is the risk weight of the index hedge, i, as follows:

(*1*) For an index hedge where all index constituents belong to the same sector and are of the same credit quality, the value in Table 1 to § __.222 corresponding to that sector and credit quality, multiplied by 0.7; or

(*2*) For an index spanning multiple sectors or with a mixture of investment grade constituents and other grade constituents, the notional-weighted average of the risk weights from Table 1 to § __.222 corresponding to the sectors and credit qualities of the constituents, multiplied by 0.7;

(C) M_i^{ind} is the remaining maturity of the index hedge, i, measured in years;

(D) B_i^{ind} is the notional amount of the index hedge, i; and

(E) DF_i^{ind} is the discount factor and is calculated as $\frac{1-e^{\left(-0.05 \cdot M_i^{ind}\right)}}{0.05 \cdot M_i^{ind}}$; and

(v) HMA_c is calculated as follows where all terms have the same definitions as set out in paragraph (a)(3)(iii) of this section:

$$HMA_c = \sum_{h \in c} \left((1 - r_{hc}^2) \cdot (RW_h \cdot M_h^{SN} \cdot B_h^{SN} \cdot DF_h^{SN})^2 \right)$$

(b) [Reserved]

§ __.223 Requirements for the standardized measure for CVA risk.

(a) *Eligibility requirements.* (1) A [BANKING ORGANIZATION] must receive approval of the [AGENCY] prior to using the standardized measure for CVA risk for calculating CVA capital requirements. Such approval may specify certain CVA risk covered positions and eligible CVA hedges that must be included in the calculation of the basic CVA approach capital requirement. In order to be eligible to use the standardized measure for CVA risk, a [BANKING ORGANIZATION] must meet the following requirements:

(i) A [BANKING ORGANIZATION] must be able to calculate, on at least a monthly basis, regulatory CVA and CVA sensitivities to market risk factors and counterparty credit spreads specified in § __.224 and § __.225;

(ii) A [BANKING ORGANIZATION] must have a CVA desk, or a similar dedicated function, responsible for CVA risk management and hedging consistent with the [BANKING ORGANIZATION]'s policies and procedures;

(iii) A [BANKING ORGANIZATION] must determine the EAD for derivative contracts using the standardized approach for counterparty credit risk as specified in § __.114; and

(iv) A [BANKING ORGANIZATION] must meet all of the requirements listed in paragraph (b) of this section and the requirements in § __.220(c) on an ongoing basis.

(2) The [AGENCY] may rescind its approval of the use of the standardized measure for CVA risk (in whole or in part), if the [AGENCY] determines that the model no longer complies

with this subpart or fails to reflect accurately the CVA risk of the [BANKING ORGANIZATION]'s CVA risk covered positions.

(3) The [AGENCY] may specify that one or more CVA risk covered positions or one or more eligible CVA hedges must be included in the basic CVA approach capital requirement or prescribe an alternative capital requirement, if the [AGENCY] determines that the [BANKING ORGANIZATION]'s implementation of the standardized CVA approach capital requirement no longer complies with this subpart F or fails to reflect accurately the CVA risk.

(b) *Ongoing requirements.* (1) Exposure models used in the calculation of regulatory CVA under § __.224(d) must be part of a CVA risk management framework that includes the identification, measurement, management, approval, and internal reporting of CVA risk.

(2) Senior management must have oversight of the risk control process.

(3) A [BANKING ORGANIZATION] must have an independent risk control unit that is responsible for the effective initial and ongoing validation (no less than annual) of the models used for calculating regulatory CVA under § __.224(d), including exposure models. This unit must be independent from the business unit that evaluates counterparties and sets limits, a [BANKING ORGANIZATION]'s trading desks, and the CVA desk, or similar dedicated function, and must report directly to senior management of the [BANKING ORGANIZATION].

(4) A [BANKING ORGANIZATION] must document the process for initial and ongoing validation of its models used for calculating regulatory CVA under § __.224(d), including exposure models, which must recreate the analysis, to a level of detail that would enable a third party to understand how the models operate, their limitations, and their key assumptions. This documentation must set out the minimum frequency (no less than annual) with which ongoing validation will be conducted as well as other circumstances (such as a sudden change in market

behavior) under which additional validation must be conducted more frequently. In addition, the documentation must sufficiently describe how the validation is conducted with respect to data flows and portfolios, what analyses are used, and how representative counterparty portfolios are constructed.

(5) A [BANKING ORGANIZATION] must test the pricing models used to calculate exposure for given paths of market risk factors against appropriate independent benchmarks for a wide range of market states as part of the initial and ongoing model validation process. A [BANKING ORGANIZATION]'s pricing models for options must account for the non-linearity of option value with respect to market risk factors.

(6) An independent review of the overall CVA risk management process must be conducted as part of the [BANKING ORGANIZATION]'s own regular internal auditing process. This review must include both the activities of the CVA desk, or similar dedicated function, and of the independent risk control unit.

(7) A [BANKING ORGANIZATION] must define criteria on which to assess the exposure models and their inputs and have a written policy in place to describe the process to assess the performance of exposure models and remedy unacceptable performance.

(8) A [BANKING ORGANIZATION]'s exposure models must capture transaction-specific information in order to aggregate exposures at the level of the netting set. A [BANKING ORGANIZATION] must verify that transactions are assigned to the appropriate netting set within the model.

(9) A [BANKING ORGANIZATION]'s exposure models must reflect transaction terms and specifications accurately. The terms and specifications must reside in a secure database that is subject to formal and periodic audit no less than annually. The transmission of transaction

terms and specifications data to the exposure model must also be subject to internal audit, and formal reconciliation processes must be in place between the internal model and source data systems to verify on an ongoing basis that transaction terms and specifications are being reflected correctly or at least conservatively.

(10) A [BANKING ORGANIZATION] must acquire current and historical market data that are either independent of the lines of business or validated independently from the lines of business and be compliant with applicable accounting standards. The data must be input into the exposure models in a timely and complete fashion, and maintained in a secure database subject to formal and periodic audit. A [BANKING ORGANIZATION] must also have a well-developed data integrity process to handle the data of erroneous and anomalous observations. In the case where an exposure model relies on proxy market data, a [BANKING ORGANIZATION] must set internal policies to identify suitable proxies and the [BANKING ORGANIZATION] must demonstrate empirically on an ongoing basis that the proxy provides a conservative representation of the underlying risk under adverse market conditions.

§ __.224 Calculation of the standardized CVA approach.

(a) *General.* A [BANKING ORGANIZATION] must calculate the CVA delta capital requirement pursuant to paragraph (b) of this section and the CVA vega capital requirement pursuant to paragraph (c) of this section, in both cases for all standardized CVA risk covered positions and for the market value of all standardized CVA hedges, in accordance with the requirements set forth below.

(1) For each standardized CVA risk covered position and standardized CVA hedge, a [BANKING ORGANIZATION] must identify all of the relevant risk factors as described in § __.225 for which it will calculate sensitivities for delta risk and vega risk as described in

paragraphs (b) and (c) of this section. A [BANKING ORGANIZATION] must also identify the corresponding buckets related to these risk factors as described in § __.225.

(2) A [BANKING ORGANIZATION] must assign a standardized CVA hedge that mitigates credit spread delta risk either to the counterparty credit spread risk class or to the reference credit spread risk class.

(b) *CVA delta capital requirement*. (1) *General.* The CVA delta capital requirement equals the sum of the risk class-level CVA delta capital requirements calculated pursuant to paragraph (b)(4) of this section for each of the following six risk classes:

(i) Interest rate risk;

(ii) Foreign exchange risk;

(iii) Counterparty credit spread risk;

(iv) Reference credit spread risk;

(v) Equity risk; and

(vi) Commodity risk.

(2) *Net weighted sensitivity calculation*. For each risk factor, *k*, specified in § __.225(a), a [BANKING ORGANIZATION] must:

(i) Calculate the CVA delta sensitivity of aggregate regulatory CVA to the risk factor, S_k^{CVA}, and the CVA delta sensitivity of the aggregate market value of standardized CVA hedges to the risk factor, S_k^{Hdg}, pursuant to paragraph (e) of this section.

(ii) Calculate the weighted CVA delta sensitivity to the risk factor, WS_k^{CVA}, and the weighted hedge delta sensitivity to the risk factor, WS_k^{Hdg}, by multiplying S_k^{CVA} and S_k^{Hdg}, respectively, by the corresponding risk weight, RW_k, specified in § __.225(a):

$$WS_k^{CVA} = RW_k \cdot S_k^{CVA}$$

$$WS_k^{Hdg} = RW_k \cdot S_k^{Hdg}$$

(iii) Calculate the net weighted delta sensitivity, WS_k, by subtracting the weighted hedge delta sensitivity, WS_k^{Hdg}, from the weighted CVA delta sensitivity, WS_k^{CVA} :

$$WS_k = WS_k^{CVA} - WS_k^{Hdg}$$

(3) *Within bucket aggregation*. For each bucket, b, as provided in § __.225(a), a [BANKING ORGANIZATION] must calculate the bucket-level CVA delta capital requirement, K_b, by aggregating the net weighted delta sensitivities for each risk factor in a bucket, b, using the buckets and correlation parameters, ρ_{kl}, applicable to each risk class as specified in § __.225(a), as follows:

$$K_b = \sqrt{\sum_{k\in b} WS_k^2 + \sum_{k\in b}\sum_{l\in b, l\neq k} (\rho_{kl} \cdot WS_k \cdot WS_l) + R \cdot \sum_{k\in b} \left(WS_k^{Hdg}\right)^2}$$

where R is the hedging disallowance parameter equal to 0.01.

(4) *Across bucket aggregation*. A [BANKING ORGANIZATION] must calculate the risk class-level CVA delta capital requirement, K, by aggregating the bucket-level CVA delta capital requirements, K_b, for each bucket in the risk class using the correlation parameters, γ_{bc}, applicable to each risk class as specified in § __.225(a), as follows:

$$K = m_{CVA} \cdot \sqrt{\sum_b K_b^2 + \sum_b \sum_{c\neq b} (\gamma_{bc} \cdot S_b \cdot S_c)}$$

where,

(i) S_b is defined for bucket, b, as:

$$S_b = max\left(min\left(\sum\nolimits_{k\in b} WS_k, K_b\right), -K_b\right)$$

(ii) S_c is defined for bucket c as:

$$S_c = max\left(min\left(\sum_{k\in c} WS_k, K_c\right), -K_c\right)$$

(iii) The multiplier, m_{CVA}, equals 1, unless the [AGENCY] notifies the [BANKING ORGANIZATION] in writing that a different value must be used. The [AGENCY] may increase a [BANKING ORGANIZATION]'s multiplier if it determines that the [BANKING ORGANIZATION]'s CVA model risk warrants it.

(c) *CVA vega capital requirement*. (1) *General.* The CVA vega capital requirement equals the sum of the risk class-level CVA vega capital requirements calculated pursuant to paragraph (c)(4) of this section for each of the following five risk classes:

(i) Interest rate risk;

(ii) Foreign exchange risk;

(iii) Reference credit spread risk;

(iv) Equity risk; and

(v) Commodity risk.

(2) *Net weighted sensitivity calculation*. For each risk factor, k, specified in § __.225(b), a [BANKING ORGANIZATION] must:

(i) Calculate the CVA vega sensitivity of aggregate regulatory CVA to the risk factor, S_k^{CVA}, and the CVA vega sensitivity of the aggregate market value of standardized CVA hedges to the risk factor, S_k^{Hdg}, pursuant to paragraph (e) of this section.

(ii) Calculate the weighted CVA vega sensitivity to the risk factor, WS_k^{CVA}, and the weighted hedge vega sensitivity to the risk factor, WS_k^{Hdg}, by multiplying S_k^{CVA} and S_k^{Hdg}, respectively, by the corresponding risk weight, RW_k, specified in § __.225(b):

$$WS_k^{CVA} = RW_k \cdot S_k^{CVA}$$

$$WS_k^{Hdg} = RW_k \cdot S_k^{Hdg}$$

(iii) Calculate the net weighted vega sensitivity, WS_k, by subtracting the weighted hedge vega sensitivity, WS_k^{Hdg}, from the weighted CVA vega sensitivity, WS_k^{CVA} :

$$WS_k = WS_k^{CVA} - WS_k^{Hdg}$$

(3) *Within bucket aggregation*. For each bucket, b, as provided in § __.225(b), a [BANKING ORGANIZATION] must calculate the bucket-level CVA vega capital requirement, K_b, by aggregating the net weighted vega sensitivities for each risk factor in a bucket, b, using the buckets and correlation parameters, ρ_{kl}, applicable to each risk class as specified in § __.225(b), as follows:

$$K_b = \sqrt{\sum_{k \in b} WS_k^2 + \sum_{k \in b} \sum_{l \in b, l \neq k} (\rho_{kl} \cdot WS_k \cdot WS_l) + R \sum_{k \in b} \left(WS_k^{Hdg}\right)^2}$$

where R is the hedging disallowance parameter equal to 0.01.

(4) *Across bucket aggregation*. A [BANKING ORGANIZATION] must calculate the risk class-level CVA vega capital requirement, K, by aggregating the bucket-level CVA vega capital requirements, K_b, for each bucket in the risk class using the correlation parameters, γ_{bc}, applicable to each risk class as specified in § __.225(b), as follows:

$$K = m_{CVA} \cdot \sqrt{\sum_b K_b^2 + \sum_b \sum_{c \neq b} (\gamma_{bc} \cdot S_b \cdot S_c)}$$

where,

(i) S_b is defined for bucket b as:

$$S_b = max\left(min\left(\sum_{k \in b} WS_k, K_b\right), -K_b\right)$$

(ii) S_c is defined for bucket c as:

$$S_c = max\left(min\left(\sum_{k\in c} WS_k\,, K_c\right), -K_c\right)$$

(iii) The multiplier, m_{CVA}, equals 1, unless the [AGENCY] notifies the [BANKING ORGANIZATION] in writing that a different value must be used. The [AGENCY] may increase a [BANKING ORGANIZATION]'s multiplier if it determines that the [BANKING ORGANIZATION]'s CVA model risk warrants it.

(d) *Calculation of regulatory CVA.* A [BANKING ORGANIZATION] must calculate aggregate regulatory CVA as the sum of regulatory CVA for each counterparty.

(1) A [BANKING ORGANIZATION] must calculate regulatory CVA at the counterparty level as the expected loss resulting from default of the counterparty and assuming non-default of the [BANKING ORGANIZATION]. In expressing the regulatory CVA, non-zero losses must have a positive sign.

(2) The calculation of regulatory CVA must be based, at a minimum, on the following inputs, consistent with the requirements of this paragraph (d) of this section:

(i) Term structure of market-implied probability of default;

(ii) Market-consensus expected loss-given-default; and

(iii) Simulated paths of discounted future exposure.

(3) The term structure of market-implied probability of default must be estimated from credit spreads observed in the markets. For counterparties whose credit is not actively traded (illiquid counterparties), the market-implied probability of default must be estimated from proxy credit spreads, estimated for such counterparties according to the following requirements:

(i) A [BANKING ORGANIZATION] must estimate the credit spread curves of illiquid counterparties from credit spreads observed in the markets of the counterparty's liquid peers via an algorithm that is based, at a minimum, on the following inputs:

(A) A measure of credit quality;

(B) Industry; and

(C) Region;

(ii) A [BANKING ORGANIZATION] may map an illiquid counterparty to a single liquid reference name if the [BANKING ORGANIZATION] demonstrates to the [AGENCY] that such mapping is appropriate; and

(iii) When no credit spread of any of the counterparty's peers is available due to the counterparty's specific type, a [BANKING ORGANIZATION] may use an estimate of credit risk to proxy the spread of an illiquid counterparty; provided that where a [BANKING ORGANIZATION] uses historical probabilities of default as part of this assessment, the resulting spread must relate to credit markets and cannot be based on historical probabilities of default alone.

(4) The market-consensus expected loss-given-default value must be the same as the one used to calculate the market-implied probability of default from credit spreads unless the seniority of the exposure resulting from CVA risk covered positions differs from the seniority of senior unsecured bonds.

(5) The simulated paths of discounted future exposure are produced by pricing all standardized CVA risk covered positions with the counterparty along simulated paths of relevant market risk factors and discounting the prices to today using risk-free interest rates along the path.

(6) All market risk factors material for the transactions with a counterparty must be simulated as stochastic processes for an appropriate number of paths defined on an appropriate set of future time points extending to the maturity of the longest transaction.

(7) For transactions with a significant level of dependence between exposure and the counterparty's credit quality, a [BANKING ORGANIZATION] must account for this dependence in regulatory CVA calculations.

(8) For margined counterparties, only financial collateral that qualifies for inclusion in the net independent collateral amount or variation margin amount under §§ __.113 through __.114 may be recognized as a risk mitigant.

(9) For margined counterparties, the simulated paths of discounted future exposure must capture the effects of margining collateral that is recognized as a risk mitigant along each exposure path. All of the relevant contractual features such as the nature of the margin agreement (unilateral vs bilateral), the frequency of margin calls, the type of collateral, thresholds, independent amounts, initial margins, and minimum transfer amounts must be appropriately captured by the exposure model. To determine collateral available to a [BANKING ORGANIZATION] at a given exposure measurement time point, the exposure model must assume that the counterparty will not post or return any collateral within a certain time period immediately prior to that time point, the margin period of risk (MPoR). For all standardized CVA risk covered positions, the MPoR must not be less than $9 + N$ business days. For purposes of this paragraph (d)(9), N is the re-margining period specified in the margin agreement.

(10) A [BANKING ORGANIZATION] must obtain the simulated paths of discounted future exposure using the same CVA exposure models used by the [BANKING ORGANIZATION] for financial reporting purposes, adjusted to meet the requirements of this section. For purposes of this section, a [BANKING ORGANIZATION] must use the same model calibration process, market data, and transaction data as the [BANKING

ORGANIZATION] uses in its CVA calculations for financial reporting purposes, adjusted to meet the requirements of this calculation.

(11) A [BANKING ORGANIZATION]'s generation of market risk factor paths underlying the exposure models must satisfy the following requirements:

(i) Drifts of risk factors must be consistent with a risk-neutral probability measure and a [BANKING ORGANIZATION] may not calibrate drifts of risk factors on a historical basis;

(ii) A [BANKING ORGANIZATION] must calibrate the volatilities and correlations of market risk factors to market data; provided that, where sufficient data from a liquid derivatives market does not exist, a [BANKING ORGANIZATION] may calibrate volatilities and correlations of market risk factors on a historical basis; and

(iii) The distribution of modelled risk factors must adequately account for the possible non-normality of the distribution of exposures.

(12) For purposes of the calculation of the regulatory CVA, a [BANKING ORGANIZATION] must recognize netting in the same manner as used by the [BANKING ORGANIZATION] for financial reporting purposes.

(e) *CVA Sensitivities.* For purposes of calculating the CVA delta capital requirement and the CVA vega capital requirement, a [BANKING ORGANIZATION] must calculate the CVA delta sensitivities and CVA vega sensitivities in accordance with the requirements set forth below.

(1) *Reference value*. For purposes of calculating the CVA delta sensitivity or CVA vega sensitivity of aggregate regulatory CVA to a risk factor, S_k^{CVA}, the reference value is the aggregate regulatory CVA of all standardized CVA risk covered positions. For purposes of calculating the CVA delta sensitivity or CVA vega sensitivity of aggregate market value of

standardized CVA hedges to a risk factor, S_k^{Hdg}, the reference value is the aggregate market value of all standardized CVA hedges.

(2) *CVA delta sensitivities definitions*—(i) *Interest rate risk*. (A) For currencies specified in § __.225(a)(1)(ii), a [BANKING ORGANIZATION] must calculate the CVA delta sensitivity to each delta risk factor by changing the risk-free yield for a given tenor for all curves in a given currency by 0.0001 and dividing the resulting change in the reference value by 0.0001. A [BANKING ORGANIZATION] must measure the delta sensitivity to the inflation rate by changing the inflation rate by 0.0001 and dividing the resulting change in the reference value by 0.0001.

(B) For currencies not specified in § __.225(a)(1)(ii), a [BANKING ORGANIZATION] must measure the CVA delta sensitivity to each delta risk factor by applying a parallel shift to all risk-free yield curves in a given currency by 0.0001 and dividing the resulting change in the reference value by 0.0001. A [BANKING ORGANIZATION] must measure the delta sensitivity to the inflation rate by changing the inflation rate by 0.0001 and dividing the resulting change in the reference value by 0.0001.

(ii) *Foreign exchange risk*. A [BANKING ORGANIZATION] must measure the CVA delta sensitivity to each delta risk factor by multiplying the current value of the exchange rate between the [BANKING ORGANIZATION]'s reporting currency and the other currency (i.e., the value of one unit of another currency expressed in units of the reporting currency) by 1.01 and dividing the resulting change in the reference value by 0.01. For transactions that reference an exchange rate between a pair of non-reporting currencies, a [BANKING ORGANIZATION] must measure the CVA delta sensitivities to the foreign exchange spot rate between the

[BANKING ORGANIZATION]'s reporting currency and each of the referenced non-reporting currencies.

(iii) *Counterparty credit spread risk*. For each entity and each tenor point, a [BANKING ORGANIZATION] must measure the CVA delta sensitivity to each delta risk factor for counterparty credit risk by shifting the relevant credit spread by 0.0001 and dividing the resulting change in the reference value by 0.0001.

(iv) *Reference credit spread risk*. A [BANKING ORGANIZATION] must measure the CVA delta sensitivity to each delta risk factor for reference credit spread risk by simultaneously shifting all of the credit spreads for all tenors of all reference names in the bucket by 0.0001 and dividing the resulting change in the reference value by 0.0001.

(v) *Equity risk*. A [BANKING ORGANIZATION] must measure the CVA delta sensitivity to each delta risk factor for equity risk by multiplying the current values of all of the equity spot prices for all reference names in the bucket by 1.01 and dividing the resulting change in the reference value by 0.01.

(vi) *Commodity risk*. A [BANKING ORGANIZATION] must measure the CVA delta sensitivities to each delta risk factor for commodity risk by multiplying the current values of all of the spot prices of all commodities in the bucket by 1.01 and dividing the resulting change in the reference value by 0.01.

(3) *CVA vega sensitivities definitions*—(i) *Interest rate risk*. A [BANKING ORGANIZATION] must measure the CVA vega sensitivity to each vega risk factor by multiplying the current values of all interest rate or inflation rate volatilities, respectively, by 1.01 and dividing the resulting change in the reference value by 0.01.

(ii) *Foreign exchange risk*. A [BANKING ORGANIZATION] must measure the CVA vega sensitivity to each vega risk factor for foreign exchange risk by multiplying the current values of all volatilities for a given exchange rate between the [BANKING ORGANIZATION]'s reporting currency and another currency by 1.01 and dividing the resulting change in the reference value by 0.01. For transactions that reference an exchange rate between a pair of non-reporting currencies, a [BANKING ORGANIZATION] must measure the volatilities of the foreign exchange spot rates between the [BANKING ORGANIZATION]'s reporting currency and each of the referenced non-reporting currencies.

(iii) *Reference credit spread risk*. A [BANKING ORGANIZATION] must measure the CVA vega sensitivity to each vega risk factor for reference credit spread risk by multiplying the current values of the volatilities of all credit spreads of all tenors for all reference names in the bucket by 1.01 and dividing the resulting change in the reference values by 0.01.

(iv) *Equity risk*. A [BANKING ORGANIZATION] must measure the CVA vega sensitivity to each risk factor for equity risk by multiplying the current values of the volatilities for all reference names in the bucket by 1.01 and dividing the resulting change in the reference value by 0.01.

(v) *Commodity risk*. A [BANKING ORGANIZATION] must measure the CVA vega sensitivity to each vega risk factor for commodity risk by multiplying the current values of the volatilities for all commodities in the bucket by 1.01 and dividing the resulting change in the reference value by 0.01.

(4) Notwithstanding paragraphs (e)(2) and (3) of this section, a [BANKING ORGANIZATION] may use smaller values of risk factor changes than what is specified in

paragraphs (e)(2) and (3) of this section if doing so is consistent with internal risk management calculations.

(5) When CVA vega sensitivities are calculated, the volatility shift must apply to both types of volatilities that appear in exposure models:

(i) Volatilities used for generating risk factor paths; and

(ii) Volatilities used for pricing options.

(6) In cases where a standardized CVA risk covered position or a standardized CVA hedge references an index, the sensitivities of the aggregate regulatory CVA or the market value of the eligible CVA hedge to all risk factors upon which the value of the index depends must be calculated. The sensitivity of the aggregate regulatory CVA or the market value of the standardized CVA hedge to risk factor, k, must be calculated by applying the shift of risk factor, k, to all index constituents that depend on this risk factor and recalculating the aggregate regulatory CVA or the market value of the standardized CVA hedge.

(7) Notwithstanding paragraph (e)(6) of this section, for credit and equity indices:

(i) For the risk classes of counterparty credit spread risk, reference credit spread risk, and equity risk, a [BANKING ORGANIZATION] may choose to introduce a set of additional risk factors that directly correspond to the indices (index risk factors);

(ii) If a [BANKING ORGANIZATION] chooses to introduce such additional risk factors, a [BANKING ORGANIZATION] must calculate CVA sensitivities to the index risk factors in addition to sensitivities to the other index risk factors; and

(iii) For a standardized CVA risk covered position or a standardized CVA hedge whose underlying is an index, its contribution to sensitivities to the index constituents is replaced with its contribution to a single sensitivity to the underlying index, provided that:

(A) For equity indices where at least 75 percent of market value of the constituents of the index, taking into account the weightings of the constituents, are mapped to the same sector, the entire index must be mapped to that sector and treated as a single-name sensitivity in that bucket;

(B) For credit indices where at least 75 percent of notional value of the constituents of the index, taking into account the weightings of the constituents, are mapped to the same sector, the entire index must be mapped to that sector and treated as a single-name sensitivity in that bucket; and

(C) In all other cases, the sensitivity must be mapped to the applicable index bucket.

§ __.225 Standardized CVA approach: definitions of buckets, risk factors, risk weights, and correlation parameters.

(a) *CVA delta capital requirement*—(1) *Interest rate risk*—(i) *Delta buckets for interest rate risk.* A [BANKING ORGANIZATION] must establish a separate interest rate risk bucket for each currency.

(ii) For the purposes of this section, specified currencies mean United States Dollar, Australian Dollar, Canadian Dollar, Euro, Japanese Yen, Swedish Krona, and United Kingdom Pound, and any additional currencies specified by the [AGENCY].

(A) *Delta risk factors for interest rate risk, specified currencies.* The delta risk factors for interest rate risk for the specified currencies are the absolute changes of the inflation rate and of the risk-free yields for the following five tenors: 1 year, 2 years, 5 years, 10 years, and 30 years.

(B) *Delta risk weights for interest rate risk, specified currencies*. The delta risk weights, RW_k, for interest rate risk for the specified currencies are set out in Table 1 to § __.225.

Table 1 to § __.225—Delta Risk Weights for Interest Rate Risk (Specified Currencies)

Risk factor	Risk free yields					Inflation
	1 year	2 years	5 years	10 years	30 years	
Risk weight	1.11%	0.93%	0.74%	0.74%	0.74%	1.11%

(C) *Delta within-bucket correlation parameter for interest rate risk, specified currencies*. The correlation parameters, ρ_{kl}, related to the specified currencies are set out in Table 2 to § __.225.

Table 2 to § __.225—Delta Correlation Parameters, ρ_{kl}, for Interest Rate Risk (Specified Currencies)

	1 year	2 years	5 years	10 years	30 years	Inflation
1 year	100%	91%	72%	55%	31%	40%
2 years		100%	87%	72%	45%	40%
5 years			100%	91%	68%	40%
10 years				100%	83%	40%
30 years					100%	40%
Inflation						100%

(iii) For currencies not specified in paragraph (a)(2)(ii) of this section:

(A) *Delta risk factors for interest rate risk, other currencies.* The delta risk factors for interest rate risk equal the absolute change of the inflation rate and the parallel shift of the entire risk-free yield curve for a given currency;

(B) *Delta risk weights for interest rate risk, other currencies*. The delta risk weights, RW_k, for both the risk-free yield curve and the inflation rate equal 1.58 percent; and

(C) *Delta within-bucket correlation parameter for interest rate risk, other currencies*. The correlation parameter, ρ_{kl}, between the risk-free yield curve and the inflation rate equals 40 percent.

(iv) *Delta cross-bucket correlation parameter for interest rate risk.* The delta cross-bucket correlation parameter, γ_{bc}, for interest rate risk equals 50 percent for all currency pairs.

(2) *Foreign exchange risk*—(i) *Delta buckets for foreign exchange risk*. A [BANKING ORGANIZATION] must establish a separate delta foreign exchange risk bucket for each currency, except for a [BANKING ORGANIZATION]'s own reporting currency.

(ii) *Delta risk factors for foreign exchange risk*. The delta risk factors for foreign exchange risk equal the relative change of the foreign exchange spot rate between a given currency and a [BANKING ORGANIZATION]'s reporting currency or base currency, where the foreign exchange spot rate is the current market price of one unit of another currency expressed in the units of the [BANKING ORGANIZATION]'s reporting currency or base currency.

(iii) *Delta risk weights for foreign exchange risk*. The delta risk weights, RW_k, for foreign exchange risk for all exchange rates between the [BANKING ORGANIZATION]'s reporting currency or base currency and another currency equal 11 percent.

(iv) *Delta cross-bucket correlation parameter for foreign exchange risk.* The delta cross-bucket correlation parameter, γ_{bc}, for foreign exchange risk equals 60 percent for all currency pairs.

(3) *Counterparty credit spread risk*—(i) *Delta buckets for counterparty credit spread risk.* Delta buckets for counterparty credit spread risk are set out in Table 3 to § __.225. Delta buckets 1 to 7 represent the non-index risk factors and bucket 8 is available for the optional treatment of indices. Under the optional treatment of indices, only standardized CVA hedges of counterparty credit spread risk and reference indices can be assigned to bucket 8, whereas buckets 1 to 7 must be used for calculations of CVA delta sensitivities for standardized CVA risk covered positions and all single-name and all non- index hedges. For any CVA index hedge assigned to buckets 1 to 7, the sensitivity of the hedge to each index constituent must be calculated as described in § __.224(e)(6).

(ii) *Delta risk factors for counterparty credit spread risk*. The delta risk factors for counterparty credit spread risk equal the absolute shifts of credit spreads of individual entities (counterparties and reference names for counterparty credit spread hedges) and indices (under the optional treatment of indices) for the following tenors: 0.5 years, 1 year, 3 years, 5 years, and 10 years.

(iii) *Delta risk weights for counterparty credit spread risk*. The delta risk weights, RW_k, for counterparty credit spread risk are set out in Table 3 to § __.225. The same risk weight for a given bucket and given credit quality applies to all tenors.

Table 3 to § __.225—Delta Buckets and Risk Weights for Counterparty Credit Spread Risk

Bucket number	Sector	Risk Weights		
		Investment grade names	Speculative grade names	Sub-speculative grade names
1	(a) Sovereign exposures, MDBs, and specified supranational entities	0.5%	3.0%	7.0%
	(b) PSEs, government-backed non-financials, GSE debt, and education and public administration	1.0%	4.0%	
	(c) Government-backed financials	5.0%	12.0%	
2	Financials	5.0%	12.0%	
3	Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	3.0%	7.0%	
4	Consumer goods and services, transportation and storage, and administrative and support service activities	3.0%	8.5%	
5	Technology and telecommunications	2.0%	5.5%	
6	Health care, utilities, and professional and technical activities	1.5%	5.0%	
7	Other sector	5.0%	12.0%	
8	Indices	1.5%	5.0%	

(iv) *Delta within-bucket correlation parameters, ρ_{kl}, for counterparty credit spread risk*. The delta correlation parameters, ρ_{kl}, for counterpart credit spread risk must be defined as follows:

(A) For buckets 1 through 7 of Table 3 to § __.225, a [BANKING ORGANIZATION] must calculate the correlation parameter, ρ_{kl}, between two weighted sensitivities WS_k and WS_l as follows:

$$\rho_{kl} = \rho_{kl}^{(tenor)} \cdot \rho_{kl}^{(name)} \cdot \rho_{kl}^{(quality)}$$

where,

(*1*) $\rho_{kl}^{(tenor)}$equals 100 percent if the two tenors are the same, and 90 percent otherwise;

(*2*) $\rho_{kl}^{(name)}$ equals 100 percent if the two names are the same, 90 percent if the two names are distinct but are affiliates, and 50 percent otherwise; and

(*3*) $\rho_{kl}^{(quality)}$ equals 100 percent if the credit quality of the two names is the same (where speculative and sub-speculative grade is treated as one credit quality category), and 80 percent otherwise.

(B) For bucket 8 of Table 3 to § __.225, a [BANKING ORGANIZATION] must calculate the correlation parameter, ρ_{kl}, between two weighted sensitivities WS_k and WS_l as follows:

$$\rho_{kl} = \rho_{kl}^{(tenor)} \cdot \rho_{kl}^{(name)} \cdot \rho_{kl}^{(quality)}$$

where,

(*1*) $\rho_{kl}^{(tenor)}$ equals 100 percent if the two tenors are the same, and 90 percent otherwise;

(*2*) $\rho_{kl}^{(name)}$ equals 100 percent if the two indices are the same and of the same series, 90 percent if the two indices are the same but of distinct series, and 80 percent otherwise; and

(*3*) $\rho_{kl}^{(quality)}$ equals 100 percent if the credit quality of the two indices is the same (where speculative and sub-speculative grade is treated as one credit quality category), and 80 percent otherwise.

(v) *Delta cross-bucket correlation parameters for counterparty credit spread risk.* The delta cross-bucket correlation parameters, γ_{bc}, for counterparty credit spread risk are set out in Table 4 to § __.225.

Table 4 to § __.225—Delta Cross-Bucket Correlations for Counterparty Credit Spread Delta Risk

Bucket number	1	2	3	4	5	6	7	8
1	100%	10%	20%	25%	20%	15%	0%	70%
2		100%	5%	15%	20%	5%	0%	70%
3			100%	20%	25%	5%	0%	70%
4				100%	25%	5%	0%	70%
5					100%	5%	0%	70%
6						100%	0%	70%
7							100%	0%
8								100%

(4) *Reference credit spread risk*—(i) *Delta buckets for reference credit spread risk.* Delta buckets for reference credit spread risk are set out in Table 5 to § __.225.

(ii) *Delta risk factors for reference credit spread risk*. The delta risk factor for reference credit spread risk equals the simultaneous absolute shift of all credit spreads for all tenors of all reference names in the bucket.

(iii) *Delta risk weights for reference credit spread risk*. The delta risk weights, RW_k, for reference credit spread risk are set out in Table 5 to § __.225.

Table 5 to § __.225—Delta and Vega Buckets and Delta Risk Weights for Reference Credit Spread Risk

Bucket number	Credit quality	Sector	Delta risk weights
1	Investment grade	Sovereign exposures, MDBs, and specified supranational entities	0.5%
2		PSEs, government-backed non-financials, GSE debt, and education and public administration	1.0%
3		Financials including government-backed financials and real estate activities	5.0%
4		Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	3.0%
5		Consumer goods and services, transportation and storage, and administrative and support service activities	3.0%
6		Technology and telecommunications	2.0%
7		Health care, utilities, and professional and technical activities	1.5%
8	Speculative grade	Sovereign exposures, MDBs, and specified supranational entities	3.0%
	Sub-speculative grade		7.0%
9	Speculative grade and sub-speculative grade	PSEs, government-backed non-financials, GSE debt, and education and public administration	4.0%
10		Financials including government-backed financials and real estate activities	12.0%
11		Basic materials, energy, industrials, agriculture, manufacturing, and mining and quarrying	7.0%
12		Consumer goods and services, transportation and storage, and administrative and support service activities	8.5%
13		Technology and telecommunications	5.5%
14		Health care, utilities, and professional and technical activities	5.0%
15		Other sector	12.0%
16	Investment grade	Indices	1.5%

17	Speculative grade and sub-speculative grade	Indices	5.0%

(iv) *Delta cross-bucket correlation parameters for reference credit spread risk.* The delta cross-bucket correlation parameter, γ_{bc}, for reference credit spread risk equals:

(A) The cross-bucket correlation parameters, γ_{bc}, between buckets of the same credit quality (where speculative and sub-speculative grade is treated as one credit quality category) are set out in Table 6 to § __.225.

Table 6 to § __.225—Delta and Vega Cross-Bucket Correlations for Reference Credit Spread Risk (Same Credit Quality)

Bucket number	1 or 8	2 or 9	3or 10	4 or 11	5 or 12	6 or 13	7 or 14	15	16	17
1 or 8	100%	75%	10%	20%	25%	20%	15%	0%	45%	45%
2 or 9		100%	5%	15%	20%	15%	10%	0%	45%	45%
3 or 10			100%	5%	15%	20%	5%	0%	45%	45%
4 or 11				100%	20%	25%	5%	0%	45%	45%
5 or 12					100%	25%	5%	0%	45%	45%
6 or 13						100%	5%	0%	45%	45%
7 or 14							100%	0%	45%	45%
15								100%	0%	0%
16									100%	75%
17										100%

(B) The cross-bucket correlation parameters, γ_{bc}, between buckets 1 to 14 of different credit quality (where speculative and sub-speculative grade is treated as one credit quality category), are set out in Table 7 to § __.225.

Table 7 to § __.225—Delta and Vega Cross-Bucket Correlations for Reference Credit Spread Risk (Different Credit Quality)

Bucket number	1 or 8	2 or 9	3 or 10	4 or 11	5 or 12	6 or 13	7 or 14

1 or 8	50.0%	37.5%	5.0%	10.0%	12.5%	10.0%	7.5%
2 or 9		50.0%	2.5%	7.5%	10.0%	7.5%	5.0%
3 or 10			50.0%	2.5%	7.5%	10.0%	2.5%
4 or 11				50.0%	10.0%	12.5%	2.5%
5 or 12					50.0%	12.5%	2.5%
6 or 13						50.0%	2.5%
7 or 14							50.0%

(5) *Equity risk*—(i) *Delta buckets for equity risk.* For equity risk, a [BANKING ORGANIZATION] must establish buckets along three dimensions: the reference entity's market capitalization, economy and sector as set out in Table 8 to § __.225. To assign a delta sensitivity to an economy, a [BANKING ORGANIZATION], at least annually, must review and update the countries and territorial entities that satisfy the requirements of a liquid market economy using the most recent economic data available. To assign a delta sensitivity to a sector, a [BANKING ORGANIZATION] must follow market convention by using classifications that are commonly used in the market for grouping issuers by industry sector. A [BANKING ORGANIZATION] must assign each issuer to one of the sector buckets and must assign all issuers from the same industry to the same sector. Delta sensitivities of any equity issuer that a [BANKING ORGANIZATION] cannot assign to a sector must be assigned to the other sector. For multinational, multi-sector equity issuers, the allocation to a particular bucket must be done according to the most material economy and sector in which the issuer operates.

Table 8 to § __.225—Delta and Vega Buckets and Delta Risk Weights for Equity Risk

Bucket number	Size	Economy	Sector	Delta risk weight
1	Large market cap	Emerging market economies	Consumer goods and services, transportation and storage, administrative and support service activities, healthcare, and utilities	55%

2			Telecommunications and industrials	60%
3			Basic materials, energy, agriculture, manufacturing, and mining and quarrying	45%
4			Financials including government-backed financials, real estate activities, and technology	55%
5		Liquid market economies	Consumer goods and services, transportation and storage, administrative and support service activities, healthcare, and utilities	30%
6			Telecommunications and industrials	35%
7			Basic materials, energy, agriculture, manufacturing, and mining and quarrying	40%
8			Financials including government-backed financials, real estate activities, and technology	50%
9	Small market cap	Emerging market economies	All sectors described under bucket numbers 1, 2, 3, and 4	70%
10		Liquid market economies	All sectors described under bucket numbers 5, 6, 7, and 8	50%
11	Other sector			70%
12	Large market cap and liquid market economies		Indices	15%
13	Other		Indices	25%

(ii) *Delta risk factors for equity risk*. The delta risk factor for equity risk equals the simultaneous relative shift of all equity spot prices for all reference entities in the bucket.

(iii) *Delta risk weights for equity risk*. The delta risk weights, RW_k, for equity risk are set out in Table 8 to § __.225.

(iv) *Delta cross-bucket correlation parameters for equity risk.* The delta cross-bucket correlation parameter, γ_{bc}, for equity risk equals 15 percent for all cross-bucket pairs in Table 8 to § __.225 assigned to bucket numbers 1 to 10 and zero percent for all cross-bucket pairs that include bucket 11. The cross-bucket correlation between buckets 12 and 13 in Table 8 to §

__.225 equals 75 percent and the cross-bucket correlation between buckets 12 or 13 and any of the buckets 1 through 10 equals 45 percent.

(6) *Commodity risk*—(i) *Delta buckets for commodity risk.* Delta buckets for commodity risk are set out in Table 9 § __.225.

(ii) *Delta risk factors for commodity risk*. The delta risk factor for commodity risk equals the simultaneous relative shift of all of the commodity spot prices for all commodities in the bucket.

(iii) *Delta risk weights for commodity risk*. The delta risk weights, RW_k, for commodity risk are set out in Table 9 to § __.225.

Table 9 to § __.225—Delta and Vega Buckets and Delta Risk Weights for Commodity Risk

Bucket number	Commodity group	Examples	Delta risk weight
1	Energy – Solid combustibles	Coal, charcoal, wood pellets, and nuclear fuel	30%
2	Energy – Liquid combustibles	Crude oil (such as Light-sweet, heavy, West Texas Intermediate, and Brent); biofuels (such as bioethanol and biodiesel); petrochemicals (such as propane, ethane, gasoline, methanol, and butane); and refined fuels (such as jet fuel, kerosene, gasoil, fuel oil, naphtha, and heating oil and diesel)	35%
3	Energy – Carbon trading	Carbon emissions trading (such as certified emissions reductions, in-delivery month EU allowance, Regional Greenhouse Gas Initiative CO2 allowance, and renewable energy certificates)	60%
4	Freight	Dry-bulk route (such as Capesize, Panamax, Handysize, and Supramax); and liquid-bulk/gas shipping route (such as Suezmax, Aframax, and very large crude carriers)	80%
5	Metals – non-precious	Base metal (such as aluminum, copper, lead, nickel, tin, and zinc); steel raw materials (such as steel billet, steel wire, steel coil, steel scrap and steel rebar, iron ore, tungsten, vanadium, titanium, and	40%

		tantalum); and minor metals (such as cobalt, manganese, molybdenum)	
6	Gaseous combustibles and electricity	Natural gas and liquefied natural gas; and electricity (such as spot, day-ahead, peak, and off-peak)	45%
7	Precious metals (including gold)	Gold, silver, platinum, and palladium	20%
8	Grains and oilseed	Corn; wheat; soybean (such as soybean seed, soybean oil and soybean meal); oats; palm oil; canola; barley; rapeseed (such as rapeseed seed, rapeseed oil, and rapeseed meal); red bean, sorghum; coconut oil; olive oil; peanut oil; sunflower oil; and rice	35%
9	Livestock and dairy	Cattle (such live and feeder), hog, poultry, lamb, fish, shrimp, and dairy (such as milk, whey, eggs, butter, and cheese)	25%
10	Forestry and other agriculturals	Cocoa; coffee (such as arabica and robusta); tea; citrus and orange juice; potatoes; sugar; cotton; wool; lumber and pulp; and rubber	35%
11	Other commodity	Industrial minerals (such as potash, fertilizer, and phosphate rocks), rare earths, terephthalic acid, and flat glass	50%
12	Commodity Index		30%

(iv) *Delta cross-bucket correlation parameters for commodity risk*. The delta cross-bucket correlation, γ_{bc}, for commodity risk equals 20 percent for all cross-bucket pairs in Table 9 to § __.225 assigned to bucket numbers 1 to 10 or 12 and zero percent for all cross-bucket pairs that include bucket 11.

(b) *CVA vega capital requirement*—(1) *Interest rate risk.*

(i) *Vega buckets for interest rate risk.* A [BANKING ORGANIZATION] must establish a separate vega interest rate risk bucket for each currency.

(ii) *Vega risk factors for interest rate risk.* The vega risk factors for interest rate risk for all currencies equal a simultaneous relative change of all inflation rate volatilities for each currency and a simultaneous relative change of all interest rate volatilities for each currency.

(iii) *Vega risk weights for interest rate risk.* The vega risk weights, RW_k, for interest rate risk equal 100 percent.

(iv) *Vega within-bucket correlation parameters for interest rate risk.* The vega within-bucket correlation parameter, ρ_{kl}, for interest rate risk equals 40 percent.

(v) *Vega cross-bucket correlation parameter for interest rate risk.* The vega cross-bucket correlation parameter, γ_{bc}, for interest rate risk equals 50 percent for all currency pairs.

(2) *Foreign exchange risk*—(i) *Vega buckets for foreign exchange risk*. A [BANKING ORGANIZATION] must establish a separate vega foreign exchange risk bucket for each currency, except for a [BANKING ORGANIZATION]'s own reporting currency.

(ii) *Vega risk factors for foreign exchange risk*. The vega risk factors for foreign exchange risk equal the simultaneous, relative change of all volatilities for the exchange rate between a [BANKING ORGANIZATION]'s reporting currency or base currency and each other currency.

(iii) *Vega risk weights for foreign exchange risk*. The vega risk weights, RW_k, for foreign exchange risk equal 100 percent.

(iv) *Vega cross-bucket correlation parameter for foreign exchange risk.* The vega cross-bucket correlation parameter, γ_{bc}, for foreign exchange risk equals 60 percent for all currency pairs.

(3) *Reference credit spread risk*—(i) *Vega buckets for reference credit spread risk.* Vega buckets for reference credit spread risk are set out in Table 5 § __.225.

(ii) *Vega risk factors for reference credit spread risk*. The vega risk factors for reference credit spread risk equal the simultaneous relative shift of the volatilities of all credit spreads of all tenors for all reference names in the bucket.

(iii) *Vega risk weights for reference credit spread risk*. The vega risk weights, RW_k, for reference credit spread risk equal 100 percent.

(iv) *Vega cross-bucket correlation parameters for reference credit spread risk.* The vega cross-bucket correlation parameter, γ_{bc}, for reference credit spread risk is defined in the same manner as the delta cross-bucket correlation parameter for reference credit spread risk, pursuant to paragraph (a)(4)(iv) of this section.

(4) *Equity risk*—(i) *Vega buckets for equity risk.* The vega buckets for equity risk are defined in the same manner as the delta buckets for equity risk, pursuant to paragraph (a)(5)(i) of this section.

(ii) *Vega risk factors for equity risk*. The vega risk factor for equity risk equals the simultaneous relative shift of the volatilities for all reference entities in the bucket.

(iii) *Vega risk weights for equity risk*. The vega risk weights, RW_k, for equity risk equal 78 percent for large market cap buckets and 100 percent otherwise.

(iv) *Vega cross-bucket correlation parameters for equity risk.* The vega cross-bucket correlation parameter, γ_{bc}, for equity risk equals 15 percent for all cross-bucket pairs within Table 8 to § __.225 that fall within bucket numbers 1 to 10 and zero percent for all cross-bucket pairs that include bucket 11. The cross-bucket correlation between buckets 12 and 13, in Table 8 to § __.225, is set at 75 percent and the cross-bucket correlation between buckets 12 or 13 and any of the buckets 1 to 10 is 45 percent.

(5) *Commodity risk*—(i) *Vega buckets for commodity risk*. The vega buckets for commodity risk are defined in the same manner as the delta buckets for commodity risk, pursuant to paragraph (a)(6)(i) of this section.

(ii) *Vega risk factors for commodity risk*. The vega risk factor for commodity risk equals the simultaneous relative shift of the volatilities for all commodities in the bucket.

(iii) *Vega risk weights for commodity risk*. The vega risk weights for commodity risk RW_k are 100 percent.

(iv) *Vega cross-bucket correlation parameters for commodity risk*. The vega cross-bucket correlation parameter, γ_{bc}, for commodity risk equals 20 percent for all cross-bucket pairs in Table 9 to § __.225 that fall within bucket numbers 1 to 10 or 12 and zero percent for all cross-bucket pairs that include bucket 11.

DEPARTMENT OF THE TREASURY

Office of the Comptroller of the Currency

12 CFR Chapter I

For the reasons set forth in the common preamble, the OCC proposes to amend parts 3, 6, and 32 of chapter I of title 12 of the Code of Federal Regulations as follows:

PART 3—CAPITAL ADEQUACY STANDARDS

1. The authority citation for part 3 continues to read as follows:

Authority: 12 U.S.C. 93a, 161, 1462, 1462a, 1463, 1464, 1818, 1828(n), 1828 note, 1831n note, 1835, 3907, 3909, 5412(b)(2)(B), and Pub. L. 116–136, 134 Stat. 281.

2. In § 3.1, revise paragraphs (c)(3)(ii), (c)(4)(i) and (iii), and (f), and add paragraph (g) to

read as follows:

§ 3.1 Purpose, applicability, reservations of authority, and timing.

* * * * *

(c) * * *

(3) * * *

(i) Each national bank or Federal savings association subject to subpart D of this part must use the methodologies in subpart D (and subpart F of this part if the national bank or Federal savings association meets the trading activity threshold to be a market risk national bank or Federal savings association) to calculate standardized total risk-weighted assets.

(ii) Each national bank or Federal savings association subject to subpart E of this part must use the methodologies in subpart E (and subpart F of this part if the national bank or Federal savings association meets the trading activity threshold to be a market risk national bank or Federal savings association) to calculate expanded total risk-weighted assets.

(4) * * *

(i) Except for a national bank or Federal savings association subject to subpart E of this part, each national bank or Federal savings association with total consolidated assets of $50 billion or more must make the public disclosures described in subpart D of this part.

* * * * *

(iii) Each national bank or Federal savings association subject to subpart E of this part must make the public disclosures described in subpart E of this part.

* * * * *

(f) *Transitions and timing*. -- (1) *Transitions*. Notwithstanding any other provision of this part, a national bank or Federal savings association must make any adjustments provided in subpart G of this part for purposes of implementing this part.

(2) *Timing.* A national bank or Federal savings association that changes from one category to another category, or that changes from having no category to having a category, must comply with the requirements of its category in this part, including applicable transition provisions of the requirements in this part, no later than on the first day of the second quarter following the change in the national bank's or Federal savings association's category.

(g) *Severability*. If any provision of this part, or the application thereof to any person or circumstances, is held invalid, such invalidity shall not affect the validity of other provisions or the application of such provision to other persons or circumstances that can be given effect without the invalid provision or application.

3. In § 3.2:

a. Revise the definition of "Adjusted allowances for credit losses (AACL)";

b. Remove the definitions for "Advanced approaches national bank or Federal savings association", "Advanced approaches total risk-weighted assets", "Advanced market risk-weighted assets", and "Allowances for loan and lease losses (ALLL)";

c. Revise the definition for "Carrying value";

d. Add, in alphabetical order, the definition for "Category I national bank or Federal savings association";

e. Revise the definitions for “Category II national bank or Federal savings association” and “Category III national bank or Federal savings association”;

f. Add, in alphabetical order, the definition for “Category IV national bank or Federal savings association”;

g. Revise footnote 3 to the definition for “Cleared transaction”;

h. Revise the definition for “Commitment”;

i. Revise the definition for “Corporate exposure”;

j. Remove the definition for “Credit-risk-weighted assets”;

k. Add, in alphabetical order, the definition for “CVA risk-weighted assets”;

l. Add, in alphabetical, order the definition for “Dependent on the cash flows generated by the real estate”;

m. Revise the definition for “Effective notional amount”;

n. Revise the definition for “Eligible clean-up call”;

o. Remove the definition for “Eligible credit reserves”;

p. Revise the definition for “Eligible guarantee”;

q. Add, in alphabetical order, the definition for “Eligible prepaid credit protection arrangement”;

r. Add, in alphabetical, order the definition for “Expanded total risk-weighted assets”;

s. Remove the definition for “Expected credit loss (ECL)”;

t. Revise the definition for “Exposure amount”;

u. Revise paragraph (4)(i)(A) in the definition of “Financial institution”;

v. Revise the definition for “Market risk national bank or Federal savings association”;

w. Add, in alphabetical, order the definition for “Market risk-weighted assets”;

x. Revise the definitions for “Net independent collateral amount” and “Netting set”;

y. Add, in alphabetical order, the definitions for “Non-performing loan securitization (NPL securitization)” and “Nonrefundable purchase price discount (NRPPD)”;

z. Revise the definition for “Non-significant investment in the capital of an unconsolidated financial institution”;

aa. Add, in alphabetical, order the definition for “Prepaid credit protection arrangement”;

bb. Revise the definition for “Protection amount (P)”;

cc. Add, in alphabetical order, the definition of “Qualifying cross-product master netting agreement”;

dd. Revise paragraphs (3) and (4) of the definition for “Qualifying master netting agreement”;

ee. In the definition of “Residential mortgage exposure”:

i. Remove paragraph (2);

ii. Redesignate paragraphs (1)(i) and (1)(ii) as paragraphs (1) and (2), respectively; and

iii. In paragraph (2) (as redesignated), remove the words “family; and” and add, in their place, the word “family.”;

ff. Remove the definition for “Securitization special purpose entity (securitization SPE)”;

gg. Revise the definition for “Significant investment in the capital of an unconsolidated financial institution”;

hh. Remove the definition for “Specific wrong-way risk”;

ii. Add, in alphabetical order, the definition of “Specified supranational entity”;

jj. Revise the definitions for “Speculative grade” and “Standardized market risk-weighted assets”;

kk. Revise the definitions for “Standardized total risk-weighted assets”, “Sub-speculative grade”, and “Synthetic securitization”;

ll. Add, in alphabetical order, the definition for “Synthetic excess spread”;

mm. Add, in alphabetical order, the definition for “Total credit risk-weighted assets”;

nn. Revise the definition for “Traditional securitization” ;

oo. Remove the definition for “Value-at-risk (VaR)”;

pp. Revise the definition for “Variation margin amount”; and

qq. Remove the definition for “Unconditionally cancelable”.

The additions and revisions read as follows:

§ 3.2 Definitions

* * * * *

Adjusted allowances for credit losses (AACL) means valuation allowances that have been established through a charge against earnings or retained earnings for expected credit losses on financial assets measured at amortized cost and a lessor's net investment in leases that have been established to reduce the amortized cost basis of the assets to amounts expected to be collected as determined in accordance with GAAP. For purposes of this part, adjusted allowances for credit losses include allowances for expected credit losses on off-balance sheet credit exposures not accounted for as insurance as determined in accordance with GAAP. Adjusted allowances for credit losses exclude allocated transfer risk reserves and allowances created that reflect credit losses on purchased credit deteriorated assets, purchased seasoned loans, assets required to record an allowance for credit losses through a gross-up adjustment to the purchase price of the asset, and available-for-sale debt securities.

* * * * *

Carrying value means, with respect to an asset, the value of the asset on the balance sheet of the national bank or Federal savings association as determined in accordance with GAAP. For all assets other than available-for-sale debt securities, purchased credit deteriorated assets, purchased seasoned loans, or assets required to record an allowance for credit losses through a gross-up adjustment to the purchase price of the asset, the carrying value is not reduced by any associated credit loss allowance that is determined in accordance with GAAP.

* * * * *

Category I national bank or Federal savings association means a national bank or Federal savings association that is a subsidiary of a global systemically important BHC, as defined pursuant to 12 CFR 252.5.

Category II national bank or Federal savings association means a national bank or Federal savings association that is not a subsidiary of a global systemically important BHC, as defined pursuant to 12 CFR 252.5, and that:

(1) Is a subsidiary of a Category II banking organization, as defined pursuant to 12 CFR 252.5 or 12 CFR 238.10, as applicable; or

(2)(i) Has total consolidated assets, calculated based on the average of the national bank's or Federal savings association's total consolidated assets for the four most recent calendar quarters as reported on the Call Report, equal to $700 billion or more. If the national bank or Federal savings association has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or the average of the most recent quarters, as applicable; or

(ii)(A) Has total consolidated assets, calculated based on the average of the national bank's or Federal savings association's total consolidated assets for the four most recent calendar quarters as reported on the Call Report, of $100 billion or more but less than $700 billion. If the national bank or Federal savings association has not filed the Call Report for each of the four most recent quarters, total consolidated assets is based on its total consolidated assets, as reported

on the Call Report, for the most recent quarter or average of the most recent quarters, as applicable; and

(B) Has cross-jurisdictional activity, calculated based on the average of its cross-jurisdictional activity for the four most recent calendar quarters, of $75 billion or more. Cross-jurisdictional activity is the sum of cross-jurisdictional claims and cross-jurisdictional liabilities, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form.

(3) After meeting the criteria in paragraph (2) of this definition, a national bank or Federal savings association continues to be a Category II national bank or Federal savings association until the national bank or Federal savings association has:

(i) Less than $700 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters; and

(ii) (A) Less than $75 billion in cross-jurisdictional activity for each of the four most recent calendar quarters. Cross-jurisdictional activity is the sum of cross-jurisdictional claims and cross-jurisdictional liabilities, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form; or

(B) Less than $100 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters.

* * * * *

Category III national bank or Federal savings association means a national bank or Federal savings association that is not a Category II national bank or Federal savings association, and that:

(1) Is a subsidiary of a Category III banking organization, as defined pursuant to 12 CFR 252.5 or 12 CFR 238.10, as applicable; or

(2)(i) Has total consolidated assets, calculated based on the average of the national bank's or Federal savings association's total consolidated assets for the four most recent calendar quarters as reported on the Call Report, equal to $250 billion or more. If the national bank or Federal savings association has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or average of the most recent quarters, as applicable; or

(ii)(A) Has total consolidated assets, calculated based on the average of the national bank's or Federal savings association's total consolidated assets for the four most recent calendar quarters as reported on the Call Report, of $100 billion or more but less than $250 billion. If the depository institution has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or average of the most recent quarters, as applicable; and

(B) Has at least one of the following in paragraphs (2)(ii)(B)(*1*) through (*3*) of this definition, each calculated as the average of the four most recent calendar quarters, or if the national bank or Federal savings association has not filed each applicable reporting form for each of the four most recent calendar quarters, for the most recent quarter or quarters, as applicable:

(*1*) Total nonbank assets, calculated in accordance with the instructions to the FR Y–9LP or equivalent reporting form, equal to $75 billion or more;

(*2*) Off-balance sheet exposure equal to $75 billion or more. Off-balance sheet exposure is a national bank's or Federal savings association's total exposure, calculated in accordance with the instructions to the Call Report or equivalent reporting form, minus the total consolidated assets of the national bank or Federal savings association, as reported on the Call Report; or

(*3*) Weighted short-term wholesale funding, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form, equal to $75 billion or more.

(iii) After meeting the criteria in paragraph (2)(ii) of this definition, a national bank or Federal savings association continues to be a Category III national bank or Federal savings association until the national bank or Federal savings association:

(A) Has:

(*1*) Less than $250 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters;

(*2*) Less than $75 billion in total nonbank assets, calculated in accordance with the instructions to the FR Y–9LP or equivalent reporting form, for each of the four most recent calendar quarters;

(*3*) Less than $75 billion in weighted short-term wholesale funding, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form, for each of the four most recent calendar quarters; and

(*4*) Less than $75 billion in off-balance sheet exposure for each of the four most recent calendar quarters. Off-balance sheet exposure is a national bank's or Federal savings association's total exposure, calculated in accordance with the instructions to the FR Y–15 or equivalent

reporting form, minus the total consolidated assets of the national bank or Federal savings association, as reported on the Call Report; or

(B) Has less than $100 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters; or

(C) Is a Category II national bank or Federal savings association.

* * * * *

Category IV national bank or Federal savings association means a national bank or Federal savings association that is not a Category II national bank or Federal savings association, or a Category III national bank or Federal savings association and that:

(1) Is a subsidiary of a Category IV banking organization, as defined pursuant to 12 CFR 252.5 or 12 CFR 238.10, as applicable; or:

(2) Has total consolidated assets, calculated based on the average of the national bank's or Federal savings association's total consolidated assets for the four most recent calendar quarters as reported on the Call Report, of $100 billion or more. If the national bank or Federal savings association has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on the average of its total consolidated assets, as reported on the Call Report, for the most recent quarter(s) available.

(3) After meeting the criterion in paragraph (4)(iii) of this definition, a national bank or Federal savings association continues to be a Category IV national bank or Federal savings association until it:

(i) Has less than $100 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters; or

(ii) Is a Category II national bank or Federal savings association or Category III national bank or Federal savings association.

* * * * *

Cleared transaction * * *

(2) * * [3]

* * * * *

Commitment means a contractual arrangement under which a national bank or Federal savings association and an obligor agree to terms applicable to one or more future extensions of credit, purchases of assets, or issuances of credit substitutes by the national bank or Federal savings association, whether or not such arrangement is unconditionally cancelable. A commitment is unconditionally cancelable if, by its terms, it either: (a) provides that a national bank or Federal savings association is not obligated to extend credit, purchase assets, or issue credit substitutes; or (b) permits a national bank or Federal savings association, at any time, with or without cause, to refuse to extend credit, purchase assets, or issue credit substitutes under the arrangement (to the extent permitted under applicable law).

* * * * *

Corporate exposure means an exposure to a company that is not:

(1) An exposure to a sovereign, a specified supranational entity, a multi-lateral development bank (MDB), a depository institution, a foreign bank, or a credit union, a public sector entity (PSE);

(2) An exposure to a Government-Sponsored Enterprises (GSE);

(3) For purposes of subpart D of this part, a residential mortgage exposure;

(4) A pre-sold construction loan;

(5) A statutory multifamily mortgage;

(6) A high volatility commercial real estate (HVCRE) exposure;

(7) A cleared transaction;

(8) A default fund contribution;

(9) A securitization exposure;

(10) An equity exposure;

(11) An unsettled transaction;

(12) A policy loan;

(13) A separate account;

(14) A Paycheck Protection Program covered loan as defined in section 7(a)(36) or (37) of the Small Business Act (15 U.S.C. 636(a)(36)-(37));

(15) For purposes of subpart E of this part, a real estate exposure, as defined in § 3.101 of this part; or

(16) For purposes of subpart E of this part, a retail exposure as defined in § 3.101 of this part.

* * * * *

CVA risk-weighted assets means the measure for CVA risk calculated under § 3.221(a) multiplied by 12.5.

* * * * *

Dependent on the cash flows generated by the real estate means, for a real estate exposure, the underwriting, at the time of origination, includes the cash flows generated by lease, rental, or sale of the real estate securing the loan as a source of repayment. For purposes of this definition, a residential mortgage exposure that is secured by the borrower's principal residence is deemed not dependent on the cash flows generated by the real estate.

* * * * *

Effective notional amount means for an eligible guarantee, eligible credit derivative, or eligible prepaid credit protection arrangement, the lesser of the contractual notional amount of the credit risk mitigant and the exposure amount of the hedged exposure, multiplied by the percentage coverage of the credit risk mitigant.

* * * * *

Eligible clean-up call means a clean-up call that:

(1) Is exercisable solely at the discretion of the originating national bank or Federal savings association or servicer;

(2) Is not structured to avoid allocating losses to securitization exposures held by investors or otherwise structured to provide credit enhancement to the securitization; and

(3) Is only exercisable:

(i) For a traditional securitization, when 10 percent or less of the principal amount of the underlying exposures or securitization exposures (determined as of the inception of the securitization) is outstanding;

(ii) For a synthetic securitization, when 10 percent or less of the principal amount of the reference portfolio of underlying exposures (determined as of the inception of the securitization) is outstanding;

(iii) Upon the occurrence of a regulatory event that significantly changes the risk-weighted asset amount for the securitization exposure under this part; or

(iv) Upon the occurrence of a tax event that significantly changes the tax treatment of the securitization exposure under applicable tax laws.

* * * * *

Eligible guarantee means a guarantee that:

(1) Is written;

(2) Is either:

(i) Unconditional, or

(ii) A contingent obligation of the U.S. government or its agencies, the enforceability of which is dependent upon some affirmative action on the part of the beneficiary of the guarantee or a third party (for example, meeting servicing requirements);

(3) Covers all or a pro rata portion of all contractual payments of the obligated party on the reference exposure;

(4) Gives the beneficiary a direct claim against the protection provider;

(5) Is not unilaterally cancelable by the protection provider for reasons other than the breach of the contract by the beneficiary;

(6) Except for a guarantee by a sovereign, is legally enforceable against the protection provider in a jurisdiction where the protection provider has sufficient assets against which a judgment may be attached and enforced;

(7) Requires the protection provider to make payment to the beneficiary on the occurrence of a default (as defined in the guarantee) of the obligated party on the reference exposure in a timely manner without the beneficiary first having to take legal actions to pursue the obligor for payment;

(8) Does not increase the beneficiary's cost of credit protection on the guarantee in response to deterioration in the credit quality of the reference exposure;

(9) Is not provided by an affiliate of the national bank or Federal savings association, unless the affiliate is an insured depository institution, foreign bank, securities broker or dealer, or insurance company that:

(i) Does not control the national bank or Federal savings association; and

(ii) Is subject to consolidated supervision and regulation comparable to that imposed on depository institutions, U.S. securities broker-dealers, or U.S. insurance companies (as the case may be); and

(10) Is provided by an eligible guarantor.

* * * * *

Eligible prepaid credit protection arrangement means a prepaid credit protection arrangement that:

(1) Is written;

(2) Is unconditional;

(3) Covers all or a pro rata portion of all contractual payments due to be paid on the reference exposure or reference exposures;

(4) Provides that the amount and timing of payments due from the protection purchaser to the protection provider are incorporated into the arrangement and the arrangement only allows these terms to change in the event of a breach of the arrangement by the protection purchaser;

(5) Provides that entry of the protection provider into receivership, insolvency, liquidation, conservatorship, or similar proceeding does not change the amounts or timing of payments due to be paid by the protection purchaser under the arrangement;

(6) Is legally valid and enforceable under applicable law of the relevant jurisdictions;

(7) Upon a failure by the obligor on the one or more reference exposures to make a contractually required payment, or the occurrence of other credit events as described in the arrangement, allows the protection purchaser promptly to reduce the outstanding balance of the initial principal amount due to the protection provider by the loss of the protection purchaser on the reference exposures without input from the protection provider; and

(8) Does not increase the protection purchaser's cost of credit protection in response to deterioration in the credit quality of any of the reference exposures.

* * * * *

Expanded total risk-weighted assets means:

(1) The sum of:

(i) Total credit risk-weighted assets;

(ii) Total risk-weighted assets for equity exposures as calculated under §§ 3.141 and 3.142;

(iii) Risk-weighted assets for operational risk as calculated under § 3.150;

(iv) Market risk-weighted assets, if applicable; and

(v) CVA risk-weighted assets, if applicable; minus

(vi) Any amount of the national bank's or Federal savings association's adjusted allowance for credit losses that is not included in tier 2 capital and any amount of allocated transfer risk reserves.

* * * * *

Exposure amount means:

(1) For the on-balance sheet component of an exposure (other than an available-for-sale or held-to-maturity security, if the national bank or Federal savings association has made an AOCI opt-out election (as defined in § 3.22(b)(2)); a derivative contract; a repo-style transaction or an eligible margin loan for which the national bank or Federal savings association determines the exposure amount under § 3.37, §§ 3.113 through 3.115 or § 3.121, as applicable; a cleared transaction; a default fund contribution; or a securitization exposure), the national bank's or Federal savings association's carrying value of the exposure.

(2) For a security (that is not a securitization exposure, equity exposure, or preferred stock classified as an equity security under GAAP) classified as available-for-sale or held-to-maturity if the national bank or Federal savings association has made an AOCI opt-out election (as defined in § 3.22(b)(2)), the national bank's or Federal savings association's carrying value (including net accrued but unpaid interest and fees) for the exposure less any net unrealized gains on the exposure and plus any net unrealized losses on the exposure.

(3) For available-for-sale preferred stock classified as an equity security under GAAP if the national bank or Federal savings association has made an AOCI opt-out election (as defined in § 3.22(b)(2)), the national bank's or Federal savings association's carrying value of the exposure less any net unrealized gains on the exposure that are reflected in such carrying value but excluded from the national bank's or Federal savings association's regulatory capital components.

(4) For the off-balance sheet component of an exposure (other than a derivative contract; a repo-style transaction or an eligible margin loan for which the national bank or Federal savings association calculates the exposure amount under § 3.37 or § 3.121, as applicable; a cleared transaction; a default fund contribution; or a securitization exposure), the notional amount of the off-balance sheet component multiplied by the appropriate credit conversion factor (CCF) in § 3.33 or § 3.112, as applicable.

(5) For an exposure that is a derivative contract (other than a cleared transaction), the exposure amount determined under § 3.34 or §§ 3.113 through 3.114, as applicable.

(6) For an exposure that is a cleared transaction, the exposure amount determined under § 3.35 or § 3.116, as applicable.

(7) For an exposure that is an eligible margin loan or repo-style transaction (other than a cleared transaction) for which the bank calculates the exposure amount as provided in § 3.37 or §§ 3.113 through 3.115, as applicable, the exposure amount determined under § 3.37 or §§ 3.113 through 3.115, as applicable.

(8) For an exposure that is a securitization exposure, the exposure amount determined under § 3.42 or § 3.131, as applicable.

* * * * *

Financial institution means:

* * * * *

(4) * * *

(i) * * *

(A) An investment in GAAP equity instruments of the company with an adjusted carrying value or exposure amount equal to or greater than $10 million, as adjusted pursuant to § 3.4; or

* * * * *

Market risk national bank or Federal savings association means a national bank or Federal savings association that is described in § 3.201(b)(1).

* * * * *

Market risk-weighted assets means the measure for market risk calculated pursuant to § 3.204(a) multiplied by 12.5.

* * * * *

Net independent collateral amount means the fair value amount of the independent collateral, as adjusted by the haircuts under § 3.121(c)(2)(iii), as applicable, that a counterparty to a netting set has posted to a national bank or Federal savings association less the fair value amount of the independent collateral, as adjusted by the haircuts under § 3.121(c)(2)(iii), as applicable, posted by the national bank or Federal savings association to the counterparty, excluding such amounts held in a bankruptcy-remote manner or posted to a QCCP and held in conformance with the operational requirements in § 3.3.

* * * * *

Netting set means: a group of transactions with a single counterparty that are subject to a qualifying master netting agreement. For derivative contracts, netting set also includes a single

derivative contract between a national bank or Federal savings association and a single counterparty.

* * * * *

Non-performing loan securitization (NPL securitization) means a traditional securitization, that is not a resecuritization, where parameter W (as defined in § 3.133(b)(1)) for the underlying exposures is greater than or equal to 90 percent at the origination cut-off date and at any subsequent date on which exposures are added to or removed from the pool of underlying exposures due to replenishment or restructuring.

Nonrefundable purchase price discount (NRPPD) means the difference between the outstanding principal balance of the underlying exposures at the time of sale and the price at which these exposures are sold by the originator to a company the activities of which are limited to those appropriate for the specific purpose of holding the underlying exposures of a securitization, when neither originator nor the original lender are reimbursed for this difference. In cases where the originator underwrites tranches of an NPL securitization for subsequent sale, the NRPPD may include the differences between the outstanding principal balance of the underlying exposures at the time of sale and the price at which all of the tranches are first sold to unrelated third parties. For any given piece of a securitization tranche, only its initial sale from the originator to investors is taken into account in the determination of NRPPD. The purchase prices of subsequent re-sales of a securitization tranche are not considered.

* * * * *

Non-significant investment in the capital of an unconsolidated financial institution means an investment by a national bank or Federal savings association subject to subpart E of this part

in the capital of an unconsolidated financial institution where the national bank or Federal savings association owns 10 percent or less of the issued and outstanding common stock of the unconsolidated financial institution.

* * * * *

Prepaid credit protection arrangement means a contractual arrangement under which a protection purchaser transfers the credit risk of one or more reference exposures to a protection provider where:

(1) The protection provider pays an initial principal amount in cash to the protection purchaser at the inception of the transaction; and

(2) The protection purchaser is obligated to repay the initial principal amount to the protection provider on or before the maturity date of the transaction, less any losses that the protection purchaser realizes or otherwise recognizes due to nonpayment of all contractual payments due to be paid on the reference exposure or reference exposures by the obligors.

* * * * *

Protection amount (P) means, with respect to an exposure hedged by an eligible guarantee, eligible credit derivative, or eligible prepaid credit protection arrangement, or secured by financial collateral, the effective notional amount of the guarantee, credit derivative, or prepaid credit protection arrangement, or the fair value of the financial collateral, reduced to reflect any currency mismatch, maturity mismatch, or lack of restructuring coverage (as provided in §§ 3.36-3.37 or §§ 3.120-3.121, as appropriate).

* * * * *

Qualifying cross-product master netting agreement means a qualifying master netting agreement that provides for termination and close-out netting across multiple types of financial transactions or qualifying master netting agreements in the event of a counterparty's default, provided that the underlying financial transactions are derivative contracts or repo-style transactions that are not cleared transactions. In order to treat an agreement as a qualifying cross-product master netting agreement, a national bank or Federal savings association must comply with the requirements of § 3.3(c) of this part with respect to that agreement.

* * * * *

Qualifying master netting agreement means a written, legally enforceable agreement provided that:

* * *

(3) The agreement does not contain a walkaway clause (that is, a provision that permits a non-defaulting counterparty to make a lower payment than it otherwise would make under the agreement, or no payment at all, to a defaulter or the estate of a defaulter, even if the defaulter or the estate of the defaulter is a net creditor under the agreement); and

(4) In order to recognize an agreement as a qualifying master netting agreement for purposes of this subpart, a national bank or Federal savings association must comply with the requirements of § 3.3(d) with respect to that agreement.

* * * * *

Significant investment in the capital of an unconsolidated financial institution means an investment by a national bank or Federal savings association subject to subpart E of this part in

the capital of an unconsolidated financial institution where the national bank or Federal savings association owns more than 10 percent of the issued and outstanding common stock of the unconsolidated financial institution.

* * * * *

Specified supranational entity means the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, or the European Financial Stability Facility.

* * * * *

Speculative grade means that the entity to which the national bank or Federal savings association is exposed through a loan or security, or the reference entity with respect to a credit derivative, has adequate capacity to meet financial commitments in the near term, but is vulnerable to adverse economic conditions, such that should economic conditions deteriorate, the issuer or the reference entity would present an elevated default risk.

* * * * *

Standardized market risk-weighted assets means the standardized measure for market risk calculated under § 3.204(b) multiplied by 12.5.

* * * * *

Standardized total risk-weighted assets means:

(1) The sum of:

(i) Total risk-weighted assets for general credit risk as calculated under § 3.31;

(ii) Total risk-weighted assets for cleared transactions and default fund contributions as calculated under § 3.35;

(iii) Total risk-weighted assets for unsettled transactions as calculated under § 3.38;

(iv) Total risk-weighted assets for securitization exposures as calculated under § 3.42;

(v) Total risk-weighted assets for equity exposures as calculated under § 3.52 and § 3.53; and

(vi) For a market risk national bank or federal savings association only, market risk-weighted assets; less

(2) Any amount of the national bank's or Federal savings association's adjusted allowance for credit losses, as applicable, that is not included in tier 2 capital and any amount of "allocated transfer risk reserves."

* * * * *

Sub-speculative grade means that the entity to which the national bank or Federal savings association is exposed through a loan or security, or the reference entity with respect to a credit derivative, depends on favorable economic conditions to meet its financial commitments, such that should such economic conditions deteriorate the issuer or the reference entity likely would default on its financial commitments.

* * * * *

Synthetic securitization means a transaction in which:

(1) All or a portion of the credit risk of one or more underlying exposures is retained or transferred to one or more third parties through the use of one or more credit derivatives, or guarantees (other than a guarantee that transfers only the credit risk of an individual retail exposure) or prepaid credit protection arrangements;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends solely upon the performance of the underlying exposures; and

(4) All or substantially all of the underlying exposures are financial exposures with credit risk (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities).

* * * * *

Total credit risk-weighted assets means the sum of:

(1) Total risk-weighted assets for general credit risk as calculated under § 3.110;

(2) Total risk-weighted assets for cleared transactions and default fund contributions as calculated under § 3.116;

(3) Total risk-weighted assets for unsettled transactions as calculated under § 3.117; and

(4) Total risk-weighted assets for securitization exposures as calculated under § 3.132.

* * * * *

Traditional securitization means a transaction in which:

(1) All or a portion of the credit or equity risk of one or more underlying exposures is transferred to one or more third parties other than through the use of credit derivatives, guarantees, or prepaid credit protection arrangements;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends solely upon the performance of the underlying exposures;

(4) All or substantially all of the underlying exposures are financial exposures (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities);

(5) The underlying exposures are not owned by an operating company;

(6) The underlying exposures are not owned by a small business investment company defined in section 302 of the Small Business Investment Act;

(7) The underlying exposures are not owned by a firm an investment in which qualifies as a community development investment under section 24(Eleventh) of the National Bank Act;

(8) The OCC may determine that a transaction in which the underlying exposures are owned by an investment firm that exercises substantially unfettered control over the size and composition of its assets, liabilities, and off-balance sheet exposures is not a traditional securitization based on the transaction's leverage, risk profile, or economic substance;

(9) The OCC may deem a transaction that meets the definition of a traditional securitization, notwithstanding paragraph (5), (6), or (7) of this definition, to be a traditional securitization based on the transaction's leverage, risk profile, or economic substance; and

(10) The transaction is not:

(i) An investment fund;

(ii) A collective investment fund (as defined in 12 CFR 9.18 (national banks), 12 CFR 151.40 (Federal saving associations));

(iii) An employee benefit plan (as defined in paragraphs (3) and (32) of section 3 of ERISA), a “governmental plan” (as defined in 29 U.S.C. 1002(32)) that complies with the tax deferral qualification requirements provided in the Internal Revenue Code, or any similar employee benefit plan established under the laws of a foreign jurisdiction;

(iv) A synthetic exposure to the capital of a financial institution to the extent deducted from capital under § 3.22; or

(v) Registered with the SEC under the Investment Company Act of 1940 (15 U.S.C. 80a-1) or foreign equivalents thereof.

* * * * *

Variation margin amount means the fair value amount of the variation margin, as adjusted by the standard supervisory haircuts under § 3.121(c)(2)(iii), as applicable, that a counterparty to a netting set has posted to a national bank or Federal savings association less the fair value amount of the variation margin, as adjusted by the standard supervisory haircuts under

§ 3.121(c)(2)(iii), as applicable, posted by the national bank or Federal savings association to the counterparty.

* * * * *

FOOTNOTES – 3.2

[3] For the standardized approach treatment of these exposures, see § 3.34(e) (OTC derivative contracts) or § 3.37(c) (repo-style transactions). For the treatment of these exposures under subpart E, see § 3.113.

* * * * *

4. In § 3.3, revise paragraph (c) to read as follows:

§ 3.3 Operational requirements for counterparty credit risk.

* * * * *

(c) *Qualifying cross-product master netting agreement*. In order to recognize an agreement as a qualifying cross-product master netting agreement as defined in § 3.2, a national bank or Federal savings association must obtain a written legal opinion verifying the validity and enforceability of the agreement under applicable law of the relevant jurisdictions if the counterparty fails to perform upon an event of default, including upon receivership, insolvency, liquidation, or similar proceeding.

* * * * *

5. Add a new section § 3.4 to read as follows:

§ 3.4 Threshold Indexing.

(a) *Methodology*. The dollar thresholds specified in paragraph (c) of this section shall be adjusted by multiplying the baseline threshold values specified in paragraph (c) of this section by one plus the cumulative percent change in the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers, measured from the effective date of this rule, as further described in paragraph (b) of this section, and shall be rounded in accordance with paragraph (d) of this section.

(b) *Frequency*. (1) *In general – biennial adjustments*. Except as otherwise provided in paragraph (b)(2) and (b)(3) of this section, the adjustments described in paragraph (a) of this section shall be effective on October 1 following each consecutive two year period ending August 30, and using the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers as of August 30 of that year.

(2) *Off-year adjustments*. In the event that the OCC determines, during a year where no adjustment would be made under paragraph (b)(1), that the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers, measured over the twelve month period ending August 30 of that year, is such that an adjustment under this section would be appropriate for that year, the OCC may make an adjustment under this section for that year.

(3) *Periods of negative inflation*. Notwithstanding paragraph (b)(1) or (b)(2) of this section, if an adjustment of dollar thresholds using the cumulative percent change of the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers from the effective date of this rule or the most recent adjustment, as applicable, would not result in an

increase from the current dollar thresholds, no adjustment will be made pursuant to paragraph (a) of this section.

(c) *Specified thresholds*. The thresholds in the following sections shall be adjusted in accordance with paragraph (a) of this section relative to the baseline threshold values as specified below.

(1) § 3.2, definition of Financial institution, paragraph (4)(i)(A), baseline threshold value $10 million;

(2) § 3.101, definition of Regulatory retail exposure, paragraph (2), baseline threshold value $1 million;

(3) § 3.101, definition of Small or medium-sized entity (SME), baseline threshold value $50 million;

(4) § 3.150(b)(1), baseline threshold value $1 billion;

(5) § 3.150(b)(2), baseline threshold values $1 billion, $30 billion, and $120 million;

(6) § 3.150(b)(2)(i), baseline threshold value $1 billion;

(7) § 3.150(b)(3), baseline threshold values $30 billion and $4.47 billion

(8) § 3.150(b)(3)(i), baseline threshold value $30 billion;

(9) § 3.150(d)(2)(i)(A), baseline threshold value $20,000;

(10) § 3.201(b)(1)(ii)(B), baseline threshold value $5 billion;

(11) § 3.201(b)(2)(ii), baseline threshold value $1 trillion;

(12) § 3.202 “Large market cap”, baseline threshold value $2 billion;

(13) § 3.202, “Market risk covered position” (1)(ii)(D), baseline value $20 million;

(14) § 3.202, “Small market cap”, baseline threshold value $2 billion.

(d) *Rounding*. When adjusting thresholds under this section, each threshold shall be rounded based on the size of the threshold (e.g., thousands, millions, billions) to the nearest number with two significant digits.

(e) *Effective date of threshold adjustments*. The OCC shall announce the thresholds adjusted in accordance with this section by publication in the Federal Register. Such adjusted thresholds shall be effective on October 1 of the year during which an adjustment is made.

(f) *Failure to publish in the Federal Register*. In the event, for any reason, the thresholds adjusted in accordance with this section are not published in the Federal Register in a year in which an adjustment is made under this section, the thresholds specified in paragraph (c) of this section will adjust as provided in this section and be effective on October 1, notwithstanding the lack of publication in the Federal Register.

* * * * *

6. Add a new section § 3.5 to read as follows:

§ 3.5 Calculation of loan-to-value (LTV) ratio.

(a) *Loan-to-Value ratio*. The loan-to-value (LTV) ratio must be calculated as the extension of credit divided by the value of the property.

(b) *Extension of credit*. For purposes of a LTV ratio calculated under this section, the extension of credit is equal to the total outstanding amount of the loan including any undrawn committed amount of the loan.

(c) *Value of the property*. (1) For purposes of a LTV ratio calculated under this section, the value of the property is the market value of all real estate properties securing or being improved by the extension of credit plus the amount of any readily marketable collateral and other acceptable collateral, as defined in 12 CFR part 34, appendix A to subpart D, that secures the extension of credit, subject to the following:

(i) For exposures subject to 12 CFR part 34, subpart C, the market value of property is a valuation that meets all requirements of that rule.

(ii) For exposures not subject to 12 CFR part 34, subpart C:

(A) The market value of real estate must be obtained from an independent valuation of the property using prudently conservative valuation criteria;

(B) The valuation must be done independently from the national bank's or Federal savings association's origination and underwriting process, and

(C) To ensure that the market value of the real estate is determined in a prudently conservative manner, the valuation must exclude expectations of price increases and must be adjusted downward to take into account the potential for the current market price to be significantly above the value that would be sustainable over the life of the loan.

(2) In the case where the exposure finances the purchase of the property, the value of the property is the lower of the market value obtained under paragraph (c)(1)(i) or (ii), as applicable, and the actual acquisition cost.

(3) The value of the property must be measured at the time of origination, except in the following circumstances:

(i) The OCC requires a national bank or Federal savings association to revise the value of the property downward;

(ii) The value of the property must be adjusted downward due to an extraordinary event that results in a permanent reduction of the property value; or

(iii) The value of the property may be increased to reflect modifications made to the property that increase the market value, as determined according to the requirements in paragraphs (c)(1)(i) or (ii) of this section.

(4) Readily marketable collateral and other acceptable collateral, as defined in 12 CFR part 34, appendix A to subpart D, must be appropriately discounted by the national bank or Federal savings association consistent with the national bank's or Federal savings association's usual practices for making loans secured by such collateral.

* * * * *

7. In § 3.10:

a. Revise paragraph (a)(1)(v);

b. Revise paragraph (b);

c. Revise paragraph (c);

d. Revise paragraph (d) introductory text; and

e. Revise paragraph (d)(3)(ii).

The revisions read as follows:

§ 3.10 Minimum capital requirements.

(a) * * *

(1) * * *

(v) For a Category I national bank or Federal savings association, a Category II national bank or Federal Savings association, and a Category III national bank or Federal savings association, a supplementary leverage ratio of 3 percent.

* * * * *

(b) *Standardized capital ratio calculations.* For a national bank or Federal savings association that is not a Category I national bank or Federal savings association or a Category II national bank or Federal savings association:

(1) *Common equity tier 1 capital ratio.* The national bank's or Federal savings association's common equity tier 1 capital ratio is the ratio of the national bank's or Federal savings association's common equity tier 1 capital to selected total risk-weighted assets;

(2) *Tier 1 capital ratio.* The national bank's or Federal savings association's tier 1 capital ratio is the ratio of the national bank's or Federal savings association's tier 1 capital to selected total risk-weighted assets;

(3) *Total capital ratio.* The national bank's or Federal savings association's total capital ratio is the ratio of the national bank's or Federal savings association's total capital to selected total risk-weighted assets; and

(4) *Leverage ratio.* The national bank's or Federal savings association's leverage ratio is the ratio of the national bank's or Federal savings association's tier 1 capital to the national

bank's or Federal savings association's average total consolidated assets as reported on the national bank's or Federal savings association's Call Report, minus amounts deducted from tier 1 capital under § 3.22(a), (c) and (d).

(5) *Selected total risk-weighted assets*. A national bank's or Federal savings association's selected total risk-weighted assets is either the national bank's or Federal savings association's standardized total risk-weighted assets or expanded total risk-weighted assets, as selected by the national bank or Federal savings association. A national bank or Federal savings association may change its choice for selected total risk-weighted assets by providing the OCC with prior notice of the change at least four full calendar quarters before the calendar quarter in which the change will take effect.

(c) *Supplementary leverage ratio.* (1) The supplementary leverage ratio of a Category I national bank or Federal savings association, a Category II national bank or Federal Savings association, or a Category III national bank or Federal savings association is the ratio of its tier 1 capital to total leverage exposure. Total leverage exposure is calculated as the sum of:

(i) The mean of the on-balance sheet assets calculated as of each day of the reporting quarter; and

(ii) The mean of the off-balance sheet exposures calculated as of the last day of each of the most recent three months, minus the applicable deductions under § 3.22(a), (c), and (d).

(2) For purposes of this part, *total leverage exposure* means the sum of the items described in paragraphs (c)(2)(i) through (viii) of this section, as adjusted pursuant to paragraph (c)(2)(ix) of this section for a clearing member national bank or Federal savings association and paragraph (c)(2)(x) of this section for a custody bank:

(i) The balance sheet carrying value of all of the national bank's or Federal savings association's on-balance sheet assets, net of adjusted allowances for credit losses, *plus* the value of securities sold under a repurchase transaction or a securities lending transaction that qualifies for sales treatment under GAAP, *less* amounts deducted from tier 1 capital under § 3.22(a), (c), and (d), *less* the value of securities received in security-for-security repo-style transactions, where the national bank or Federal savings association acts as a securities lender and includes the securities received in its on-balance sheet assets but has not sold or re-hypothecated the securities received, and, for a national bank or Federal savings association that uses the Standardized approach for counterparty credit risk (SA-CCR) § 3.114 for its standardized total risk-weighted assets or expanded total risk-weighted assets, *less* the fair value of any derivative contracts;

(ii) (A) For a national bank or Federal savings association that uses the current exposure methodology under § 3.34(b) for its standardized total risk-weighted assets, the potential future credit exposure (PFE) for each derivative contract or each single-product netting set of derivative contracts (including a cleared transaction except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the national bank or Federal savings association, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP), to which the national bank or Federal savings association is a counterparty as determined under § 3.34, but without regard to § 3.34(c), provided that:

(*1*) A national bank or Federal savings association may choose to exclude the PFE of all credit derivatives or other similar instruments through which it provides credit protection when calculating the PFE under § 3.34, but without regard to § 3.34(c), provided that it does not adjust the net-to-gross ratio (NGR); and

(*2*) A national bank or Federal savings association that chooses to exclude the PFE of credit derivatives or other similar instruments through which it provides credit protection pursuant to paragraph (c)(2)(ii)(A) of this section must do so consistently over time for the calculation of the PFE for all such instruments; or

(B) (*1*) For a national bank or Federal savings association that uses SA-CCR under § 3.114 for its standardized total risk-weighted assets or expanded total risk-weighted assets, the PFE under SA-CCR for each derivative contract or single product netting set to which the national bank or Federal savings association is a counterparty (including cleared transactions except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the national bank or Federal savings association, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP), as determined under § 3.114(g), in which the term C in § 3.114(g)(1) equals zero, and, for any counterparty that is not a commercial end-user, multiplied by 1.4. For purposes of this paragraph (c)(2)(ii)(A), a national bank or Federal savings association may set the value of the term C in § 3.114(g)(1) equal to the amount of collateral posted by a clearing member client of the national bank or Federal savings association in connection with the client-facing derivative transactions within the netting set; and

(*2*) A national bank or Federal savings association may choose to exclude the PFE of all credit derivatives or other similar instruments through which it provides credit protection when calculating the PFE under § 3.114, provided that it does so consistently over time for the calculation of the PFE for all such instruments;

(iii)(A)(*1*) For a national bank or Federal savings association that uses the current exposure methodology under § 3.34(b) for its standardized total risk-weighted assets, the amount of cash collateral that is received from a counterparty to a derivative contract and that has offset the mark-to-fair value of the derivative asset, or cash collateral that is posted to a counterparty to a derivative contract and that has reduced the national bank's or Federal savings association's on-balance sheet assets, unless such cash collateral is all or part of variation margin that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section; and

(*2*) The variation margin is used to reduce the current credit exposure of the derivative contract, calculated as described in § 3.34(b), and not the PFE; and

(*3*) For the purpose of the calculation of the NGR described in § 3.34(b)(2)(ii)(B), variation margin described in paragraph (c)(2)(iii)(A)(2) of this section may not reduce the net current credit exposure or the gross current credit exposure; or

(B)*(1)* For a national bank or Federal savings association that uses Standardized approach for derivative contracts under § 3.114 for its standardized total risk-weighted assets or expanded total risk-weighted assets, the replacement cost under § 3.114 of each derivative contract or single product netting set of derivative contracts to which the national bank or Federal savings association is a counterparty, calculated according to the following formula, and, for any counterparty that is not a commercial end-user, multiplied by 1.4:

$$\text{Replacement Cost} = \max\{V - CVM_r + CVM_p; 0\}$$

Where:

V equals the fair value for each derivative contract or each netting set of derivative contracts (including a cleared transaction except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the national bank or Federal savings association, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP);

CVM_r equals the amount of cash collateral received from a counterparty to a derivative contract and that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section, or, in the case of a client-facing derivative transaction, the amount of collateral received from the clearing member client; and

CVM_p equals the amount of cash collateral that is posted to a counterparty to a derivative contract and that has not offset the fair value of the derivative contract and that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section, or, in the case of a client-facing derivative transaction, the amount of collateral posted to the clearing member client;

(2) Notwithstanding paragraph (c)(2)(iii)(A)(*1*) of this section, where multiple netting sets are subject to a single variation margin agreement, a national bank or Federal savings association must apply the formula for replacement cost provided in § 3.114(j)(1), in which the term CMA may only include cash collateral that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section; and

(3) For purposes of paragraph (c)(2)(iii)(A)(*1*) of this section, a national bank or Federal savings association must treat a derivative contract that references an index as if it were multiple derivative contracts each referencing one component of the index if the national bank or Federal

savings association elected to treat the derivative contract as multiple derivative contracts under § 3.114(e)(6);

(C) For derivative contracts that are not cleared through a QCCP, the cash collateral received by the recipient counterparty is not segregated (by law, regulation, or an agreement with the counterparty);

(D) Variation margin is calculated and transferred on a daily basis based on the mark-to-fair value of the derivative contract;

(E) The variation margin transferred under the derivative contract or the governing rules of the CCP or QCCP for a cleared transaction is the full amount that is necessary to fully extinguish the net current credit exposure to the counterparty of the derivative contracts, subject to the threshold and minimum transfer amounts applicable to the counterparty under the terms of the derivative contract or the governing rules for a cleared transaction;

(F) The variation margin is in the form of cash in the same currency as the currency of settlement set forth in the derivative contract, provided that for the purposes of this paragraph (c)(2)(iii)(F), currency of settlement means any currency for settlement specified in the governing qualifying master netting agreement and the credit support annex to the qualifying master netting agreement, or in the governing rules for a cleared transaction; and

(G) The derivative contract and the variation margin are governed by a qualifying master netting agreement between the legal entities that are the counterparties to the derivative contract or by the governing rules for a cleared transaction, and the qualifying master netting agreement or the governing rules for a cleared transaction must explicitly stipulate that the counterparties

agree to settle any payment obligations on a net basis, taking into account any variation margin received or provided under the contract if a credit event involving either counterparty occurs;

(iv) The effective notional principal amount (that is, the apparent or stated notional principal amount multiplied by any multiplier in the derivative contract) of a credit derivative, or other similar instrument, through which the national bank or Federal savings association provides credit protection, provided that:

(A) The national bank or Federal savings association may reduce the effective notional principal amount of the credit derivative by the amount of any reduction in the mark-to-fair value of the credit derivative if the reduction is recognized in common equity tier 1 capital;

(B) The national bank or Federal savings association may reduce the effective notional principal amount of the credit derivative by the effective notional principal amount of a purchased credit derivative or other similar instrument, provided that the remaining maturity of the purchased credit derivative is equal to or greater than the remaining maturity of the credit derivative through which the national bank or Federal savings association provides credit protection and that:

(1) With respect to a credit derivative that references a single exposure, the reference exposure of the purchased credit derivative is to the same legal entity and ranks *pari passu* with, or is junior to, the reference exposure of the credit derivative through which the national bank or Federal savings association provides credit protection; or

(2) With respect to a credit derivative that references multiple exposures, the reference exposures of the purchased credit derivative are to the same legal entities and rank *pari passu* with the reference exposures of the credit derivative through which the national bank or Federal

savings association provides credit protection, and the level of seniority of the purchased credit derivative ranks *pari passu* to the level of seniority of the credit derivative through which the national bank or Federal savings association provides credit protection;

(3) Where a national bank or Federal savings association has reduced the effective notional principal amount of a credit derivative through which the national bank or Federal savings association provides credit protection in accordance with paragraph (c)(2)(iv)(A) of this section, the national bank or Federal savings association must also reduce the effective notional principal amount of a purchased credit derivative used to offset the credit derivative through which the national bank or Federal savings association provides credit protection, by the amount of any increase in the mark-to-fair value of the purchased credit derivative that is recognized in common equity tier 1 capital; and

(4) Where the national bank or Federal savings association purchases credit protection through a total return swap and records the net payments received on a credit derivative through which the national bank or Federal savings association provides credit protection in net income, but does not record offsetting deterioration in the mark-to-fair value of the credit derivative through which the national bank or Federal savings association provides credit protection in net income (either through reductions in fair value or by additions to reserves), the national bank or Federal savings association may not use the purchased credit protection to offset the effective notional principal amount of the related credit derivative through which the national bank or Federal savings association provides credit protection;

(v) Where a national bank or Federal savings association acting as a principal has more than one repo-style transaction with the same counterparty and has offset the gross value of

receivables due from a counterparty under reverse repurchase transactions by the gross value of payables under repurchase transactions due to the same counterparty, the gross value of receivables associated with the repo-style transactions *less* any on-balance sheet receivables amount associated with these repo-style transactions included under paragraph (c)(2)(i) of this section, unless the following criteria are met:

(A) The offsetting transactions have the same explicit final settlement date under their governing agreements;

(B) The right to offset the amount owed to the counterparty with the amount owed by the counterparty is legally enforceable in the normal course of business and in the event of receivership, insolvency, liquidation, or similar proceeding; and

(C) Under the governing agreements, the counterparties intend to settle net, settle simultaneously, or settle according to a process that is the functional equivalent of net settlement, (that is, the cash flows of the transactions are equivalent, in effect, to a single net amount on the settlement date), where both transactions are settled through the same settlement system, the settlement arrangements are supported by cash or intraday credit facilities intended to ensure that settlement of both transactions will occur by the end of the business day, and the settlement of the underlying securities does not interfere with the net cash settlement;

(vi) The counterparty credit risk of a repo-style transaction, including where the national bank or Federal savings association acts as an agent for a repo-style transaction and indemnifies the customer with respect to the performance of the customer's counterparty in an amount limited to the difference between the fair value of the security or cash its customer has lent and the fair value of the collateral the borrower has provided, calculated as follows:

(A) If the transaction is not subject to a qualifying master netting agreement, the counterparty credit risk (E*) for transactions with a counterparty must be calculated on a transaction by transaction basis, such that each transaction *i* is treated as its own netting set, in accordance with the following formula, where E_i is the fair value of the instruments, gold, or cash that the national bank or Federal savings association has lent, sold subject to repurchase, or provided as collateral to the counterparty, and C_i is the fair value of the instruments, gold, or cash that the national bank or Federal savings association has borrowed, purchased subject to resale, or received as collateral from the counterparty:

$E_i^* = \max \{0, [E_i — C_i]\}$; and

(B) If the transaction is subject to a qualifying master netting agreement, the counterparty credit risk (E*) must be calculated as the greater of zero and the total fair value of the instruments, gold, or cash that the national bank or Federal savings association has lent, sold subject to repurchase or provided as collateral to a counterparty for all transactions included in the qualifying master netting agreement (ΣE_i), *less* the total fair value of the instruments, gold, or cash that the national bank or Federal savings association borrowed, purchased subject to resale or received as collateral from the counterparty for those transactions (ΣC_i), in accordance with the following formula:

$E^* = \max \{0, [\Sigma ei - \Sigma ci]\}$

(vii) If a national bank or Federal savings association acting as an agent for a repo-style transaction provides a guarantee to a customer of the security or cash its customer has lent or borrowed with respect to the performance of the customer's counterparty and the guarantee is not limited to the difference between the fair value of the security or cash its customer has lent and

the fair value of the collateral the borrower has provided, the amount of the guarantee that is greater than the difference between the fair value of the security or cash its customer has lent and the value of the collateral the borrower has provided;

(viii) The credit equivalent amount of all off-balance sheet exposures of the national bank or Federal savings association, excluding repo-style transactions, repurchase or reverse repurchase or securities borrowing or lending transactions that qualify for sales treatment under GAAP, and derivative transactions, determined using:

(A) For a national bank or Federal savings association that elects to calculate its standardized total risk-weighted assets under § 3.10(b), the applicable credit conversion factor under § 3.33(b), provided, however, that the minimum credit conversion factor that may be assigned to an off-balance sheet exposure under this paragraph is 10 percent; or

(B) For a national bank or Federal savings association that elects to calculate its expanded total risk-weighted assets under § 3.10(b), a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, the applicable credit conversion factor under § 3.112(b), provided, however, that the minimum credit conversion factor that may be assigned to an off-balance sheet exposure under this paragraph is 10 percent; and

(ix) For a national bank or Federal savings association that is a clearing member:

(A) A clearing member national bank or Federal savings association that guarantees the performance of a clearing member client with respect to a cleared transaction must treat its exposure to the clearing member client as a derivative contract or repo-style transaction, as applicable, for purposes of determining its total leverage exposure;

(B) A clearing member national bank or Federal savings association that guarantees the performance of a CCP with respect to a transaction cleared on behalf of a clearing member client must treat its exposure to the CCP as a derivative contract or repo-style transaction, as applicable, for purposes of determining its total leverage exposure;

(C) A clearing member national bank or Federal savings association that does not guarantee the performance of a CCP with respect to a transaction cleared on behalf of a clearing member client may exclude its exposure to the CCP for purposes of determining its total leverage exposure;

(D) A national bank or Federal savings association that is a clearing member may exclude from its total leverage exposure the effective notional principal amount of credit protection sold through a credit derivative contract, or other similar instrument, that it clears on behalf of a clearing member client through a CCP as calculated in accordance with paragraph (c)(2)(iv) of this section;

(E) Notwithstanding paragraphs (c)(2)(ix)(A) through (C) of this section, a national bank or Federal savings association may exclude from its total leverage exposure a clearing member's exposure to a clearing member client for a derivative contract if the clearing member client and the clearing member are affiliates and consolidated for financial reporting purposes on the national bank's or Federal savings association's balance sheet; and

(F) Notwithstanding paragraph (c)(2)(ix)(A), a national bank or Federal savings association that has elected under § 3.113(c) to treat any repo-style transactions subject to a qualifying cross-product master netting agreement as derivative contracts must treat any such repo-style transactions as a derivative contract for purposes of this paragraph (c).

(x) A custody bank shall exclude from its total leverage exposure the lesser of:

(A) The amount of funds that the custody bank has on deposit at a qualifying central bank; and

(B) The amount of funds in deposit accounts at the custody bank that are linked to fiduciary or custodial and safekeeping accounts at the custody bank. For purposes of this paragraph (c)(2)(x), a deposit account is linked to a fiduciary or custodial and safekeeping account if the deposit account is provided to a client that maintains a fiduciary or custodial and safekeeping account with the custody bank and the deposit account is used to facilitate the administration of the fiduciary or custodial and safekeeping account.

(d) *Expanded capital ratio calculations.* A Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that elects to use expanded total risk-weighted assets for purposes of § 3.10(a)(5) must determine its regulatory capital ratios as described in paragraphs (d)(1) through (4) of this section.

(1) *Common equity tier 1 capital ratio.* The national bank's or Federal savings association's common equity tier 1 capital ratio is the ratio of the national bank's or Federal savings association's common equity tier 1 capital to expanded total risk-weighted assets;

(2) *Tier 1 capital ratio.* The national bank's or Federal savings association's tier 1 capital ratio is the ratio of the national bank's or Federal savings association's tier 1 capital to expanded total risk-weighted assets;

(3) *Total capital ratio.* The national bank's or Federal savings association's total capital ratio is the ratio of the national bank's or Federal savings association's total capital to expanded total risk-weighted assets; and

(4) *Leverage ratio.* The national bank's or Federal savings association's leverage ratio is the ratio of the national bank's or Federal savings association's tier 1 capital to the national bank's or Federal savings association's average total consolidated assets as reported on the national bank's or Federal savings association's Call Report, minus amounts deducted from tier 1 capital under § 3.22(a), (c) and (d).

* * * * *

8. In § 3.11, revise paragraphs (a)(2)(iv), (b)(1), (b)(1)(ii), and (b)(1)(iii) to read as follows:

§ 3.11 Capital conservation buffer and countercyclical capital buffer amount.

* * * * *

(a) * * *

(2) * * *

(iv) *Private sector credit exposure.* Private sector credit exposure means an exposure to a company or an individual that is not an exposure to a sovereign, a specified supranational entity, a MDB, a PSE, or a GSE.

* * * * *

(b) * * *

(1) ***General***. A Category I or Category II national bank or Federal savings association, and a Category III national bank or Federal savings association, must calculate a countercyclical capital buffer amount in accordance with paragraphs (b)(1)(i) through (iv) of this section for purposes of determining its maximum payout ratio under Table 1 to this section.

(i) * * *

(ii) ***Amount.*** A Category I or Category II national bank or Federal savings association, and a Category III national bank or Federal savings association, has a countercyclical capital buffer amount determined by calculating the weighted average of the countercyclical capital buffer amounts established for the national jurisdictions where the national bank's or Federal savings association's private sector credit exposures are located, as specified in paragraphs (b)(2) and (3) of this section.

(iii) *Weighting*. The weight assigned to a jurisdiction's countercyclical capital buffer amount is calculated by dividing the total risk-weighted assets for the national bank's or Federal savings association's private sector credit exposures located in the jurisdiction by the total risk-weighted assets for all of the national bank's or Federal savings association's private sector credit exposures. The methodology a national bank or Federal savings association uses for determining risk-weighted assets for purposes of this paragraph (b) must be the methodology that determines its risk-based capital ratios under § 3.10. Notwithstanding the previous sentence, the risk-weighted asset amount for a private sector credit exposure that is a covered position under subpart F of this part is its standardized default risk capital requirement as determined under § 3.210 multiplied by 12.5.

* * * * *

9. In § 3.12, revise paragraph (a)(2) and remove paragraph (a)(4).

The revision reads as follows:

§ 3.12 Community bank leverage ratio framework.

(a) * * *

(2) For purposes of this section, a qualifying community banking organization means a national bank or Federal savings association that is not a Category I national bank or Federal savings association, or a Category II national bank or savings association, and that satisfies all of the following criteria:

* * * * *

10. In § 3.20, revise paragraphs (c)(1)(xiv) and (d)(1)(xi) and (d)(3) to read as follows:

§ 3.20 Capital components and eligibility criteria for regulatory capital instruments.

* * * * *

(c) * * *

(1) * * *

(xiv) For a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), the governing agreement, offering circular, or prospectus of an instrument issued after the date upon which the national bank or Federal savings association becomes a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of

§ 3.10(a)(5), must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the national bank or Federal savings association enters into a receivership, insolvency, liquidation, or similar proceeding.

* * * * *

(d) * * *

(1) * * *

(xi) For a Category I national bank or Federal savings association, a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), the governing agreement, offering circular, or prospectus of an instrument issued after the date on which the national bank or Federal savings association becomes a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the national bank or Federal savings association enters into a receivership, insolvency, liquidation, or similar proceeding.

* * * * *

(3) AACL up to 1.25 percent of a national bank's or Federal savings association's standardized total risk-weighted assets or total credit risk-weighted assets, as applicable, not including any amount of AACL (and excluding, in the case of a market risk national bank or Federal savings association, its market risk weighted assets).

* * * * *

11. In § 3.21:

a. In paragraph (a)(1), remove the words “an advanced approaches national bank or Federal savings association” and add in their place the words “Category I national bank or Federal savings association, Category II national bank or Federal savings association, or national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5)”;

b. Revise paragraph (b):

The revision reads as follows:

§ 3.21 Minority interest.

* * * * *

(b) (1) *Applicability*. For purposes of § 3.20, a Category I national bank or Federal savings association, a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), is subject to the minority interest limitations in this paragraph (b) if:

(i) A consolidated subsidiary of the national bank or Federal savings association has issued regulatory capital that is not owned by the national bank or federal savings association; and

(ii) For each relevant regulatory capital ratio of the consolidated subsidiary, the ratio exceeds the sum of the subsidiary’s minimum regulatory capital requirements plus its capital conservation buffer.

(2) *Difference in capital adequacy standards at the subsidiary level*. For purposes of the minority interest calculations in this section, if the consolidated subsidiary issuing the capital is

not subject to capital adequacy standards similar to those of the national bank or Federal savings association, the national bank or Federal savings association must assume that the capital adequacy standards of the national bank or Federal savings association apply to the subsidiary.

(3) *Common equity tier 1 minority interest includable in the common equity tier 1 capital of the national bank or Federal savings association*. For each consolidated subsidiary of a national bank or Federal savings association, the amount of common equity tier 1 minority interest the national bank or Federal savings association may include in common equity tier 1 capital is equal to:

(i) The common equity tier 1 minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's common equity tier 1 capital that is not owned by the national bank or Federal savings association, multiplied by the difference between the common equity tier 1 capital of the subsidiary and the lower of:

(A) The amount of common equity tier 1 capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 3.11 or equivalent standards established by the subsidiary's home country supervisor; or

(B) (1) The expanded total risk-weighted assets of the national bank or Federal savings association that relate to the subsidiary multiplied by

(2) The common equity tier 1 capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 3.11 or equivalent standards established by the subsidiary's home country supervisor.

(4) *Tier 1 minority interest includable in the tier 1 capital of the national bank or Federal savings association*. For each consolidated subsidiary of the national bank or Federal savings association, the amount of tier 1 minority interest the national bank or Federal savings association may include in tier 1 capital is equal to:

(i) The tier 1 minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's tier 1 capital that is not owned by the national bank or Federal savings association multiplied by the difference between the tier 1 capital of the subsidiary and the lower of:

(A) The amount of tier 1 capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 3.11 or equivalent standards established by the subsidiary's home country supervisor, or

(B) (1) The expanded total risk-weighted assets of the national bank or Federal savings association that relate to the subsidiary multiplied by

(2) The tier 1 capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 3.11 or equivalent standards established by the subsidiary's home country supervisor.

(5) *Total capital minority interest includable in the total capital of the national bank or Federal savings association*. For each consolidated subsidiary of the national bank or Federal savings association, the amount of total capital minority interest the national bank or Federal savings association may include in total capital is equal to:

(i) The total capital minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's total capital that is not owned by the national bank or Federal savings association multiplied by the difference between the total capital of the subsidiary and the lower of:

(A) The amount of total capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 3.11 or equivalent standards established by the subsidiary's home country supervisor, or

(B) (1) The expanded total risk-weighted assets of the national bank or Federal savings association that relate to the subsidiary multiplied by

(2) The total capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 3.11 or equivalent standards established by the subsidiary's home country supervisor.

* * * * *

12. In § 3.22:

a. Revise paragraphs (a)(1) and (a)(4);

b. Remove paragraph (a)(6);

c. Redesignate paragraph (a)(7) as new paragraph (a)(6), and redesignate paragraph (a)(8) and the new paragraph (a)(7);

d. In paragraph (b)(2)(i) and (b)(2)(iv), remove the words “an advanced approaches national bank or Federal savings association” and add in their place the words “a Category I national bank or Federal savings association, a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5),”;

e. Revise paragraph (b)(2)(ii);

f. In paragraph (b)(2)(iii) and (b)(2)(iv), remove the words “an advanced approaches national bank or Federal savings association” and add in their place the words “a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5)”;

g. In footnote 21, in paragraph (b)(2)(iii), remove the words “12 CFR part 225 (Board); 12 CFR part 325, and 12 CFR part 390” and add in their place “12 CFR part 217 (Board); and 12 CFR part 325 (FDIC)”;

h. In footnote 22, in paragraph (b)(2)(iv)(A), remove the words “12 CFR part 225 (Board); 12 CFR part 325, and 12 CFR part 390” and add in their place “12 CFR part 217 (Board); and 12 CFR part 325 (FDIC)”;

i. In footnote 23, in paragraph (c), remove the words “ALLL or AACL, as applicable,” and add in its places “AACL”;

j. Revise paragraphs (c)(2);

k. In paragraph (c)(4), remove the words “an advanced approaches national bank or Federal savings association” and replace them with a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5);

l. Revise paragraphs (c)(5)(i) through (iv);

m. Revise paragraphs (c)(6);

n. Revise paragraph (d)(1).

o. Remove and reserve paragraph (d)(1)(iii);

p. Revise paragraph (d)(2);

q. Revise paragraph (f); and

r. Revise paragraph (g).

The revisions read as follows:

§ 3.22 Regulatory capital adjustments and deductions.

(a) * * *

(1) * * *

(ii) For a national bank or Federal savings association subject to subpart E of this part, goodwill that is embedded in the valuation of a significant investment in the capital of an unconsolidated financial institution in the form of common stock (and that is reflected in the

consolidated financial statements of the national bank or Federal savings association), in accordance with paragraph (d) of this section;

* * * * *

(4)(i) Any gain-on-sale in connection with a securitization exposure; and

(ii) For a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), the portion of any CEIO that does not constitute an after-tax gain-on-sale;

* * * * *

(b) * * *

(2) * * *

(i) A national bank or Federal savings association that is not a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), may make a one-time election to opt out of the requirement to include all components of AOCI (with the exception of accumulated net gains and losses on cash flow hedges related to items that are not fair-valued on the balance sheet) in common equity tier 1 capital (AOCI opt-out election). A national bank or Federal savings association that makes an AOCI opt-out election in accordance with this paragraph (b)(2) must adjust common equity tier 1 capital as follows:

(A) Subtract any net unrealized gains and add any net unrealized losses on available-for-sale securities;

(B) Subtract any accumulated net gains and add any accumulated net losses on cash flow hedges;

(C) Subtract any amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans (excluding, at the national bank's or Federal savings association's option, the portion relating to pension assets deducted under paragraph (a)(5) of this section); and

(D) Subtract any net unrealized gains and add any net unrealized losses on held-to-maturity securities that are included in AOCI.

(ii) A national bank or Federal savings association that is not a Category I national bank or Federal savings association, a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must make its AOCI opt-out election in the Call Report, during the first reporting period after the national bank or Federal savings association is required to comply with subpart A of this part. If the national bank or Federal savings association was previously a Category I national bank or Federal savings association, a Category II national bank or Federal savings association, or a national bank or Federal savings association that used expanded total risk-weighted assets for purposes of § 3.10(a)(5), the national bank or Federal savings association may not make an AOCI opt-out election under this paragraph (b)(2)(ii).

* * * * *

* * * * *

(c) * * *[23]

(1) *Investment in the national bank's or Federal savings association's own capital or covered debt instruments.* A national bank or Federal savings association must deduct an investment in the national bank's or Federal savings association's own capital instruments; and a Category I national bank or Federal savings association, a Category II national bank or Federal savings association, and a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) also must deduct an investment in the national bank's or Federal savings association's own covered debt instruments, as follows:

* * * * *

(iv) A Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must deduct an investment in the institution's own covered debt instruments from its tier 2 capital elements, as applicable. If the national bank or Federal savings association does not have a sufficient amount of tier 2 capital to effect this deduction, the national bank or Federal savings association must deduct the shortfall amount from the next higher (that is, more subordinated) component of regulatory capital.

* * * * *

(2) *Corresponding deduction approach.* For purposes of subpart C of this part, the corresponding deduction approach is the methodology used for the deductions from regulatory capital related to reciprocal cross holdings (as described in paragraph (c)(3) of this section),

investments in the capital of unconsolidated financial institutions for a national bank or Federal savings association that is not a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) (as described in paragraph (c)(4) of this section), non-significant investments in the capital of unconsolidated financial institutions for a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) (as described in paragraph (c)(5) of this section), and non-common stock significant investments in the capital of unconsolidated financial institutions for a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) (as described in paragraph (c)(6) of this section). Under the corresponding deduction approach, a national bank or Federal savings association must make deductions from the component of capital for which the underlying instrument would qualify if it were issued by the national bank or Federal savings association itself, as described in paragraphs (c)(2)(i) through (iii) of this section. If the national bank or Federal savings association does not have a sufficient amount of a specific component of capital to effect the required deduction, the shortfall must be deducted according to paragraph (f) of this section.

* * * * *

(ii) * * *

(D) For a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), a tier 2 capital instrument if it is a covered debt instrument.

* * * * *

(3) * * *

(ii) A Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must deduct an investment in any covered debt instrument that the institution holds reciprocally with another financial institution, where such reciprocal cross holdings result from a formal or informal arrangement to swap, exchange, or otherwise intend to hold each other's capital or covered debt instruments, by applying the corresponding deduction approach in paragraph (c)(2) of this section.

(4) *Investments in the capital of unconsolidated financial institutions.* A national bank or Federal savings association that is not a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must deduct its investments in the capital of unconsolidated financial institutions (as defined in § 3.2) that exceed 25 percent of the sum of the national bank or Federal savings association's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section by applying the corresponding deduction approach in paragraph (c)(2) of this section.[24] The

deductions described in this section are net of associated DTLs in accordance with paragraph (e) of this section. In addition, with the prior written approval of the OCC, a national bank or Federal savings association that underwrites a failed underwriting, for the period of time stipulated by the OCC, is not required to deduct an investment in the capital of an unconsolidated financial institution pursuant to this paragraph (c) to the extent the investment is related to the failed underwriting.[25]

(5) * * *

(i) A Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must deduct its non-significant investments in the capital of unconsolidated financial institutions (as defined in § 3.2) that, in the aggregate and together with any investment in a covered debt instrument (as defined in § 3.2) issued by a financial institution in which the national bank or Federal savings association does not have a significant investment in the capital of the unconsolidated financial institution (as defined in § 3.2), exceeds 10 percent of the sum of the national bank's or Federal savings association's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section (the 10 percent threshold for non-significant investments) by applying the corresponding deduction approach in paragraph (c)(2) of this section.[26] The deductions described in this paragraph are net of associated DTLs in accordance with paragraph (e) of this section. In addition, with the prior written approval of the OCC, a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of

§ 3.10(a)(5) that underwrites a failed underwriting, for the period of time stipulated by the OCC, is not required to deduct from capital a non-significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph (c)(5) to the extent the investment is related to the failed underwriting.[27] For any calculation under this paragraph (c)(5)(i), a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) may exclude the amount of an investment in a covered debt instrument under paragraph (c)(5)(iii) or (iv) of this section, as applicable.

(ii) For a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), the amount to be deducted under this paragraph (c)(5) from a specific capital component is equal to:

(A) The national bank's or Federal savings association's aggregate non-significant investments in the capital of an unconsolidated financial institution and, if applicable, any investments in a covered debt instrument subject to deduction under this paragraph (c)(5), exceeding the 10 percent threshold for non-significant investments, multiplied by

(B) The ratio of the national bank's or Federal savings association's aggregate non-significant investments in the capital of an unconsolidated financial institution (in the form of such capital component) to the national bank's or Federal savings association's total non-significant investments in unconsolidated financial institutions, with an investment in a covered debt instrument being treated as tier 2 capital for this purpose.

(iii) For purposes of applying the deduction under paragraph (c)(5)(i) of this section, a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5), may exclude from the deduction the amount of the national bank's or Federal savings association's gross long position, in accordance with § 3.22(h)(2), in investments in covered debt instruments issued by financial institutions in which the national bank or Federal savings association does not have a significant investment in the capital of the unconsolidated financial institutions up to an amount equal to 5 percent of the sum of the national bank's or Federal savings association's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section, net of associated DTLs in accordance with paragraph (e) of this section.

(iv) Prior to applying the deduction under paragraph (c)(5)(i) of this section:

(A) A Category I national bank or Federal savings association may designate any investment in a covered debt instrument as an excluded covered debt instrument, as defined in § 3.2.

(B) A Category I national bank or Federal savings association must deduct, according to the corresponding deduction approach in paragraph (c)(2) of this section, its gross long position, calculated in accordance with paragraph (h)(2) of this section, in a covered debt instrument that was originally designated as an excluded covered debt instrument, in accordance with paragraph (c)(5)(iv)(A) of this section, but no longer qualifies as an excluded covered debt instrument.

(C) A Category I national bank or Federal savings association must deduct according to the corresponding deduction approach in paragraph (c)(2) of this section the amount of its gross

long position, calculated in accordance with paragraph (h)(2) of this section, in a direct or indirect investment in a covered debt instrument that was originally designated as an excluded covered debt instrument, in accordance with paragraph (c)(5)(iv)(A) of this section, and has been held for more than thirty business days.

(D) A Category I national bank or Federal savings association must deduct according to the corresponding deduction approach in paragraph (c)(2) of this section its gross long position, calculated in accordance with paragraph (h)(2) of this section, of its aggregate position in excluded covered debt instruments that exceeds 5 percent of the sum of the national bank's or Federal savings association 's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section, net of associated DTLs in accordance with paragraph (e) of this section.

(6) *Significant investments in the capital of unconsolidated financial institutions that are not in the form of common stock.* If a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) has a significant investment in the capital of an unconsolidated financial institution, the national bank or Federal savings association must deduct from capital any such investment issued by the unconsolidated financial institution that is held by the national bank or Federal savings association other than an investment in the form of common stock, as well as any investment in a covered debt instrument issued by the unconsolidated financial institution, by applying the corresponding deduction approach in paragraph (c)(2) of this section.[28] The deductions described in this section are net of associated DTLs in accordance with paragraph (e) of this section. In addition, with the prior written approval of the OCC, for the period of time stipulated by the

OCC, a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) that underwrites a failed underwriting is not required to deduct the significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph (c)(6) if such investment is related to such failed underwriting.

* * * * *

(d) **Certain DTAs subject to common equity tier 1 capital deduction thresholds.**

(1) A national bank or Federal savings association that is not a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must make deductions from regulatory capital as described in this paragraph (d)(1).

* * * * *

(2) A Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must make deductions from regulatory capital as described in this paragraph (d)(2).

(i) A Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must deduct from common

equity tier 1 capital elements the amount of each of the items set forth in this paragraph (d)(2) that, individually, exceeds 10 percent of the sum of the national bank's or Federal savings association's common equity tier 1 capital elements, less adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section (the 10 percent common equity tier 1 capital deduction threshold).

(A) DTAs arising from temporary differences that the national bank or Federal savings association could not realize through net operating loss carrybacks, net of any related valuation allowances and net of DTLs, in accordance with paragraph (e) of this section. A Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) is not required to deduct from the sum of its common equity tier 1 capital elements DTAs (net of any related valuation allowances and net of DTLs, in accordance with § 3.22(e)) arising from timing differences that the national bank or Federal savings association could realize through net operating loss carrybacks. The national bank or Federal savings association must risk weight these assets at 100 percent. For a national bank or Federal savings association that is a member of a consolidated group for tax purposes, the amount of DTAs that could be realized through net operating loss carrybacks may not exceed the amount that the national bank or Federal savings association could reasonably expect to have refunded by its parent holding company.

(B) Significant investments in the capital of unconsolidated financial institutions in the form of common stock, net of associated DTLs in accordance with paragraph (e) of this section.[30] Significant investments in the capital of unconsolidated financial institutions in the form of common stock subject to the 10 percent common equity tier 1 capital deduction

threshold may be reduced by any goodwill embedded in the valuation of such investments deducted by the national bank or Federal savings association pursuant to paragraph (a)(1) of this section. In addition, with the prior written approval of the OCC, for the period of time stipulated by the OCC, a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) that underwrites a failed underwriting is not required to deduct a significant investment in the capital of an unconsolidated financial institution in the form of common stock pursuant to this paragraph (d)(2) if such investment is related to such failed underwriting.

(ii) A Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) must deduct from common equity tier 1 capital elements the items listed in paragraph (d)(2)(i) of this section that are not deducted as a result of the application of the 10 percent common equity tier 1 capital deduction threshold, and that, in aggregate, exceed 17.65 percent of the sum of the national bank's or Federal savings association's common equity tier 1 capital elements, minus adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section, minus the items listed in paragraph (d)(2)(i) of this section (the 15 percent common equity tier 1 capital deduction threshold). Any goodwill that has been deducted under paragraph (a)(1) of this section can be excluded from the significant investments in the capital of unconsolidated financial institutions in the form of common stock.[31]

(iii) For purposes of calculating the amount of DTAs subject to the 10 and 15 percent common equity tier 1 capital deduction thresholds, a Category I national bank or Federal savings

association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) may exclude DTAs and DTLs relating to adjustments made to common equity tier 1 capital under paragraph (b) of this section. A Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) that elects to exclude DTAs relating to adjustments under paragraph (b) of this section also must exclude DTLs and must do so consistently in all future calculations. A Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) may change its exclusion preference only after obtaining the prior approval of the OCC.

* * * * *

(f) *Insufficient amounts of a specific regulatory capital component to effect deductions.* Under the corresponding deduction approach, if a national bank or Federal savings association does not have a sufficient amount of a specific component of capital to effect the full amount of any deduction from capital required under paragraph (d) of this section, the national bank or Federal savings association must deduct the shortfall amount from the next higher (that is, more subordinated) component of regulatory capital. Any investment by a Category I national bank or Federal savings association, or a Category II national bank or Federal savings association, or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) in a covered debt instrument must be treated as an investment in the tier 2 capital for purposes of this paragraph (f). Notwithstanding any other provision of this section, a

qualifying community banking organization (as defined in § 3.12) that has elected to use the community bank leverage ratio framework pursuant to § 3.12 is not required to deduct any shortfall of tier 2 capital from its additional tier 1 capital or common equity tier 1 capital.

(g) *Treatment of assets that are deducted.* A national bank or Federal savings association must exclude from standardized total risk-weighted assets and, as applicable, expanded total risk-weighted assets any item that is required to be deducted from regulatory capital.

* * * * *

FOOTNOTES – 3.22

* * * * *

[23]The national bank or Federal savings association must calculate amounts deducted under paragraphs (c) through (f) of this section after it calculates the amount of AACL includable in tier 2 capital under § 3.20(d)(3).

[24] With the prior written approval of the OCC, for the period of time stipulated by the OCC, a national bank or Federal savings association is not required to deduct a non-significant investment in the capital instrument of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph if the financial institution is in distress and if such investment is made for the purpose of providing financial support to the financial institution, as determined by the OCC.

[25] Any non-significant investments in the capital of an unconsolidated financial institution that is not required to be deducted under this paragraph (c)(4) or otherwise under this section must be assigned the appropriate risk weight under subparts D, E, or F of this part, as applicable.

[26] With the prior written approval of the OCC, for the period of time stipulated by the OCC, a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) is not required to deduct a non-significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph if the financial institution is in distress and if such investment is made for the purpose of providing financial support to the financial institution, as determined by the OCC.

[27] Any non-significant investment in the capital of an unconsolidated financial institution or any investment in a covered debt instrument that is not required to be deducted under this paragraph (c)(5) or otherwise under this section must be assigned the appropriate risk weight under subparts D, E, or F of this part, as applicable.

[28] With prior written approval of the OCC, for the period of time stipulated by the OCC, a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) is not required to deduct a significant investment in the capital of an unconsolidated financial institution, including an investment in a covered debt instrument, under this paragraph (c)(6) or otherwise under this section if such investment is made for the purpose of providing financial support to the financial institution as determined by the OCC.

* * * * *

[30] With the prior written approval of the OCC, for the period of time stipulated by the OCC, a Category I national bank or Federal savings association or a Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) is not required to deduct a significant investment in the capital instrument of an unconsolidated financial institution in distress in the form of common stock pursuant to this section if such investment is made for the purpose of providing financial support to the financial institution as determined by the OCC.

[31] The amount of the items in paragraph (d)(2) of this section that is not deducted from common equity tier 1 capital pursuant to this section must be included in the risk-weighted assets of the Category I national bank or Federal savings association or the Category II national bank or Federal savings association or a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of § 3.10(a)(5) and assigned the appropriate risk weight for the investment under subpart E of this part for purposes of expanded total risk-weighted assets.

* * * * *

13. In § 3.30

a. Revise paragraph (a);

b. In paragraph (b), remove the words “covered positions” and add in their place the words “market risk covered positions”.

The revisions read as follows:

§ 3.30 Applicability.

(a) This subpart sets forth methodologies for determining standardized total risk-weighted

assets. This subpart applies to any national bank or Federal savings association that elects to use this subpart under § 3.10(b).

* * * * *

14. In § 3.34, revise paragraph (a) to read as follows:

§ 3.34 Derivative contracts.

(a) *Exposure amount for derivative contracts.* A national bank or Federal savings association must use the current exposure methodology (CEM) described in paragraph (b) of this section to calculate the exposure amount for all its OTC derivative contracts, unless the national bank or Federal savings association makes the election provided in paragraph (a)(2) of this section.

(2) A national bank or Federal savings association that is not subject to subpart E of this part may elect to calculate the exposure amount for all its OTC derivative contracts under the standardized approach for counterparty credit risk (SA–CCR) in § 3.114 by notifying the OCC, rather than calculating the exposure amount for all its derivative contracts using CEM. A national bank or Federal savings association that elects under this paragraph (a)(1)(ii) to calculate the exposure amount for its OTC derivative contracts under SA–CCR must apply the treatment of cleared transactions under § 3.116 to its derivative contracts that are cleared transactions and to all default fund contributions associated with such derivative contracts, rather than applying § 3.35. A national bank or Federal savings association that is not subject to subpart E of this part must use the same methodology to calculate the exposure amount for all its derivative contracts and, if a national bank or Federal savings association has elected to use SA-CCR under this paragraph (a)(1)(ii), the national bank or Federal savings association may change its election only with prior approval of the OCC.

* * * * *

15. Revise § 3.35(a)(3) to read as follows:

§ 3.35 Cleared transactions.

(a) * * *

(3) *Alternate requirements.* Notwithstanding any other provision of this section, a national bank or Federal savings association that has elected to use SA-CCR under § 3.34(a), must apply § 3.116 to its derivative contracts that are cleared transactions rather than this section.

* * * * *

§ 3.37 [Amended]

16. In § 3.37, revise paragraph (c)(1) to read as follows:

(c) *Collateral haircut approach*—(1) *General.* A national bank or Federal savings association may recognize the credit risk mitigation benefits of financial collateral that secures an eligible margin loan, repo-style transaction, collateralized derivative contract, or single-product netting set of such transactions, and of any collateral that secures a repo-style transaction that is included in the national bank's or Federal savings association's measure for market risk under subpart F of this part by using the collateral haircut approach in this section. A national bank or Federal savings association may use the standard supervisory haircuts in paragraph (c)(3) of this section or, with prior written approval of the OCC, its own estimates of haircuts according to paragraph (c)(4) of this section.

* * * * *

17. Revise § 3.61 to read as follows:

§ 3.61 Purpose and scope.

Sections 3.61 through 3.63 of this subpart establish public disclosure requirements related to the capital requirements described in subpart B of this part for a national bank or Federal savings association with total consolidated assets of $50 billion or more as reported on the national bank's or Federal savings association's most recent year-end Call Report that is not a national bank or Federal savings association subject to subpart E of this part. A national bank or Federal savings association with total consolidated assets of $50 billion or more as reported on the national bank's or Federal savings association's most recent year-end Call Report that is not subject to subpart E of this part must comply with § 3.62 unless it is a consolidated subsidiary of a bank holding company, savings and loan holding company, or depository institution that is subject to the disclosure requirements of § 3.62 or a subsidiary of a non-U.S. banking organization that is subject to comparable public disclosure requirements in its home jurisdiction. For purposes of this section, total consolidated assets are determined based on the average of the national bank's or Federal savings association's total consolidated assets in the four most recent quarters as reported on the Call Report or the average of the national bank or Federal savings association's total consolidated assets in the most recent consecutive quarters as reported quarterly on the national bank's or Federal savings association's Call Report if the national bank or Federal savings association has not filed such a report for each of the most recent four quarters.

18. In § 3.63:

a. In Table 3, revise entry (c); and

b. Remove paragraphs (d) and (e);

The revision reads as follows:

§ 3.63 Disclosures by national banks and Federal savings associations described in § 3.61.

* * * * *

Table 3 to § 3.63—Capital Adequacy

* * * * * * *

	(c)	Market risk-weighted assets as calculated under subpart F of this part 3.

* * * * * * *

* * * * *

19. Subparts E and F are amended as follows:

Subparts E and F [Amended]

a. Remove subparts E and F and replace with subparts E and F as set forth at the end of the common preamble;

b. Remove "[AGENCY]" and add "OCC" in its place wherever it appears;

c. Remove "[BANKING ORGANIZATION]" and add "national bank or Federal savings association" in its place wherever it appears;

d. Remove “[BANKING ORGANIZATIONS]” and add “national banks or Federal savings associations” in its place wherever it appears;

e. Remove “[BANKING ORGANIZATION]’s” and add “national bank’s or Federal savings association’s” in its place, wherever it appears;

f. Remove “[REAL ESTATE LENDING GUIDELINES]” and add “12 CFR part 34, appendix A to subpart D” in its place wherever it appears; and

g. Remove “[APPRAISAL RULE]” and add “12 CFR part 34, subpart C” in its place wherever it appears.

20. In *§* 3.111:

a. *Remove paragraph (j)(1)(i);*

b. *Redesignate paragraph (j)(1)(ii) as paragraph (j)(1); and*

c. *Remove paragraph (k).*

21. In *§ 3.*300:

a. *Revise paragraph (a);*

b. *Remove paragraphs (b), (c), and (d);*

c. *Redesignate paragraph (e) as paragraph (b); and*

d. *Remove paragraphs (f), (g), and (h).*

The revision reads as follows:

§ 3.300 Transitions.

(a) *Transition adjustments for AOCI.* Beginning [January 1, 2027], a national bank or Federal savings association that uses expanded total risk-weighted assets for purposes of §

3.10(a)(5) that had made an AOCI opt-out election under § 3.22(b)(2) effective [December 31, 2026] must subtract from the sum of its common equity tier 1 elements, before making deductions required under § 3.22(c) or (d), the AOCI adjustment amount multiplied by the percentage provided in Table 1 to § 3.300.

The transition AOCI adjustment amount is the sum of:

(1) Net unrealized gains or losses on available-for-sale debt securities, plus

(2) Accumulated net gains or losses on cash flow hedges, plus

(3) Any amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans, plus

(4) Net unrealized holding gains or losses on held-to-maturity securities that are included in AOCI.

Table 1 to § 3.300

Transition AOCI Adjustment

Transition period	Percentage applicable to transition AOCI adjustment amount
January 1, 2027 to December 31, 2027	100
January 1, 2028 to December 31, 2028	80
January 1, 2029 to December 31, 2029	60
January 1, 2030 to December 31, 2030	40
January 1, 2031 to December 31, 2031	20
January 1, 2032 and thereafter	0

* * * * *

22. Remove and reserve § 3.301

23. In § 3.302, remove the words “advanced approaches total risk-weighted assets” and add in their place the words “expanded total risk-weighted assets”.

24. Remove and reserve §§ 3.303 and 3.304.

25. In § 3.305, remove the words “advanced approaches total risk-weighted assets” and add in their place the words “expanded total risk-weighted assets”.

PART 6 – PROMPT CORRECTIVE ACTION

26. The authority citation for part 6 continues to read as follows:

Authority: 12 U.S.C. 93a, 1831o, 5412(b)(2)(B).

27. In § 6.2:

a. Remove the definition for “Advanced approaches national bank or advanced approaches Federal savings association”;

b. Add, in alphabetical order, the definition for Category I national bank or Federal savings association;

c. Add, in alphabetical order, the definition for Category II national bank or Federal savings association;

d. Add, in alphabetical order, the definition for Category III national bank or Federal savings association;

e. Add, in alphabetical order, the definition for “National bank or Federal savings association subject to part 3, subpart E of this chapter”; and

f. Revise the definition for “Total risk-weighted assets”.

The addition and revision read as follows:

§ 6.2 Definitions.

* * * * *

Category I national bank or Federal savings association means a bank that is a Category I Board-regulated institution as defined in 12 CFR 3.2.

Category II national bank or Federal savings association means a bank that is a Category II Board-regulated institution as defined in 12 CFR 3.2.

Category III national bank or Federal savings association means a bank that is a Category III Board-regulated institution as defined in 12 CFR 3.2.

* * * * *

National bank or Federal savings association subject to part 3, subpart E of this chapter means a bank that is subject to part 3, subpart E of this chapter.

* * * * *

Total risk-weighted assets means standardized total risk-weighted assets, and for a national bank or Federal savings association subject to part 3, subpart E of this chapter, also includes expanded risk-weighted assets, as defined in § 3.2 of this chapter.

* * * * *

28. In § 6.4, revise paragraphs (a)(1)(iv)(B), (b)(2)(iv)(B), and (b)(3)(iv)(B) to read as follows:

§ 6.4 Capital measures and capital categories.

(a) * * *

(1) * * *

(iv) * * *

(B) With respect to a Category I national bank or Federal savings association or a Category II national bank or Federal savings association; and

* * * * *

(b) * * *

(2) * * *

(iv) * * *

(B) With respect to a Category I national bank or Federal savings association, a Category II national bank or Federal savings association, or a Category III national bank or Federal savings association, the national bank or Federal savings association has a supplementary leverage ratio of 3.0 percent or greater;

* * * * *

(3) * * *

(iv) * * *

(B) With respect to a Category I national bank or Federal savings association, a Category II national bank or Federal savings association, or a Category III national bank or Federal savings association, the national bank or Federal savings association has a supplementary leverage ratio of less than 3.0 percent.

* * * * *

PART 32 – LENDING LIMITS

29. The authority citation for part 32 continues to read as follows:

Authority: 12 U.S.C. 1 *et seq.*, 12 U.S.C. 84, 93a, 1462a, 1463, 1464(u), 5412(b)(2)(B), and 15 U.S.C. 1639h.

30. In § 32.2, remove the designations for paragraphs (a) through (ee) and arrange the definitions in alphabetical order and in the definition for "Eligible credit derivative", revise paragraph (1).

The revision reads as follows:

§ 32.2 Definitions

* * * * *

Eligible credit derivative * * *

(1) The derivative contract meets the requirements of paragraphs (1) through (9) of an eligible guarantee, as defined in § 3.2 of this chapter, and has been confirmed by the protection purchaser and the protection provider;

* * * * *

Board of Governors of the Federal Reserve System

12 CFR Chapter II

Authority and Issuance

For the reasons set forth in the common preamble, the Board of Governors of the Federal Reserve System proposes to amend chapter II of title 12 of the Code of Federal Regulations as follows:

PART 208—MEMBERSHIP OF STATE BANKING INSTITUTIONS IN THE FEDERAL RESERVE SYSTEM (REGULATION H)

31. The authority citation for part 208 continues to read as follows:

Authority: 12 U.S.C. 24, 36, 92a, 93a, 248(a), 248(c), 321–338a, 371d, 461, 481–486, 601, 611, 1814, 1816, 1817(a)(3), 1817(a)(12), 1818, 1820(d)(9), 1833(j), 1828(o), 1831, 1831o, 1831p-1, 1831r-1, 1831w, 1831x, 1835a, 1882, 2901–2907, 3105, 3310, 3331–3351, 3905–3909, 5371, and 5371 note; 15 U.S.C. 78b, 78I(b), 78*l*(i), 78o-4(c)(5), 78q, 78q-1, 78w, 1681s, 1681w, 6801, and 6805; 31 U.S.C. 5318; 42 U.S.C. 4012a, 4104a, 4104b, 4106, and 4128.

Subpart D—Prompt Corrective Action

32. Revise § 208.41 to read as follows:

§ 208.41 Definitions for purposes of this subpart.

For purposes of this subpart, except as modified in this section or unless the context otherwise requires, the terms used have the same meanings as set forth in section 38 and section 3 of the FDI Act. As used in this subpart:

Bank means an insured depository institution as defined in section 3 of the FDI Act (12 U.S.C. 1813).

Category I bank means a bank that is a Category I Board-regulated institution as defined in 12 CFR 217.2.

Category II bank means a bank that is a Category II Board-regulated institution as defined in 12 CFR 217.2.

Category III bank means a bank that is a Category III Board-regulated institution as defined in 12 CFR 217.2.

Common equity tier 1 capital means the amount of capital as defined in § 217.2 of this chapter.

Common equity tier 1 risk-based capital ratio means the ratio of common equity tier 1 capital to total risk-weighted assets, as calculated in accordance with § 217.10(b) or § 217.10(d) of this chapter, as applicable.

Control—(1) *Control* has the same meaning assigned to it in section 2 of the Bank Holding Company Act (12 U.S.C. 1841), and the term *controlled* shall be construed consistently with the term *control.*

(2) *Exclusion for fiduciary ownership.* No insured depository institution or company controls another insured depository institution or company by virtue of its ownership or control of shares in a fiduciary capacity. Shares shall not be deemed to have been acquired in a fiduciary capacity if the acquiring insured depository institution or company has sole discretionary authority to exercise voting rights with respect to the shares.

(3) *Exclusion for debts previously contracted.* No insured depository institution or company controls another insured depository institution or company by virtue of its ownership or

control of shares acquired in securing or collecting a debt previously contracted in good faith, until two years after the date of acquisition. The two-year period may be extended at the discretion of the appropriate Federal banking agency for up to three one-year periods.

Controlling person means any person having control of an insured depository institution and any company controlled by that person.

Global systemically important BHC has the same meaning as in § 217.2 of this chapter.

Leverage ratio means the ratio of tier 1 capital to average total consolidated assets, as calculated in accordance with § 217.10 of this chapter.

Management fee means any payment of money or provision of any other thing of value to a company or individual for the provision of management services or advice to the bank, or related overhead expenses, including payments related to supervisory, executive, managerial, or policy making functions, other than compensation to an individual in the individual's capacity as an officer or employee of the bank.

Supplementary leverage ratio means the ratio of tier 1 capital to total leverage exposure, as calculated in accordance with § 217.10 of this chapter.

Tangible equity means the amount of tier 1 capital, plus the amount of outstanding perpetual preferred stock (including related surplus) not included in tier 1 capital.

Tier 1 capital means the amount of capital as defined in § 217.20 of this chapter.

Tier 1 risk-based capital ratio means the ratio of tier 1 capital to total risk-weighted assets, as calculated in accordance with § 217.10(b) or § 217.10(d) of this chapter, as applicable.

Total assets means quarterly average total assets as reported in a bank's Call Report, minus items deducted from tier 1 capital. At its discretion the Federal Reserve may calculate total assets using a bank's period-end assets rather than quarterly average assets.

Total leverage exposure means the total leverage exposure as defined in § 217.10(c)(2) of this chapter.

Total risk-based capital ratio means the ratio of total capital to total risk-weighted assets, as calculated in accordance with § 217.10(b) or § 217.10(d) of this chapter, as applicable.

Total risk-weighted assets means standardized total risk-weighted assets or expanded total risk-weighted assets, each as defined in § 217.2 of this chapter.

Subpart D [Amended]

33. In § 208.43, remove the words "an advanced approaches bank or bank that is a Category III Board-regulated institution (as defined in § 217.2 of this chapter)" wherever they appear and add in their place the words "a Category I bank, Category II bank, or Category III bank."

Subpart G—Financial Subsidiaries of State Member Banks

34. In § 208.73:

a. Revise paragraph (a) introductory text;

b. Remove paragraph (b); and

c. Redesignate paragraphs (c) through (f) as (b) through (e), respectively.

The revision reads as follows:

§ 208.73 What additional provisions are applicable to state member banks with financial subsidiaries?

(a) *Capital requirements*. A state member bank that controls or holds an interest in a financial subsidiary must comply with the rules set forth in § 217.22(a)(7) of Regulation Q (12 CFR 217.22(a)(7)) in determining its compliance with applicable regulatory capital standards (including the well capitalized standard of § 208.71(a)(1)).

* * * * *

35. In **Appendix C,** revise footnote 2 to read as follows:

Appendix C to Part 208 – Interagency Guidelines for Real Estate Lending Policies

* * * * *

[2] The term "total capital" refers to that term as defined in 12 CFR part 3, 12 CFR part 217, or 12 CFR part 324, as applicable.

PART 217—CAPITAL ADEQUACY OF BANK HOLDING COMPANIES, SAVINGS AND LOAN HOLDING COMPANIES, AND STATE MEMBER BANKS (REGULATION Q)

36. The authority citation for part 217 reads as follows:

Authority: 12 U.S.C. 248(a), 321–338a, 481–486, 1462a, 1467a, 1818, 1828, 1831n, 1831o, 1831p-1, 1831w, 1835, 1844(b), 1851, 3904, 3906–3909, 4808, 5365, 5368, 5371, and 5371 note, and sec. 4012, Pub. L. 116–136, 134 Stat. 281.

37. Revise subparts E and F of part 217 as set forth at the end of the common preamble.

38. In part 217, subparts E and F:

a. Remove "[AGENCY]" and add "Board" in its place wherever it appears;

b. Remove "[BANKING ORGANIZATION]" and add "Board-regulated institution" in its place wherever it appears; and

c. Remove "__." and add "217." in its place wherever it appears.

Subpart A—General Provisions

39. In § 217.1:

a. Revise paragraph (c)(4);

b. Add paragraph (c)(6);

c. Revise paragraphs (e) and (f); and

d. Add paragraph (h).

The addition and revision read as follows:

§ 217.1 Purpose, applicability, reservations of authority, and timing.

* * * * *

(c) * * *

(4) *Risk-weighted assets.* Each Board-regulated institution must calculate either standardized total risk-weighted assets or expanded total risk-weighted assets, as necessary to satisfy the requirements of § 217.10(b) or (d), as applicable.

* * * * *

(6) *Transitions*. Notwithstanding any other provision of this part, a Board-regulated institution must make any adjustments provided in subpart G of this part for purposes of implementing this part.

* * * * *

(e) *Notice and response procedures.* In making a determination under this part, unless more specifically provided for, the Board will apply notice and response procedures in the same manner and to the same extent as the notice and response procedures in 12 CFR 263.202.

(f) *Timing.* A Board-regulated institution that changes from one category of Board-regulated institution to another of such categories, or that changes from having no category of Board-regulated institution to having a such category, must comply with the requirements of its category in this part, including applicable transition provisions of the requirements in this part, no later than on the first day of the second quarter following the change in the company's category.

* * * * *

(h) *Severability*. If any provision of this part, or the application thereof to any person or circumstances, is held invalid, such invalidity shall not affect the validity of other provisions or

the application of such provision to other persons or circumstances that can be given effect without the invalid provision or application.

* * * * *

40. In § 217.2:

a. Revise the definition of "Adjusted allowances for credit losses (AACL)";

b. Remove the definitions for "Advanced approaches Board-regulated institution", "Advanced approaches total risk-weighted assets", and "Advanced market risk-weighted assets";

c. Remove the definition of "Allowances for loan and lease losses (ALLL)";

d. Revise the definition for "Carrying value";

e. Add, in alphabetical order, the definition for "Category I Board-regulated institution";

f. In the definition for "Category II Board-regulated institution":

i. Remove paragraph (3);

ii. Redesignate paragraph (4) as paragraph (3);

iii. Revise newly redesignated paragraph (3)(i);

iv. In newly redesignated paragraph (3)(iii) introductory text, remove the words "paragraph (4)(i) of this section" and add, in their place, the words "paragraph (3)(ii) of this definition";

g. In the definition of "Category III Board-regulated institution":

i. Remove paragraph (3);

ii. Redesignate paragraph (4) as paragraph (3);

iii. Revise newly redesignated paragraph (3) introductory text;

iv. Revise newly redesignated paragraph (3)(i); and

vi. In newly redesignated paragraph (3)(iv) introductory text, remove the words "paragraph (4)(ii) of this definition" and add, in their place, the words "paragraph (3)(ii) of this definition";

h. Add, in alphabetical order, the definition for "Category IV Board-regulated institution";

i. Revise footnote 3 to paragraph (2) of the definition for "Cleared transaction."

j. Revise the definition for "Commitment";

k. Revise the definition for "Corporate exposure";

l. Remove the definition for "Credit-risk-weighted assets";

m. Add, in alphabetical order, the definitions for "CVA risk-weighted assets" and "Dependent on the cash flows generated by the real estate";

n. Revise the definitions for "Effective notional amount" and "Eligible clean-up call";

o. Remove the definition for "Eligible credit reserves";

p. Revise the definition for "Eligible guarantee";

q. Add, in alphabetical order, the definitions for "Eligible prepaid credit protection arrangement" and "Expanded total risk-weighted assets";

r. Remove the definition for "Expected credit loss (ECL)";

s. Revise the definition for "Exposure amount";

t. Revise paragraph (4)(i)(A) in the definition of "Financial institution";

u. Revise the definition of "Market risk Board-regulated institution";

v. Add, in alphabetical order, the definition for "Market risk-weighted assets";

w. Revise the definitions for "Net independent collateral amount" and "Netting set";

x. Add, in alphabetical order, the definitions for "Non-performing loan securitization (NPL securitization)" and "Nonrefundable purchase price discount (NRPPD)";

y. Revise the definition for “Non-significant investment in the capital of an unconsolidated financial institution”;

z. Add, in alphabetical order, the definition for “Prepaid credit protection arrangement”;

aa. Revise the definition for “Protection amount (P)”;

bb. Add, in alphabetical order, the definition for “Qualifying Cross Product Master Netting Agreement”;

cc. Revise paragraphs (3) and (4) of the definition for “Qualifying master netting agreement”;

dd. In the definition of “Residential mortgage exposure”:

i. Remove paragraph (2);

ii. Redesignate paragraphs (1)(i) and (1)(ii) as paragraphs (1) and (2), respectively; and

iii. In newly redesignated paragraph (2), remove the words “family; and” and add, in their place, the word “family.”;

ee. Remove the definition for “Securitization special purpose entity (securitization SPE)”;

ff. Revise the definition for “Significant investment in the capital of an unconsolidated financial institution”;

gg. Remove the definition for “Specific wrong-way risk”;

hh. Add, in alphabetical order, the definition for “Specified supranational entity”;

ii. Revise the definitions for “Speculative grade”, “Standardized market risk-weighted assets”, “Standardized total risk-weighted assets” and “Sub-speculative grade”;

jj. Add, in alphabetical order, the definition for “Synthetic excess spread”;

kk. Revise the definition for “Synthetic securitization”;

ll. Add, in alphabetical order, the definition for “Total credit risk-weighted assets”;

mm. Revise the definition for “Traditional securitization”;

nn. Remove the definition for “Value-at-risk (VaR)”;

oo. Revise the definition for “Variation margin amount”; and

pp. Remove the definition of “Unconditionally cancelable”.

The additions and revisions read as follows:

§ 217.2 Definitions.

* * * * *

Adjusted allowances for credit losses (AACL) means valuation allowances that have been established through a charge against earnings or retained earnings for expected credit losses on financial assets measured at amortized cost and a lessor’s net investment in leases that have been established to reduce the amortized cost basis of the assets to amounts expected to be collected as determined in accordance with GAAP. For purposes of this part, adjusted allowances for credit losses include allowances for expected credit losses on off-balance sheet credit exposures not accounted for as insurance as determined in accordance with GAAP. Adjusted allowances for credit losses exclude allocated transfer risk reserves and allowances created that reflect credit losses on purchased credit deteriorated assets, purchased seasoned loans, assets required to record an allowance for credit losses through a gross-up adjustment to the purchase price of the asset, and available-for-sale debt securities.

* * * * *

Carrying value means, with respect to an asset, the value of the asset on the balance sheet of the Board-regulated institution as determined in accordance with GAAP. For all assets other than available-for-sale debt securities, purchased credit deteriorated assets, purchased seasoned

loans, or assets required to record an allowance for credit losses through a gross-up adjustment to the purchase price of the asset, the carrying value is not reduced by any associated credit loss allowance that is determined in accordance with GAAP.

Category I Board-regulated institution means:

(1) A global systemically important BHC; or

(2) A state member bank that is a subsidiary of a global systemically important BHC.

* * * * *

Category II Board-regulated institution means:

* * * * *

(3) * * *

(i) Is a subsidiary of a Category II banking organization, as defined pursuant to § 252.5 of this chapter or § 238.10 of this chapter, as applicable; or

* * * * *

Category III Board-regulated institution means:

* * * * *

(3) A state member bank that is not a Category II Board-regulated institution and that:

(i) Is a subsidiary of a Category III banking organization, as defined pursuant to § 252.5 of this chapter or § 238.10 of this chapter, as applicable; or

* * * * *

Category IV Board-regulated institution means:

(1) A depository institution holding company that is identified as a Category IV banking organization pursuant to § 252.5 of this chapter or § 238.10 of this chapter, as applicable;

(2) A U.S. intermediate holding company that is identified as a Category IV banking organization pursuant to § 252.5 of this chapter;

(3) A state member bank that is not a Category II Board-regulated institution or Category III Board-regulated institution and that:

(i) Is a subsidiary of a Category IV banking organization, as defined pursuant to § 252.5 of this chapter or § 238.10 of this chapter, as applicable; or

(ii) Has total consolidated assets, calculated based on the average of the depository institution's total consolidated assets for the four most recent calendar quarters as reported on the Call Report of $100 billion or more. If the depository institution has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or the average of the most recent consecutive quarters, as applicable.

(iii) After meeting the criterion in paragraph (3)(ii) of this definition, a state member bank continues to be a Category IV Board-regulated institution until the state member bank:

(A) Has less than $100 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters; or

(B) Is a Category II or Category III Board-regulated institution.

* * * * *

Cleared transaction * * *

(2) * * *[3]

[3] For the standardized approach treatment of these exposures, see § 217.34(e) (OTC derivative contracts) or § 217.37(c) (repo-style transactions). For the expanded risk-based treatment of these exposures, see § 217.113.

* * * * *

Commitment means a contractual arrangement, under which a Board-regulated institution and an obligor agree to terms applicable to one or more future extensions of credit, purchases of assets, or issuances of credit substitutes by the Board-regulated institution, whether or not such arrangement is unconditionally cancelable. A commitment is unconditionally cancelable if, by its terms, it either: (a) provides that a Board-regulated institution is not obligated to extend credit, purchase assets, or issue credit substitutes; or (b) permits a Board-regulated institution, at any time, with or without cause, to refuse to extend credit, purchase assets, or issue credit substitutes under the arrangement (to the extent permitted under applicable law).

* * * * *

Corporate exposure means an exposure to a company that is not:

(1) An exposure to a sovereign, a specified supranational entity, a multi-lateral development bank (MDB), a depository institution, a foreign bank, or a credit union, a public sector entity (PSE);

(2) An exposure to a government-sponsored enterprise (GSE);

(3) For purposes of subpart D of this part, a residential mortgage exposure;

(4) A pre-sold construction loan;

(5) A statutory multifamily mortgage;

(6) A high volatility commercial real estate (HVCRE) exposure;

(7) A cleared transaction;

(8) A default fund contribution;

(9) A securitization exposure;

(10) An equity exposure;

(11) An unsettled transaction;

(12) A policy loan;

(13) A separate account;

(14) A Paycheck Protection Program covered loan as defined in section 7(a)(36) or (37) of the Small Business Act (15 U.S.C. 636(a)(36)-(37));

(15) For purposes of subpart E of this part, a real estate exposure, as defined in § 217.101; or

(16) For purposes of subpart E of this part, a retail exposure as defined in § 217.101.

* * * * *

CVA risk-weighted assets means the measure for CVA risk calculated under § 217.221(a) multiplied by 12.5.

* * * * *

Dependent on the cash flows generated by the real estate means, for a real estate exposure, the underwriting, at the time of origination, includes the cash flows generated by lease, rental, or sale of the real estate securing the loan as a source of repayment. For purposes of this definition, a residential mortgage exposure that is secured by the borrower's principal residence is deemed not dependent on the cash flows generated by the real estate.

* * * * *

Effective notional amount means for an eligible guarantee, eligible credit derivative, or eligible prepaid credit protection arrangement, the lesser of the contractual notional amount of the credit risk mitigant and the exposure amount of the hedged exposure, multiplied by the percentage coverage of the credit risk mitigant.

* * * * *

Eligible clean-up call means a clean-up call that:

(1) Is exercisable solely at the discretion of the originating Board-regulated institution or servicer;

(2) Is not structured to avoid allocating losses to securitization exposures held by investors or otherwise structured to provide credit enhancement to the securitization; and

(3) Is only exercisable:

(i) For a traditional securitization, when 10 percent or less of the principal amount of the underlying exposures or securitization exposures (determined as of the inception of the securitization) is outstanding;

(ii) For a synthetic securitization, when 10 percent or less of the principal amount of the reference portfolio of underlying exposures (determined as of the inception of the securitization) is outstanding;

(iii) Upon the occurrence of a regulatory event that significantly changes the risk-weighted asset amount for the securitization exposure under this part; or

(iv) Upon the occurrence of a tax event that significantly changes the tax treatment of the securitization exposure under applicable tax laws.

* * * * *

Eligible guarantee means a guarantee that:

(1) Is written;

(2) Is either:

(i) Unconditional, or

(ii) A contingent obligation of the U.S. government or its agencies, the enforceability of which is dependent upon some affirmative action on the part of the beneficiary of the guarantee or a third party (for example, meeting servicing requirements);

(3) Covers all or a pro rata portion of all contractual payments of the obligated party on the reference exposure;

(4) Gives the beneficiary a direct claim against the protection provider;

(5) Is not unilaterally cancelable by the protection provider for reasons other than the breach of the contract by the beneficiary;

(6) Except for a guarantee by a sovereign, is legally enforceable against the protection provider in a jurisdiction where the protection provider has sufficient assets against which a judgment may be attached and enforced;

(7) Requires the protection provider to make payment to the beneficiary on the occurrence of a default (as defined in the guarantee) of the obligated party on the reference exposure in a timely manner without the beneficiary first having to take legal actions to pursue the obligor for payment;

(8) Does not increase the beneficiary's cost of credit protection on the guarantee in response to deterioration in the credit quality of the reference exposure;

(9) Is not provided by an affiliate of the Board-regulated institution, unless the affiliate is an insured depository institution, foreign bank, securities broker or dealer, or insurance company that:

(i) Does not control the Board-regulated institution; and

(ii) Is subject to consolidated supervision and regulation comparable to that imposed on depository institutions, U.S. securities broker-dealers, or U.S. insurance companies (as the case may be); and

(10) Is provided by an eligible guarantor.

* * * * *

Eligible prepaid credit protection arrangement means a prepaid credit protection arrangement that:

(1) Is written;

(2) Is unconditional;

(3) Covers all or a pro rata portion of all contractual payments due to be paid on the reference exposure or reference exposures;

(4) Provides that the amount and timing of payments due from the protection purchaser to the protection provider are incorporated into the arrangement and the arrangement only allows these terms to change in the event of a breach of the arrangement by the protection purchaser;

(5) Provides that entry of the protection provider into receivership, insolvency, liquidation, conservatorship, or similar proceeding does not change the amounts or timing of payments due to be paid by the protection purchaser under the arrangement;

(6) Is legally valid and enforceable under applicable law of the relevant jurisdictions;

(7) Upon a failure by the obligor on the one or more reference exposures to make a contractually required payment, or the occurrence of other credit events as described in the arrangement, allows the protection purchaser promptly to reduce the outstanding balance of the initial principal amount due to the protection provider by the loss of the protection purchaser on the reference exposures without input from the protection provider; and

(8) Does not increase the protection purchaser's cost of credit protection in response to deterioration in the credit quality of any of the reference exposures.

* * * * *

Expanded total risk-weighted assets means the sum of:

(1) Total credit risk-weighted assets;

(2) Total risk-weighted assets for equity exposures as calculated under § 217.141 and 217.142;

(3) Risk-weighted assets for operational risk as calculated under § 217.150;

(4) Market risk-weighted assets, if applicable; and

(5) CVA risk-weighted assets, if applicable; minus

(6) Any amount of the Board-regulated institution's adjusted allowance for credit losses that is not included in tier 2 capital and any amount of allocated transfer risk reserves.

* * * * *

Exposure amount means:

(1) For the on-balance sheet component of an exposure (other than an available-for-sale or held-to-maturity security, if the Board-regulated institution has made an AOCI opt-out election (as defined in § 217.22(b)(2)); a derivative contract; a repo-style transaction or an eligible margin loan for which the Board-regulated institution determines the exposure amount under § 217.37, §§ 217.113 through 217.115, or § 217.121, as applicable; a cleared transaction; a default fund contribution; or a securitization exposure), the Board-regulated institution's carrying value of the exposure.

(2) For a security (that is not a securitization exposure, equity exposure, or preferred stock classified as an equity security under GAAP) classified as available-for-sale or held-to-maturity if the Board-regulated institution has made an AOCI opt-out election (as defined in § 217.22(b)(2)), the Board-regulated institution's carrying value (including net accrued but unpaid interest and fees) for the exposure less any net unrealized gains on the exposure and plus any net unrealized losses on the exposure.

(3) For available-for-sale preferred stock classified as an equity security under GAAP if the Board-regulated institution has made an AOCI opt-out election (as defined in § 217.22(b)(2)), the Board-regulated institution's carrying value of the exposure less any net unrealized gains on the exposure that are reflected in such carrying value but excluded from the Board-regulated institution's regulatory capital components.

(4) For the off-balance sheet component of an exposure (other than a derivative contract; a repo-style transaction or an eligible margin loan for which the Board-regulated institution calculates the exposure amount under § 217.37 or § 217.121, as applicable; a cleared transaction; a default fund contribution; or a securitization exposure), the notional amount of the off-balance sheet component multiplied by the appropriate credit conversion factor (CCF) in § 217.33 or § 217.112, as applicable.

(5) For an exposure that is a derivative contract (other than a cleared transaction), the exposure amount determined under § 217.34 or §§ 217.113 through 217.114, as applicable.

(6) For an exposure that is a cleared transaction, the exposure amount determined under § 217.35 or § 217.116, as applicable.

(7) For an exposure that is an eligible margin loan or repo-style transaction (other than a cleared transaction) for which the bank calculates the exposure amount as provided in § 217.37 or §§ 217.113 through 217.115, as applicable, the exposure amount determined under § 217.37 or §§ 217.113 through 217.115, as applicable.

(8) For an exposure that is a securitization exposure, the exposure amount determined under § 217.42 or § 217.131, as applicable.

* * * * *

Financial institution means:

* * * * *

(4) * * *

(i) * * *

(A) An investment in GAAP equity instruments of the company with an adjusted carrying value or exposure amount equal to or greater than $10 million, as adjusted pursuant to § 217.4; or

* * * * *

Market risk Board-regulated institution means a Board-regulated institution that is described in § 217.201(b)(1).

Market risk-weighted assets means the measure for market risk calculated pursuant to § 217.204(a) multiplied by 12.5.

* * * * *

Net independent collateral amount means the fair value amount of the independent collateral, as adjusted by the haircuts under § 217.121(c)(2)(iii), as applicable, that a counterparty to a netting set has posted to a Board-regulated institution less the fair value amount of the independent collateral, as adjusted by the haircuts under § 217.121(c)(2)(iii), as applicable, posted by the Board-regulated institution to the counterparty, excluding such amounts held in a bankruptcy-remote manner or posted to a QCCP and held in conformance with the operational requirements in § 217.3.

Netting set means a group of transactions with a single counterparty that are subject to a qualifying master netting agreement. For derivative contracts, netting set also includes a single derivative contract between a Board-regulated institution and a single counterparty.

* * * * *

Non-performing loan securitization (NPL securitization) means a traditional securitization, that is not a resecuritization, where parameter W (as defined in § 217.133(b)(1)) for the underlying exposures is greater than or equal to 90 percent at the origination cut-off date and at any subsequent date on which exposures are added to or removed from the pool of underlying exposures due to replenishment or restructuring.

Nonrefundable purchase price discount (NRPPD) means the difference between the outstanding principal balance of the underlying exposures at the time of sale and the price at which these exposures are sold by the originator to a company the activities of which are limited to those appropriate for the specific purpose of holding the underlying exposures of a securitization, when neither originator nor the original lender are reimbursed for this difference. In cases where the originator underwrites tranches of an NPL securitization for subsequent sale, the NRPPD may include the differences between the outstanding principal balance of the underlying exposures at the time of sale and the price at which all of the tranches are first sold to unrelated third parties. For any given piece of a securitization tranche, only its initial sale from the originator to investors is taken into account in the determination of NRPPD. The purchase prices of subsequent re-sales of a securitization tranche are not considered.

Non-significant investment in the capital of an unconsolidated financial institution means an investment by a Category I Board-regulated institution or a Category II Board-regulated institution in the capital of an unconsolidated financial institution where the Category I Board-regulated institution or Category II Board-regulated institution owns 10 percent or less of the issued and outstanding common stock of the unconsolidated financial institution.

* * * * *

Prepaid credit protection arrangement means a contractual arrangement under which a protection purchaser transfers the credit risk of one or more reference exposures to a protection provider where:

(1) The protection provider pays an initial principal amount in cash to the protection purchaser at the inception of the transaction; and

(2) The protection purchaser is obligated to repay the initial principal amount to the protection provider on or before the maturity date of the transaction, less any losses that the protection purchaser realizes or otherwise recognizes due to nonpayment of all contractual payments due to be paid on the reference exposure or reference exposures by the obligors.

* * * * *

Protection amount (P) means, with respect to an exposure hedged by an eligible guarantee, eligible credit derivative, or eligible prepaid credit protection arrangement, or secured by financial collateral, the effective notional amount of the guarantee, credit derivative, or prepaid credit protection arrangement, or the fair value of the financial collateral, reduced to reflect any currency mismatch, maturity mismatch, or lack of restructuring coverage (as provided in § 217.36-217.37 or § 217.120-121, as applicable).

* * * * *

Qualifying cross-product master netting agreement means a qualifying master netting agreement that provides for termination and close-out netting across multiple types of financial transactions or qualifying master netting agreements in the event of a counterparty's default, provided that the underlying financial transactions are derivative contracts or repo-style transactions that are not cleared transactions. In order to treat an agreement as a qualifying cross-

product master netting agreement, a Board-regulated institution must comply with the requirements of § 217.3(c) of this part with respect to that agreement.

* * * * *

Qualifying master netting agreement means a written, legally enforceable agreement provided that:

* * *

(3) The agreement does not contain a walkaway clause (that is, a provision that permits a non-defaulting counterparty to make a lower payment than it otherwise would make under the agreement, or no payment at all, to a defaulter or the estate of a defaulter, even if the defaulter or the estate of the defaulter is a net creditor under the agreement); and

(4) In order to recognize an agreement as a qualifying master netting agreement for purposes of this subpart, a Board-regulated institution must comply with the requirements of § 217.3(d) with respect to that agreement.

* * * * *

Significant investment in the capital of an unconsolidated financial institution means an investment by a Category I Board-regulated institution or a Category II Board-regulated institution in the capital of an unconsolidated financial institution where the Category I Board-regulated institution or a Category II Board-regulated institution owns more than 10 percent of the issued and outstanding common stock of the unconsolidated financial institution.

* * * * *

Specified supranational entity means the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, or the European Financial Stability Facility.

* * * * *

Speculative grade means that the entity to which the Board-regulated institution is exposed through a loan or security, or the reference entity with respect to a credit derivative, has adequate capacity to meet financial commitments in the near term, but is vulnerable to adverse economic conditions, such that should economic conditions deteriorate, the issuer or the reference entity would present an elevated default risk.

Standardized market risk-weighted assets means the standardized measure for market risk calculated under § 217.204(b) multiplied by 12.5.

Standardized total risk-weighted assets means:

(1) The sum of:

(i) Total risk-weighted assets for general credit risk as calculated under § 217.31;

(ii) Total risk-weighted assets for cleared transactions and default fund contributions as calculated under § 217.35;

(iii) Total risk-weighted assets for unsettled transactions as calculated under § 217.38;

(iv) Total risk-weighted assets for securitization exposures as calculated under § 217.42;

(v) Total risk-weighted assets for equity exposures as calculated under § 217.52 and § 217.53; and

(vi) For a market risk Board-regulated institution only, market risk-weighted assets; less

(2) Any amount of the Board-regulated institution’s adjusted allowance for credit losses that is not included in tier 2 capital and any amount of allocated transfer risk reserves.

* * * * *

Sub-speculative grade means that the entity to which the Board-regulated institution is exposed through a loan or security, or the reference entity with respect to a credit derivative,

depends on favorable economic conditions to meet its financial commitments, such that should such economic conditions deteriorate the issuer or the reference entity likely would default on its financial commitments.

* * * * *

Synthetic securitization means a transaction in which:

(1) All or a portion of the credit risk of one or more underlying exposures is retained or transferred to one or more third parties through the use of one or more credit derivatives, guarantees (other than a guarantee that transfers only the credit risk of an individual retail exposure), or prepaid credit protection arrangements;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends solely upon the performance of the underlying exposures; and

(4) All or substantially all of the underlying exposures are financial exposures (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities).

* * * * *

Total credit risk-weighted assets means the sum of:

(1) Total risk-weighted assets for general credit risk as calculated under § 217.110;

(2) Total risk-weighted assets for cleared transactions and default fund contributions as calculated under § 217.116;

(3) Total risk-weighted assets for unsettled transactions as calculated under § 217.117; and

(4) Total risk-weighted assets for securitization exposures as calculated under § 217.132.

* * * * *

Traditional securitization means a transaction in which:

(1) All or a portion of the credit or equity risk of one or more underlying exposures is transferred to one or more third parties other than through the use of credit derivatives, guarantees, or prepaid credit protection arrangements;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends solely upon the performance of the underlying exposures;

(4) All or substantially all of the underlying exposures are financial exposures (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities);

(5) The underlying exposures are not owned by an operating company;

(6) The underlying exposures are not owned by a small business investment company defined in section 302 of the Small Business Investment Act;

(7) The underlying exposures are not owned by a firm an investment in which qualifies as a community development investment under section 24(Eleventh) of the National Bank Act;

(8) The Board may determine that a transaction in which the underlying exposures are owned by an investment firm that exercises substantially unfettered control over the size and composition of its assets, liabilities, and off-balance sheet exposures is not a traditional securitization based on the transaction's leverage, risk profile, or economic substance;

(9) The Board may deem a transaction that meets the definition of a traditional securitization, notwithstanding paragraph (5), (6), or (7) of this definition, to be a traditional securitization based on the transaction's leverage, risk profile, or economic substance; and

(10) The transaction is not:

(i) An investment fund;

(ii) A collective investment fund (as defined in 12 CFR 208.34);

(iii) An employee benefit plan (as defined in paragraphs (3) and (32) of section 3 of ERISA), a "governmental plan" (as defined in 29 U.S.C. 1002(32)) that complies with the tax deferral qualification requirements provided in the Internal Revenue Code, or any similar employee benefit plan established under the laws of a foreign jurisdiction;

(iv) A synthetic exposure to the capital of a financial institution to the extent deducted from capital under § 217.22; or

(v) Registered with the SEC under the Investment Company Act of 1940 (15 U.S.C. 80a-1) or foreign equivalents thereof.

* * * * *

Variation margin amount means the fair value amount of the variation margin, as adjusted by the standard supervisory haircuts under § 217.121(c)(2)(iii), as applicable, that a counterparty to a netting set has posted to a Board-regulated institution less the fair value amount of the variation margin, as adjusted by the standard supervisory haircuts under § 217.121(c)(2)(iii), as applicable, posted by the Board-regulated institution to the counterparty.

* * * * *

41. In § 217.3, revise paragraph (c) to read as follows:

§ 217.3 Operational requirements for counterparty credit risk.

* * * * *

(c) *Qualifying cross-product master netting agreement.* In order to recognize an agreement as a qualifying cross-product master netting agreement as defined in § 217.2, a Board-regulated institution must obtain a written legal opinion verifying the validity and enforceability of the agreement under applicable law of the relevant jurisdictions if the counterparty fails to perform upon an event of default, including upon receivership, insolvency, liquidation, or similar proceeding

* * * * *

42. Add a new section § 217.4 to read as follows:

§ 217.4 Threshold Indexing.

(a) *Methodology*. The dollar thresholds specified in paragraph (c) of this section shall be adjusted by multiplying the baseline threshold values specified in paragraph (c) of this section by one plus the cumulative percent change in the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers, measured from the effective date of this rule, as further described in paragraph (b) of this section, and shall be rounded in accordance with paragraph (d) of this section.

(b) *Frequency*. (1) *In general – biennial adjustments*. Except as otherwise provided in paragraph (b)(2) and (b)(3) of this section, the adjustments described in paragraph (a) of this section shall be effective on October 1 following each consecutive two year period ending August 30, and using the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers as of August 30 of that year.

(2) *Off-year adjustments*. In the event that the Board determines, during a year where no adjustment would be made under paragraph (b)(1), that the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers, measured over the twelve month period ending August 30 of that year, is such that an adjustment under this section would be appropriate for that year, the Board may make an adjustment under this section for that year.

(3) *Periods of negative inflation*. Notwithstanding paragraph (b)(1) or (b)(2) of this section, if an adjustment of dollar thresholds using the cumulative percent change of the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers from the effective date of this rule or the most recent adjustment, as applicable, would not result in an increase from the current dollar thresholds, no adjustment will be made pursuant to paragraph (a) of this section.

(c) *Specified thresholds*. The thresholds in the following sections shall be adjusted in accordance with paragraph (a) of this section relative to the baseline threshold values as specified below.

(1) § 217.2, definition of Financial institution, paragraph (4)(i)(A), baseline threshold value $10 million;

(2) § 217.101, definition of Regulatory retail exposure, paragraph (2), baseline threshold value $1 million;

(3) § 217.101, definition of Small or medium-sized entity (SME), baseline threshold value $50 million;

(4) § 217.150(b)(1), baseline threshold value $1 billion;

(5) § 217.150(b)(2), baseline threshold values $1 billion, $30 billion, and $120 million;

(6) § 217.150(b)(2)(i), baseline threshold value $1 billion;

(7) § 217.150(b)(3), baseline threshold values $30 billion and $4.47 billion

(8) § 217.150(b)(3)(i), baseline threshold value $30 billion;

(9) § 217.150(d)(2)(i)(A), baseline threshold value $20,000;

(10) § 217.201(b)(1)(ii)(B), baseline threshold value $5 billion;

(11) § 217.201(b)(2)(ii), baseline threshold value $1 trillion;

(12) § 217.202 "Large market cap", baseline threshold value $2 billion;

(13) § 217.202, "Market risk covered position" (1)(ii)(D), baseline value $20 million;

(14) § 217.202, "Small market cap", baseline threshold value $2 billion.

(d) *Rounding*. When adjusting thresholds under this section, each threshold shall be rounded based on the size of the threshold (e.g., thousands, millions, billions) to the nearest number with two significant digits.

(e) *Effective date of threshold adjustments*. The [AGENCY] shall announce the thresholds adjusted in accordance with this section by publication in the Federal Register. Such adjusted thresholds shall be effective on October 1 of the year during which an adjustment is made.

(f) *Failure to publish in the Federal Register*. In the event, for any reason, the thresholds adjusted in accordance with this section are not published in the Federal Register in a year in which an adjustment is made under this section, the thresholds specified in paragraph (c) of this section will adjust as provided in this section and be effective on October 1, notwithstanding the lack of publication in the Federal Register.

* * * * *

43. Add § 217.5 "Calculation of loan-to-value (LTV) ratio."

The addition reads as follows:

§ 217.5 Calculation of loan-to-value (LTV) ratio.

(a) *Loan-to-Value ratio.* The loan-to-value (LTV) ratio must be calculated as the extension of credit divided by the value of the property.

(b) *Extension of credit.* For purposes of a LTV ratio calculated under this section, the extension of credit is equal to the total outstanding amount of the loan including any undrawn committed amount of the loan.

(c) *Value of the property.* (1) For purposes of a LTV ratio calculated under this section, the value of the property is the market value of all real estate properties securing or being improved by the extension of credit plus the amount of any readily marketable collateral and other acceptable collateral, as defined in 12 CFR part 208, appendix C, that secures the extension of credit, subject to the following:

(i) For exposures subject to 12 CFR 208 subpart E or 12 CFR 225 subpart G, as applicable, the market value of property is a valuation that meets all requirements of that rule.

(ii) For exposures not subject to 12 CFR 208 subpart E or 12 CFR 225 subpart G, as applicable:

(A) The market value of real estate must be obtained from an independent valuation of the property using prudently conservative valuation criteria;

(B) The valuation must be done independently from the [BANKING ORGANIZATION]'s origination and underwriting process, and

(C) To ensure that the market value of the real estate is determined in a prudently conservative manner, the valuation must exclude expectations of price increases and must be adjusted downward to account for the potential for the current market price to be significantly above the value that would be sustainable over the life of the loan.

(2) In the case where the exposure includes the financing to purchase the property, the value of the property is the lower of the market value obtained under paragraph (c)(1)(i) or (c)(1)(ii) of this section, as applicable, and the actual acquisition cost.

(3) The value of the property must be measured at the time of origination, except in the following circumstances:

(i) The [AGENCY] requires a [BANKING ORGANIZATION] to revise the value of the property downward;

(ii) The value of the property must be adjusted downward due to an extraordinary event that results in a permanent reduction of the property value; or

(iii) The value of the property may be increased to reflect modifications made to the property that increase the market value, as determined according to the requirements in paragraphs (c)(1)(i) or (ii) of this section.

(4) Readily marketable collateral and other acceptable collateral, as defined in 12 CFR part 208, appendix C, must be appropriately discounted by the [BANKING ORGANIZATION] consistent with the [BANKING ORGANIZATION]'s usual practices for making loans secured by such collateral.

Subpart B—Capital Ratio Requirements and Buffers

44. In § 217.10:

a. Revise paragraph (a)(1)(v);

b. Revise paragraph (b);

c. Revise paragraph (c);

d. Revise paragraph (d) introductory text; and

e. Revise paragraph (d)(3)(ii).

The revisions read as follows:

§ 217.10 Minimum capital requirements.

(a) * * *

(1) * * *

(v) For a Category I Board-regulated institution, Category II Board-regulated institution, or Category III Board-regulated institution, a supplementary leverage ratio of 3 percent.

* * * * *

(b) *Standardized capital ratio calculations.* For a Board-regulated institution that is not a Category I Board-regulated institution or Category II Board regulated institution:

(1) *Common equity tier 1 capital ratio.* The Board-regulated institution's common equity tier 1 capital ratio is the ratio of the Board-regulated institution's common equity tier 1 capital to selected total risk-weighted assets;

(2) *Tier 1 capital ratio.* The Board-regulated institution's tier 1 capital ratio is the ratio of the Board-regulated institution's tier 1 capital to selected total risk-weighted assets;

(3) *Total capital ratio.* The Board-regulated institution's total capital ratio is the ratio of the Board-regulated institution's total capital to selected total risk-weighted assets; and

(4) *Leverage ratio.* The Board-regulated institution's leverage ratio is the ratio of the Board-regulated institution's tier 1 capital to the Board-regulated institution's average total consolidated assets as reported on the Board-regulated institution's Call Report, for a state member bank, or the Consolidated Financial Statements for Bank Holding Companies (FR Y-9C), for a bank holding company or savings and loan holding company, as applicable minus amounts deducted from tier 1 capital under § 217.22(a), (c) and (d).

(5) *Selected total risk-weighted assets*. A Board-regulated institution's selected total risk-weighted assets is either the Board-regulated institution's standardized total risk-weighted assets or expanded total risk-weighted assets, as selected by the Board-regulated institution. A Board-regulated institution may change its choice for selected total risk-weighted assets by providing the Board with prior notice of the change at least four full calendar quarters before the calendar quarter in which the change will take effect.

(c) *Supplementary leverage ratio.* (1) The supplementary leverage ratio of a Category I Board-regulated institution, Category II Board-regulated institution, or Category III Board-regulated institution is the ratio of its tier 1 capital to total leverage exposure. Total leverage exposure is calculated as the sum of:

(i) The mean of the on-balance sheet assets calculated as of each day of the reporting quarter; and

(ii) The mean of the off-balance sheet exposures calculated as of the last day of each of the most recent three months, minus the applicable deductions under § 217.22(a), (c), and (d).

(2) For purposes of this part, *total leverage exposure* means the sum of the items described in paragraphs (c)(2)(i) through (viii) of this section, as adjusted pursuant to paragraph (c)(2)(ix) of this section for a clearing member Board-regulated institution and paragraph (c)(2)(x) of this section for a custodial banking organization:

(i) The balance sheet carrying value of all of the Board-regulated institution's on-balance sheet assets, net of adjusted allowances for credit losses, *plus* the value of securities sold under a repurchase transaction or a securities lending transaction that qualifies for sales treatment under GAAP, *less* amounts deducted from tier 1 capital under § 217.22(a), (c), and (d), *less* the value of securities received in security-for-security repo-style transactions, where the Board-regulated

institution acts as a securities lender and includes the securities received in its on-balance sheet assets but has not sold or re-hypothecated the securities received, and, for a Board-regulated institution that uses the standardized approach for counterparty credit risk (SA-CCR) under § 217.114 for its standardized total risk-weighted assets or expanded total risk-weighted assets, *less* the fair value of any derivative contracts;

(ii) (A) For a Board-regulated institution that uses the current exposure methodology under § 217.34(b) for its standardized total risk-weighted assets, the potential future credit exposure (PFE) for each derivative contract or each single-product netting set of derivative contracts (including a cleared transaction except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the Board-regulated institution, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP), to which the Board-regulated institution is a counterparty as determined under § 217.34, but without regard to § 217.34(c), provided that:

(*1*) A Board-regulated institution may choose to exclude the PFE of all credit derivatives or other similar instruments through which it provides credit protection when calculating the PFE under § 217.34, but without regard to § 217.34(c), provided that it does not adjust the net-to-gross ratio (NGR); and

(*2*) A Board-regulated institution that chooses to exclude the PFE of credit derivatives or other similar instruments through which it provides credit protection pursuant to paragraph (c)(2)(ii)(A) of this section must do so consistently over time for the calculation of the PFE for all such instruments; or

(B) (*1*) For a Board-regulated institution that uses SA-CCR under § 217.114 for its

standardized total risk-weighted assets or expanded total risk-weighted assets, the PFE under SA-CCR for each derivative contract or single product netting set of derivative contracts to which the Board-regulated institution is a counterparty (including cleared transactions except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the Board-regulated institution, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP), as determined under § 217.114(g), in which the term C in § 217.114(g)(1) equals zero, and, for any counterparty that is not a commercial end-user, multiplied by 1.4. For purposes of this paragraph (c)(2)(ii)(A), a Board-regulated institution may set the value of the term C in § 217.114(g)(1) equal to the amount of collateral posted by a clearing member client of the Board-regulated institution in connection with the client-facing derivative transactions within the netting set; and

(*2*) A Board-regulated institution may choose to exclude the PFE of all credit derivatives or other similar instruments through which it provides credit protection when calculating the PFE under § 217.114, provided that it does so consistently over time for the calculation of the PFE for all such instruments;

(iii)(A)(*1*) For a Board-regulated institution that uses the current exposure methodology under § 217.34(b) for its standardized total risk-weighted assets, the amount of cash collateral that is received from a counterparty to a derivative contract and that has offset the mark-to-fair value of the derivative asset, or cash collateral that is posted to a counterparty to a derivative contract and that has reduced the Board-regulated institution's on-balance sheet assets, unless such cash collateral is all or part of variation margin that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section; and

(*2*) The variation margin is used to reduce the current credit exposure of the derivative contract, calculated as described in § 217.34(b), and not the PFE; and

(*3*) For the purpose of the calculation of the NGR described in § 217.34(b)(2)(ii)(B), variation margin described in paragraph (c)(2)(iii)(A)(2) of this section may not reduce the net current credit exposure or the gross current credit exposure; or

(B)*(1)* For a Board-regulated institution that uses SA-CCR under § 217.114 for its standardized total risk-weighted assets or expanded total risk-weighted assets, the replacement cost under § 217.114 of each derivative contract or single product netting set of derivative contracts to which the Board-regulated institution is a counterparty, calculated according to the following formula, and, for any counterparty that is not a commercial end-user, multiplied by 1.4:

$$\text{Replacement Cost} = \max\{V - CVM_r + CVM_p; 0\}$$

Where:

V equals the fair value for each derivative contract or each netting set of derivative contracts (including a cleared transaction except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the Board-regulated institution, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP);

CVM_r equals the amount of cash collateral received from a counterparty to a derivative contract and that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section, or, in the case of a client-facing derivative transaction, the amount of collateral received from the clearing member client; and

CVM_p equals the amount of cash collateral that is posted to a counterparty to a derivative

contract and that has not offset the fair value of the derivative contract and that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section, or, in the case of a client-facing derivative transaction, the amount of collateral posted to the clearing member client;

(2) Notwithstanding paragraph (c)(2)(iii)(A)(*1*) of this section, where multiple netting sets are subject to a single variation margin agreement, a Board-regulated institution must apply the formula for replacement cost provided in § 217.114(j)(1), in which the term CMA may only include cash collateral that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section; and

(3) For purposes of paragraph (c)(2)(iii)(A)(*1*) of this section, a Board-regulated institution must treat a derivative contract that references an index as if it were multiple derivative contracts each referencing one component of the index if the Board-regulated institution elected to treat the derivative contract as multiple derivative contracts under § 217.114(e)(6);

(C) For derivative contracts that are not cleared through a QCCP, the cash collateral received by the recipient counterparty is not segregated (by law, regulation, or an agreement with the counterparty);

(D) Variation margin is calculated and transferred on a daily basis based on the mark-to-fair value of the derivative contract;

(E) The variation margin transferred under the derivative contract or the governing rules of the CCP or QCCP for a cleared transaction is the full amount that is necessary to fully extinguish the net current credit exposure to the counterparty of the derivative contracts, subject to the threshold and minimum transfer amounts applicable to the counterparty under the terms of the derivative contract or the governing rules for a cleared transaction;

(F) The variation margin is in the form of cash in the same currency as the currency of settlement set forth in the derivative contract, provided that for the purposes of this paragraph (c)(2)(iii)(F), currency of settlement means any currency for settlement specified in the governing qualifying master netting agreement and the credit support annex to the qualifying master netting agreement, or in the governing rules for a cleared transaction; and

(G) The derivative contract and the variation margin are governed by a qualifying master netting agreement between the legal entities that are the counterparties to the derivative contract or by the governing rules for a cleared transaction, and the qualifying master netting agreement or the governing rules for a cleared transaction must explicitly stipulate that the counterparties agree to settle any payment obligations on a net basis, taking into account any variation margin received or provided under the contract if a credit event involving either counterparty occurs;

(iv) The effective notional principal amount (that is, the apparent or stated notional principal amount multiplied by any multiplier in the derivative contract) of a credit derivative, or other similar instrument, through which the Board-regulated institution provides credit protection, provided that:

(A) The Board-regulated institution may reduce the effective notional principal amount of the credit derivative by the amount of any reduction in the mark-to-fair value of the credit derivative if the reduction is recognized in common equity tier 1 capital;

(B) The Board-regulated institution may reduce the effective notional principal amount of the credit derivative by the effective notional principal amount of a purchased credit derivative or other similar instrument, provided that the remaining maturity of the purchased credit derivative is equal to or greater than the remaining maturity of the credit derivative through which the Board-regulated institution provides credit protection and that:

(1) With respect to a credit derivative that references a single exposure, the reference exposure of the purchased credit derivative is to the same legal entity and ranks pari passu with, or is junior to, the reference exposure of the credit derivative through which the Board-regulated institution provides credit protection; or

(2) With respect to a credit derivative that references multiple exposures, the reference exposures of the purchased credit derivative are to the same legal entities and rank pari passu with the reference exposures of the credit derivative through which the Board-regulated institution provides credit protection, and the level of seniority of the purchased credit derivative ranks pari passu to the level of seniority of the credit derivative through which the Board-regulated institution provides credit protection;

(3) Where a Board-regulated institution has reduced the effective notional principal amount of a credit derivative through which the Board-regulated institution provides credit protection in accordance with paragraph (c)(2)(iv)(A) of this section, the Board-regulated institution must also reduce the effective notional principal amount of a purchased credit derivative used to offset the credit derivative through which the Board-regulated institution provides credit protection, by the amount of any increase in the mark-to-fair value of the purchased credit derivative that is recognized in common equity tier 1 capital; and

(4) Where the Board-regulated institution purchases credit protection through a total return swap and records the net payments received on a credit derivative through which the Board-regulated institution provides credit protection in net income, but does not record offsetting deterioration in the mark-to-fair value of the credit derivative through which the Board-regulated institution provides credit protection in net income (either through reductions in fair value or by additions to reserves), the Board-regulated institution may not use the purchased

credit protection to offset the effective notional principal amount of the related credit derivative through which the Board-regulated institution provides credit protection;

(v) Where a Board-regulated institution acting as a principal has more than one repo-style transaction with the same counterparty and has offset the gross value of receivables due from a counterparty under reverse repurchase transactions by the gross value of payables under repurchase transactions due to the same counterparty, the gross value of receivables associated with the repo-style transactions *less* any on-balance sheet receivables amount associated with these repo-style transactions included under paragraph (c)(2)(i) of this section, unless the following criteria are met:

(A) The offsetting transactions have the same explicit final settlement date under their governing agreements;

(B) The right to offset the amount owed to the counterparty with the amount owed by the counterparty is legally enforceable in the normal course of business and in the event of receivership, insolvency, liquidation, or similar proceeding; and

(C) Under the governing agreements, the counterparties intend to settle net, settle simultaneously, or settle according to a process that is the functional equivalent of net settlement, (that is, the cash flows of the transactions are equivalent, in effect, to a single net amount on the settlement date), where both transactions are settled through the same settlement system, the settlement arrangements are supported by cash or intraday credit facilities intended to ensure that settlement of both transactions will occur by the end of the business day, and the settlement of the underlying securities does not interfere with the net cash settlement;

(vi) The counterparty credit risk of a repo-style transaction, including where the Board-regulated institution acts as an agent for a repo-style transaction and indemnifies the customer

with respect to the performance of the customer's counterparty in an amount limited to the difference between the fair value of the security or cash its customer has lent and the fair value of the collateral the borrower has provided, calculated as follows:

(A) If the transaction is not subject to a qualifying master netting agreement, the counterparty credit risk (E*) for transactions with a counterparty must be calculated on a transaction by transaction basis, such that each transaction *i* is treated as its own netting set, in accordance with the following formula, where E_i is the fair value of the instruments, gold, or cash that the Board-regulated institution has lent, sold subject to repurchase, or provided as collateral to the counterparty, and C_i is the fair value of the instruments, gold, or cash that the Board-regulated institution has borrowed, purchased subject to resale, or received as collateral from the counterparty:

$E_i^* = \max \{0, [E_i — C_i]\}$; and

(B) If the transaction is subject to a qualifying master netting agreement, the counterparty credit risk (E*) must be calculated as the greater of zero and the total fair value of the instruments, gold, or cash that the Board-regulated institution has lent, sold subject to repurchase or provided as collateral to a counterparty for all transactions included in the qualifying master netting agreement (ΣE_i), *less* the total fair value of the instruments, gold, or cash that the Board-regulated institution borrowed, purchased subject to resale or received as collateral from the counterparty for those transactions (ΣC_i), in accordance with the following formula:

$E^* = \max \{0, [\Sigma ei - \Sigma ci]\}$

(vii) If a Board-regulated institution acting as an agent for a repo-style transaction provides a guarantee to a customer of the security or cash its customer has lent or borrowed with respect to the performance of the customer's counterparty and the guarantee is not limited to the

difference between the fair value of the security or cash its customer has lent and the fair value of the collateral the borrower has provided, the amount of the guarantee that is greater than the difference between the fair value of the security or cash its customer has lent and the value of the collateral the borrower has provided;

(viii) The credit equivalent amount of all off-balance sheet exposures of the Board-regulated institution, excluding repo-style transactions, repurchase or reverse repurchase or securities borrowing or lending transactions that qualify for sales treatment under GAAP, and derivative transactions, determined using:

(A) For a Board-regulated institution that elects to calculate its standardized total risk-weighed assets under § 217.10(b), the applicable credit conversion factor under § 217.33(b), provided, however, that the minimum credit conversion factor that may be assigned to an off-balance sheet exposure under this paragraph is 10 percent; or

(B) For a Board-regulated institution that elects to calculate its expanded total risk-weighted assets under § 217.10(b), a Category I Board-regulated institution, or a Category II Board-regulated institution, the applicable credit conversion factor under § 217.112(b), provided, however, that the minimum credit conversion factor that may be assigned to an off-balance sheet exposure under this paragraph is 10 percent; and

(ix) For a Board-regulated institution that is a clearing member:

(A) A clearing member Board-regulated institution that guarantees the performance of a clearing member client with respect to a cleared transaction must treat its exposure to the clearing member client as a derivative contract or repo-style transaction, as applicable, for purposes of determining its total leverage exposure;

(B) A clearing member Board-regulated institution that guarantees the performance of a

CCP with respect to a transaction cleared on behalf of a clearing member client must treat its exposure to the CCP as a derivative contract or repo-style transaction, as applicable, for purposes of determining its total leverage exposure;

(C) A clearing member Board-regulated institution that does not guarantee the performance of a CCP with respect to a transaction cleared on behalf of a clearing member client may exclude its exposure to the CCP for purposes of determining its total leverage exposure;

(D) A Board-regulated institution that is a clearing member may exclude from its total leverage exposure the effective notional principal amount of credit protection sold through a credit derivative contract, or other similar instrument, that it clears on behalf of a clearing member client through a CCP as calculated in accordance with paragraph (c)(2)(iv) of this section;

(E) Notwithstanding paragraphs (c)(2)(ix)(A) through (C) of this section, a Board-regulated institution may exclude from its total leverage exposure a clearing member's exposure to a clearing member client for a derivative contract if the clearing member client and the clearing member are affiliates and consolidated for financial reporting purposes on the Board-regulated institution's balance sheet; and

(F) Notwithstanding paragraph (c)(2)(ix)(A), a Board-regulated institution that has elected under § 217.113(c) to treat any repo-style transactions subject to a qualifying cross-product master netting agreement as derivative contracts must treat any such repo-style transactions as a derivative contract for purposes of this paragraph (c).

(x) A custodial banking organization shall exclude from its total leverage exposure the lesser of:

(A) The amount of funds that the custodial banking organization has on deposit at a

qualifying central bank; and

(B) The amount of funds in deposit accounts at the custodial banking organization that are linked to fiduciary or custodial and safekeeping accounts at the custodial banking organization. For purposes of this paragraph (c)(2)(x), a deposit account is linked to a fiduciary or custodial and safekeeping account if the deposit account is provided to a client that maintains a fiduciary or custodial and safekeeping account with the custodial banking organization and the deposit account is used to facilitate the administration of the fiduciary or custodial and safekeeping account.

(d) *Expanded capital ratio calculations.* For a Category I Board-regulated institution or a Category II Board-regulated institution:

(1) *Common equity tier 1 capital ratio.* The Board-regulated institution’s common equity tier 1 capital ratio is the ratio of the Board-regulated institution's common equity tier 1 capital to expanded total risk-weighted assets;

(2) *Tier 1 capital ratio.* The Board-regulated institution’s tier 1 capital ratio is the ratio of the Board-regulated institution’s tier 1 capital to expanded total risk-weighted assets;

(3) *Total capital ratio.* The Board-regulated institution’s total capital ratio is the ratio of the Board-regulated institution’s total capital to expanded total risk-weighted assets; and

(4) *Leverage ratio.* The Board-regulated institution’s leverage ratio is the ratio of the Board-regulated institution’s tier 1 capital to the Board-regulated institution’s average total consolidated assets as reported on the Board-regulated institution's Call Report, for a state member bank, or the Consolidated Financial Statements for Bank Holding Companies (FR Y-9C), for a bank holding company or savings and loan holding company, as applicable minus amounts deducted from tier 1 capital under § 217.22(a), (c) and (d).

* * * * *

45. Revise § 217.11 to read as follows:

§ 217.11 Capital conservation buffer, countercyclical capital buffer amount, and GSIB surcharge.

(a) *Capital conservation buffer*—(1) *Composition of the capital conservation buffer.* The capital conservation buffer is composed solely of common equity tier 1 capital.

(2) *Definitions.* For purposes of this section, the following definitions apply:

(i) *Eligible retained income.* The eligible retained income of a Board-regulated institution is the greater of:

(A) The Board-regulated institution's net income, calculated in accordance with the instructions to the FR Y–9C or Call Report, as applicable, for the four calendar quarters preceding the current calendar quarter, net of any distributions and associated tax effects not already reflected in net income; and

(B) The average of the Board-regulated institution's net income, calculated in accordance with the instructions to the FR Y–9C or Call Report, as applicable, for the four calendar quarters preceding the current calendar quarter.

(ii) *Maximum payout amount.* A Board-regulated institution's maximum payout amount for the current calendar quarter is equal to the Board-regulated institution's eligible retained income, multiplied by its maximum payout ratio.

(iii) *Maximum payout ratio.* The maximum payout ratio is the percentage of eligible retained income that a Board-regulated institution can pay out in the form of distributions and discretionary bonus payments during the current calendar quarter. For a Board-regulated institution that is not subject to 12 CFR 225.8 or 238.170, and that is not a state member bank

that is a subsidiary of a globally systemically important BHC, the maximum payout ratio is determined by the Board-regulated institution's capital conservation buffer, calculated as of the last day of the previous calendar quarter, as set forth in table 1 to § 217.11. For a Board-regulated institution that is subject to 12 CFR 225.8 or 238.170 or that is a state member bank that is a subsidiary of a global systemically important BHC, the maximum payout ratio is determined under paragraph (c)(1)(ii) of this section.

(iv) *Private sector credit exposure.* Private sector credit exposure means an exposure to a company or an individual that is not an exposure to a sovereign, a specified supranational entity, a MDB, a PSE, or a GSE.

(v) *Leverage buffer requirement.* (A) A global systemically important BHC's leverage buffer requirement is 50 percent of the most recent method 1 surcharge (expressed as a percentage) that the Board-regulated institution was required to calculate pursuant to § 217.403(b), subject to the effective date provisions of § 217.403(d).

(B) The leverage buffer requirement of a state member bank that is a subsidiary of a global systemically important BHC is equal to the lesser of 1.0 percent or 50 percent of the most recent method 1 surcharge (expressed as a percentage) that the global systemically important BHC that controls the state member bank was required to calculate pursuant to § 217.403(b), subject to the effective date provisions of § 217.403(d).

(vi) *Stress capital buffer requirement.* (A) The stress capital buffer requirement for a Board-regulated institution subject to 12 CFR 225.8 or 238.170 is the stress capital buffer requirement determined under 12 CFR 225.8 or 238.170 except as provided in paragraph (a)(2)(vi)(B) of this section.

(B) If a Board-regulated institution subject to 12 CFR 225.8 or 238.170 has not yet received a stress capital buffer requirement, its stress capital buffer requirement for purposes of this part is 2.5 percent.

(3) *Calculation of capital conservation buffer.* (i) A Board-regulated institution that is not subject to 12 CFR 225.8 or 238.170 has a capital conservation buffer equal to the lowest of the following ratios, calculated as of the last day of the previous calendar quarter:

(A) The Board-regulated institution's common equity tier 1 capital ratio minus the Board-regulated institution's minimum common equity tier 1 capital ratio requirement under § 217.10;

(B) The Board-regulated institution's tier 1 capital ratio minus the Board-regulated institution's minimum tier 1 capital ratio requirement under § 217.10; and

(C) The Board-regulated institution's total capital ratio minus the Board-regulated institution's minimum total capital ratio requirement under § 217.10; or

(ii) Notwithstanding paragraphs (a)(3)(i)(A) through (C) of this section, if a Board-regulated institution's common equity tier 1, tier 1, or total capital ratio is less than or equal to the Board-regulated institution's minimum common equity tier 1, tier 1, or total capital ratio requirement under § 217.10, respectively, the Board-regulated institution's capital conservation buffer is zero.

(4) *Limits on distributions and discretionary bonus payments.* (i) A Board-regulated institution that is not subject to 12 CFR 225.8 or 238.170 shall not make distributions or discretionary bonus payments or create an obligation to make such distributions or payments during the current calendar quarter that, in the aggregate, exceed its maximum payout amount.

(ii) A Board-regulated institution that is not subject to 12 CFR 225.8 or 238.170 and that has a capital conservation buffer that is greater than 2.5 percent plus 100 percent of its applicable

countercyclical capital buffer amount in accordance with paragraph (b) of this section is not subject to a maximum payout amount under paragraph (a)(2)(ii) of this section.

(iii) Except as provided in paragraph (a)(4)(iv) of this section, a Board-regulated institution that is not subject to 12 CFR 225.8 or 238.170 may not make distributions or discretionary bonus payments during the current calendar quarter if the Board-regulated institution's:

(A) Eligible retained income is negative; and

(B) Capital conservation buffer was less than 2.5 percent as of the end of the previous calendar quarter.

(iv) Notwithstanding the limitations in paragraphs (a)(4)(i) through (iii) of this section, the Board may permit a Board-regulated institution that is not subject to 12 CFR 225.8 or 238.170 to make a distribution or discretionary bonus payment upon a request of the Board-regulated institution, if the Board determines that the distribution or discretionary bonus payment would not be contrary to the purposes of this section, or to the safety and soundness of the Board-regulated institution. In making such a determination, the Board will consider the nature and extent of the request and the particular circumstances giving rise to the request.

Table 1 to § 217.11—Calculation of Maximum Payout Amount

Capital conservation buffer	Maximum payout ratio
Greater than 2.5 percent plus 100 percent of the Board-regulated institution's applicable countercyclical capital buffer amount	No payout ratio limitation applies.
Less than or equal to 2.5 percent plus 100 percent of the Board-regulated institution's applicable countercyclical capital buffer amount, *and* greater than 1.875 percent plus 75 percent of the Board-regulated institution's applicable countercyclical capital buffer amount	60 percent.
Less than or equal to 1.875 percent plus 75 percent of the Board-regulated institution's applicable countercyclical capital buffer amount, *and* greater than 1.25 percent plus 50	40 percent.

Capital conservation buffer	Maximum payout ratio
percent of the Board-regulated institution's applicable countercyclical capital buffer amount	
Less than or equal to 1.25 percent plus 50 percent of the Board-regulated institution's applicable countercyclical capital buffer amount *and* greater than 0.625 percent plus 25 percent of the Board-regulated institution's applicable countercyclical capital buffer amount	20 percent.
Less than or equal to 0.625 percent plus 25 percent of the Board-regulated institution's applicable countercyclical capital buffer amount	0 percent.

(v) Additional limitations on distributions may apply under 12 CFR 225.4 and 263.202 to a Board-regulated institution that is not subject to 12 CFR 225.8 or 238.170.

(b) *Countercyclical capital buffer amount*—(1) *General.* A Category I Board-regulated institution, Category II Board-regulated institution, or Category III Board-regulated institution must calculate a countercyclical capital buffer amount in accordance with this paragraph (b) for purposes of determining its maximum payout ratio under Table 1 to § 217.11 section and, if applicable, Table 2 to § 217.11.

(i) *Extension of capital conservation buffer.* The countercyclical capital buffer amount is an extension of the capital conservation buffer as described in paragraph (a) or (c) of this section, as applicable.

(ii) *Amount.* A Category I Board-regulated institution, Category II Board-regulated institution, or Category III Board-regulated institution has a countercyclical capital buffer amount determined by calculating the weighted average of the countercyclical capital buffer amounts established for the national jurisdictions where the Board-regulated institution's private sector credit exposures are located, as specified in paragraphs (b)(2) and (3) of this section.

(iii) *Weighting.* The weight assigned to a jurisdiction's countercyclical capital buffer amount is calculated by dividing the total risk-weighted assets for the Board-regulated

institution's private sector credit exposures located in the jurisdiction by the total risk-weighted assets for all of the Board-regulated institution's private sector credit exposures. The methodology a Board-regulated institution uses for determining risk-weighted assets for purposes of this paragraph (b) must be the methodology that determines its risk-based capital ratios under § 217.10. Notwithstanding the previous sentence, the risk-weighted asset amount for a private sector credit exposure that is a covered position under subpart F of this part is its standardized default risk capital requirement as determined under § 217.210 multiplied by 12.5.

(iv) *Location.* (A) Except as provided in paragraphs (b)(1)(iv)(B) and (C) of this section, the location of a private sector credit exposure is the national jurisdiction where the borrower is located (that is, where it is incorporated, chartered, or similarly established or, if the borrower is an individual, where the borrower resides).

(B) If, in accordance with subpart D or E of this part, the Board-regulated institution has assigned to a private sector credit exposure a risk weight associated with a protection provider on a guarantee or credit derivative, the location of the exposure is the national jurisdiction where the protection provider is located.

(C) The location of a securitization exposure is the location of the underlying exposures, or, if the underlying exposures are located in more than one national jurisdiction, the national jurisdiction where the underlying exposures with the largest aggregate unpaid principal balance are located. For purposes of this paragraph (b), the location of an underlying exposure shall be the location of the borrower, determined consistent with paragraph (b)(1)(iv)(A) of this section.

(2) *Countercyclical capital buffer amount for credit exposures in the United States*—(i) *Initial countercyclical capital buffer amount with respect to credit exposures in the United States.* The initial countercyclical capital buffer amount in the United States is zero.

(ii) *Adjustment of the countercyclical capital buffer amount.* The Board will adjust the countercyclical capital buffer amount for credit exposures in the United States in accordance with applicable law.[1]

[1] The Board expects that any adjustment will be based on a determination made jointly by the Board, OCC, and FDIC.

(iii) *Range of countercyclical capital buffer amount.* The Board will adjust the countercyclical capital buffer amount for credit exposures in the United States between zero percent and 2.5 percent of risk-weighted assets.

(iv) *Adjustment determination.* The Board will base its decision to adjust the countercyclical capital buffer amount under this section on a range of macroeconomic, financial, and supervisory information indicating an increase in systemic risk including, but not limited to, the ratio of credit to gross domestic product, a variety of asset prices, other factors indicative of relative credit and liquidity expansion or contraction, funding spreads, credit condition surveys, indices based on credit default swap spreads, options implied volatility, and measures of systemic risk.

(v) *Effective date of adjusted countercyclical capital buffer amount*—(A) *Increase adjustment.* A determination by the Board under paragraph (b)(2)(ii) of this section to increase the countercyclical capital buffer amount will be effective 12 months from the date of announcement, unless the Board establishes an earlier effective date and includes a statement articulating the reasons for the earlier effective date.

(B) *Decrease adjustment.* A determination by the Board to decrease the established countercyclical capital buffer amount under paragraph (b)(2)(ii) of this section will be effective

on the day following announcement of the final determination or the earliest date permissible under applicable law or regulation, whichever is later.

(vi) *Twelve-month sunset.* The countercyclical capital buffer amount will return to zero percent 12 months after the effective date that the adjusted countercyclical capital buffer amount is announced, unless the Board announces a decision to maintain the adjusted countercyclical capital buffer amount or adjust it again before the expiration of the 12-month period.

(3) *Countercyclical capital buffer amount for foreign jurisdictions.* The Board will adjust the countercyclical capital buffer amount for private sector credit exposures to reflect decisions made by foreign jurisdictions consistent with due process requirements described in paragraph (b)(2) of this section.

(c) *Calculation of buffers for Board-regulated institutions subject to 12 CFR 225.8 or 238.170*—(1) *Limits on distributions and discretionary bonus payments.* (i) *General.* A Board-regulated institution that is subject to 12 CFR 225.8 or 238.170, or that is a state member bank that is a subsidiary of a global systemically important BHC, shall not make distributions or discretionary bonus payments or create an obligation to make such distributions or payments during the current calendar quarter that, in the aggregate, exceed its maximum payout amount.

(ii) *Maximum payout ratio.* The maximum payout ratio of a Board-regulated institution that is subject to 12 CFR 225.8 or 238.170, or that is a state member bank that is a subsidiary of a globally systemically important BHC, is the lowest of the payout ratios determined by its capital conservation buffer; and, if applicable, leverage buffer; as set forth in Table 2 to § 217.11.

(iii) *Capital conservation buffer requirement.* A Board-regulated institution that is subject to 12 CFR 225.8 or 238.170 has a capital conservation buffer requirement equal to its stress capital buffer requirement plus its applicable countercyclical capital buffer amount in accordance

with paragraph (b) of this section plus its applicable GSIB surcharge in accordance with paragraph (d) of this section. A Board-regulated institution that is a state member bank subsidiary of a global systemically important BHC has a capital conservation buffer requirement equal to 2.5 percent.

(iv) *No maximum payout amount limitation.* A Board-regulated institution that is subject to 12 CFR 225.8 or 238.170, or that is a state member bank that is a subsidiary of a global systemically important BHC, is not subject to a maximum payout amount under paragraph (a)(2)(ii) of this section if it has:

(A) A capital conservation buffer, calculated under paragraph (c)(2) of this section, that is greater than its capital conservation buffer requirement calculated under paragraph (c)(1)(iii) of this section; and

(B) If applicable, a leverage buffer, calculated under paragraph (c)(3) of this section, that is greater than its leverage buffer requirement as set forth in paragraph (a)(2)(v) of this section.

(v) *Negative eligible retained income.* Except as provided in paragraph (c)(1)(vi) of this section, a Board-regulated institution that is subject to 12 CFR 225.8 or 238.170, or that is a state member bank that is a subsidiary of a global systemically important BHC, may not make distributions or discretionary bonus payments during the current calendar quarter if, as of the end of the previous calendar quarter, the Board-regulated institution's:

(A) Eligible retained income is negative; and

(B) (*1*) Capital conservation buffer was less than its capital conservation buffer requirement; or

(*2*) If applicable, leverage buffer was less than its leverage buffer requirement.

(vi) *Prior approval.* Notwithstanding the limitations in paragraphs (c)(1)(i) through (v) of this section, the Board may permit a Board-regulated institution that is subject to 12 CFR 225.8 or 238.170, or that is a state member bank that is a subsidiary of a global systemically important BHC, to make a distribution or discretionary bonus payment upon a request of the Board-regulated institution, if the Board determines that the distribution or discretionary bonus payment would not be contrary to the purposes of this section, or to the safety and soundness of the Board-regulated institution. In making such a determination, the Board will consider the nature and extent of the request and the particular circumstances giving rise to the request.

(vii) *Other limitations on distributions.* Additional limitations on distributions may apply under 12 CFR 225.4, 225.8, 238.170, 252.63, 252.165, and 263.202 to a Board-regulated institution that is subject to 12 CFR 225.8 or 238.170.

(2) *Capital conservation buffer.* (i) The capital conservation buffer for Board-regulated institutions subject to 12 CFR 225.8 or 238.170, or that is a state member bank that is a subsidiary of a global systemically important BHC, is composed solely of common equity tier 1 capital.

(ii) A Board-regulated institution that is subject to 12 CFR 225.8 or 238.170, or that is a state member bank that is a subsidiary of a global systemically important BHC, has a capital conservation buffer that is equal to the lowest of the following ratios, calculated as of the last day of the previous calendar quarter:

(A) The Board-regulated institution's common equity tier 1 capital ratio minus the Board-regulated institution's minimum common equity tier 1 capital ratio requirement under § 217.10;

(B) The Board-regulated institution's tier 1 capital ratio minus the Board-regulated institution's minimum tier 1 capital ratio requirement under § 217.10; and

(C) The Board-regulated institution's total capital ratio minus the Board-regulated institution's minimum total capital ratio requirement under § 217.10; or

(iii) Notwithstanding paragraph (c)(2)(ii) of this section, if a Board-regulated institution's common equity tier 1, tier 1, or total capital ratio is less than or equal to the Board-regulated institution's minimum common equity tier 1, tier 1, or total capital ratio requirement under § 217.10, respectively, the Board-regulated institution's capital conservation buffer is zero.

(3) *Leverage buffer.* (i) The leverage buffer is composed solely of tier 1 capital.

(ii) A Category I Board-regulated institution has a leverage buffer that is equal to the global systemically important BHC's supplementary leverage ratio minus 3 percent, calculated as of the last day of the previous calendar quarter.

(iii) Notwithstanding paragraph (c)(3)(ii) of this section, if a Category I Board-regulated institution's supplementary leverage ratio is less than or equal to 3 percent, the Category I Board-regulated institution's leverage buffer is zero.

Table 2 to § 217.11—Calculation of Maximum Payout Ratio

Capital buffer[1]	Payout ratio
Greater than the Board-regulated institution's buffer requirement[2]	No payout ratio limitation applies.
Less than or equal to 100 percent of the Board-regulated institution's buffer requirement, *and* greater than 75 percent of the Board-regulated institution's buffer requirement	60 percent.
Less than or equal to 75 percent of the Board-regulated institution's buffer requirement, *and* greater than 50 percent of the Board-regulated institution's buffer requirement	40 percent.
Less than or equal to 50 percent of the Board-regulated institution's buffer requirement, *and* greater than 25 percent of the Board-regulated institution's buffer requirement	20 percent.
Less than or equal to 25 percent of the Board-regulated institution's buffer requirement	0 percent.

[1] A Board-regulated institution's "capital buffer" means each of, as applicable, its capital conservation buffer and leverage buffer.

[2] A Board-regulated institution's "buffer requirement" means each of, as applicable, its capital conservation buffer requirement and leverage buffer requirement.

(d) *GSIB surcharge.* A global systemically important BHC must use its GSIB surcharge calculated in accordance with subpart H of this part for purposes of determining its maximum payout ratio under Table 2 to § 217.11.

Subpart C—Definition of Capital

46. In § 217.20, revise paragraphs (c)(1)(xiv), (d)(1)(xi) and (d)(3) to read as follows:

§ 217.20 Capital components and eligibility criteria for regulatory capital instruments.

* * * * *

(c) * * *

(1) * * *

(xiv) For a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5), the governing agreement, offering circular, or prospectus of an instrument issued after the date upon which the Board-regulated institution becomes a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the Board-regulated institution enters into a receivership, insolvency, liquidation, or similar proceeding.

* * * * *

(d) * * *

(1) * * *

(xi) For a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5), the governing agreement, offering circular, or prospectus of an instrument issued after the date on which the Board-regulated institution becomes a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the Board-regulated institution enters into a receivership, insolvency, liquidation, or similar proceeding.

* * * * *

(3) AACL up to 1.25 percent of the Board-regulated institution's standardized total risk-weighted assets or total credit risk-weighted assets, as applicable, not including any amount of the AACL (and excluding the case of a market risk Board-regulated institution, its market risk weighted assets).

* * * * *

47. In § 217.21:

a. In paragraph (a)(1), remove the words "an advanced approaches Board-regulated institution" and add in their place the words "a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5)"; and

b. Revise paragraph (b).

The revision reads as follows:

§ 217.21 Minority interest.

* * * * *

(b) (1) *Applicability*. For purposes of § 217.20, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) is subject to the minority interest limitations in this paragraph (b) if:

(i) A consolidated subsidiary of the Board-regulated institution has issued regulatory capital that is not owned by the Board-regulated institution; and

(ii) For each relevant regulatory capital ratio of the consolidated subsidiary, the ratio exceeds the sum of the subsidiary's minimum regulatory capital requirements plus its capital conservation buffer.

(2) *Difference in capital adequacy standards at the subsidiary level*. For purposes of the minority interest calculations in this section, if the consolidated subsidiary issuing the capital is not subject to capital adequacy standards similar to those of the Board-regulated institution, the Board-regulated institution must assume that the capital adequacy standards of the Board-regulated institution apply to the subsidiary.

(3) *Common equity tier 1 minority interest includable in the common equity tier 1 capital of the Board-regulated institution*. For each consolidated subsidiary of a Board-regulated institution, the amount of common equity tier 1 minority interest the Board-regulated institution may include in common equity tier 1 capital is equal to:

(i) The common equity tier 1 minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's common equity tier 1 capital that is not owned by the Board-regulated institution, multiplied by the difference between the common equity tier 1 capital of the subsidiary and the lower of:

(A) The amount of common equity tier 1 capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 217.11 or equivalent standards established by the subsidiary's home country supervisor; or

(B) (*1*) The expanded total risk-weighted assets of the Board-regulated institution that relate to the subsidiary multiplied by

(*2*) The common equity tier 1 capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 217.11 or equivalent standards established by the subsidiary's home country supervisor.

(4) *Tier 1 minority interest includable in the tier 1 capital of the Board-regulated institution*. For each consolidated subsidiary of the Board-regulated institution, the amount of tier 1 minority interest the Board-regulated institution may include in tier 1 capital is equal to:

(i) The tier 1 minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's tier 1 capital that is not owned by the Board-regulated institution multiplied by the difference between the tier 1 capital of the subsidiary and the lower of:

(A) The amount of tier 1 capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 217.11 or equivalent standards established by the subsidiary's home country supervisor, or

(B) (*1*) The expanded total risk-weighted assets of the Board-regulated institution that relate to the subsidiary multiplied by

(*2*) The tier 1 capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 217.11 or equivalent standards established by the subsidiary's home country supervisor.

(5) *Total capital minority interest includable in the total capital of the Board-regulated institution*. For each consolidated subsidiary of the Board-regulated institution, the amount of total capital minority interest the Board-regulated institution may include in total capital is equal to:

(i) The total capital minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's total capital that is not owned by the Board-regulated institution multiplied by the difference between the total capital of the subsidiary and the lower of:

(A) The amount of total capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 217.11 or equivalent standards established by the subsidiary's home country supervisor, or

(B) (*1*) The expanded total risk-weighted assets of the Board-regulated institution that relate to the subsidiary multiplied by

(*2*) The total capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 217.11 or equivalent standards established by the subsidiary's home country supervisor.

* * * * *

48. In § 217.22:

a. Revise paragraphs (a)(1) and (4); and

b. Remove paragraph (a)(6); and

c. Redesignate paragraph (a)(7) as new paragraph (a)(6); and

d. Revise paragraphs (b)(2)(i) and (b)(2)(ii);

e. In paragraph (b)(2)(iii), remove the words "an advanced approaches Board-regulated institution" and add in their place the words "a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5)";

f. In paragraph (b)(2)(iv), remove the words "or FR Y-9SP";

g. In footnote 22, in paragraph (b)(2)(iv)(A), remove the words "12 CFR part 225 (Board)", and add in its place "12 CFR part 217 (Board)";

h. In footnote 23, in paragraph (c), remove the words "ALLL or AACL, as applicable," and add in its places "AACL";

i. Revise paragraph (c)(2);

j. In paragraph (c)(4), remove the words "an advanced approaches Board-regulated institution" and add in their place the words "a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5)";

k. Revise paragraphs (c)(5)(i) through (iv); and

l. Revise paragraphs (c)(6) and (d)(2).

The revisions read as follows:

§ 217.22 Regulatory capital adjustments and deductions.

(a) * * *

(1)(i) Goodwill, net of associated deferred tax liabilities (DTLs) in accordance with paragraph (e) of this section; and

(ii) For a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5), goodwill that is embedded in the valuation of a significant investment in the capital of an unconsolidated financial institution in the form of common stock (and that is reflected in the consolidated financial statements of the Board-regulated institution), in accordance with paragraph (d) of this section;

* * * * *

(4) (i) Any gain-on-sale in connection with a securitization exposure;

(ii) For a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5), the portion of any CEIO that does not constitute an after-tax gain-on-sale;

(b) * * *

(2) AOCI opt-out election.

(i) A Board-regulated institution that is not a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses the expanded total risk-weighted assets for purposes of § 217.10(a)(5) may make a one-time election to opt out of the requirement to include all components of AOCI (with the exception of accumulated net gains and losses on cash flow hedges related to items that are not fair-valued on the balance sheet) in common equity tier 1 capital (AOCI opt-out election). A Board-regulated institution that makes an AOCI opt-out election in accordance with this paragraph (b)(2) must adjust common equity tier 1 capital as follows:

(A) Subtract any net unrealized gains and add any net unrealized losses on available-for-sale securities;

(B) Subtract any accumulated net gains and add any accumulated net losses on cash flow hedges;

(C) Subtract any amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans (excluding, at the Board-regulated institution's option, the portion relating to pension assets deducted under paragraph (a)(5) of this section); and

(D) Subtract any net unrealized gains and add any net unrealized losses on held-to-maturity securities that are included in AOCI.

(ii) A Board-regulated institution that is not a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) must make its AOCI opt-out election in the Call Report, for a state member bank, or FR Y-9C, for a bank holding company or savings and loan holding company, during the first reporting period after the Board-regulated institution is required to comply with subpart A of this part. If the Board-regulated institution was previously a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5), the Board-regulated institution may not make an AOCI opt-out election under this paragraph (b)(2)(ii).

* * * * *

(c) * * *

(2) *Corresponding deduction approach.* For purposes of subpart C of this part, the corresponding deduction approach is the methodology used for the deductions from regulatory capital related to reciprocal cross holdings (as described in paragraph (c)(3) of this section), investments in the capital of unconsolidated financial institutions for a Board-regulated institution that is not a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) (as described in paragraph (c)(4) of this section), non-significant investments in the capital of unconsolidated financial institutions for a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) (as described in paragraph (c)(5) of this section), and non-common stock significant investments in the capital of unconsolidated financial institutions for a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) (as described in paragraph (c)(6) of this section). Under the corresponding deduction approach, a Board-regulated institution must make deductions from the component of capital for which the underlying instrument would qualify if it were issued by the Board-regulated institution itself, as described in paragraphs (c)(2)(i) through (iii) of this section. If the Board-regulated institution does not have a sufficient amount of a specific component of capital to effect the required deduction, the shortfall must be deducted according to paragraph (f) of this section.

* * * * *

(5) * * *

(i) A Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) must deduct its non-significant investments in the capital of unconsolidated financial institutions (as defined in § 217.2) that, in the aggregate and together with any investment in a covered debt instrument (as defined in § 217.2) issued by a financial institution in which the Board-regulated institution does not have a significant investment in the capital of the unconsolidated financial institution (as defined in § 217.2), exceeds 10 percent of the sum of the Board-regulated institution's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section (the 10 percent threshold for non-significant investments) by applying the corresponding deduction approach in paragraph (c)(2) of this section.[26] The deductions described in this paragraph are net of associated DTLs in accordance with paragraph (e) of this section. In addition, with the prior written approval of the Board, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) that underwrites a failed underwriting, for the period of time stipulated by the Board, is not required to deduct from capital a non-significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph (c)(5) to the extent the investment is related to the failed underwriting.[27] For any calculation under this paragraph (c)(5)(i), a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) may exclude the amount of an investment in a covered debt instrument under paragraph (c)(5)(iii) or (iv) of this section, as applicable.

(ii) For a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5), the amount to be deducted under this paragraph (c)(5) from a specific capital component is equal to:

(A) The Board-regulated institution's aggregate non-significant investments in the capital of an unconsolidated financial institution and, if applicable, any investments in a covered debt instrument subject to deduction under this paragraph (c)(5), exceeding the 10 percent threshold for non-significant investments, multiplied by

(B) The ratio of the Board-regulated institution's aggregate non-significant investments in the capital of an unconsolidated financial institution (in the form of such capital component) to the Board-regulated institution's total non-significant investments in unconsolidated financial institutions, with an investment in a covered debt instrument being treated as tier 2 capital for this purpose.

(iii) For purposes of applying the deduction under paragraph (c)(5)(i) of this section, a Category II Board-regulated institution or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) may exclude from the deduction the amount of the Board-regulated institution's gross long position, in accordance with § 217.22(h)(2), in investments in covered debt instruments issued by financial institutions in which the Board-regulated institution does not have a significant investment in the capital of the unconsolidated financial institutions up to an amount equal to 5 percent of the sum of the Board-regulated institution's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section, net of associated DTLs in accordance with paragraph (e) of this section.

(iv) Prior to applying the deduction under paragraph (c)(5)(i) of this section:

(A) A Category I Board-regulated institution may designate any investment in a covered debt instrument as an excluded covered debt instrument, as defined in § 217.2.

(B) A Category I Board-regulated institution must deduct, according to the corresponding deduction approach in paragraph (c)(2) of this section, its gross long position, calculated in accordance with paragraph (h)(2) of this section, in a covered debt instrument that was originally designated as an excluded covered debt instrument, in accordance with paragraph (c)(5)(iv)(A) of this section, but no longer qualifies as an excluded covered debt instrument.

(C) A Category I Board-regulated institution must deduct according to the corresponding deduction approach in paragraph (c)(2) of this section the amount of its gross long position, calculated in accordance with paragraph (h)(2) of this section, in a direct or indirect investment in a covered debt instrument that was originally designated as an excluded covered debt instrument, in accordance with paragraph (c)(5)(iv)(A) of this section, and has been held for more than thirty business days.

(D) A Category I Board-regulated institution must deduct according to the corresponding deduction approach in paragraph (c)(2) of this section its gross long position, calculated in accordance with paragraph (h)(2) of this section, of its aggregate position in excluded covered debt instruments that exceeds 5 percent of the sum of the Board-regulated institution's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section, net of associated DTLs in accordance with paragraph (e) of this section.

(6) *Significant investments in the capital of unconsolidated financial institutions that are not in the form of common stock.* If a Category I Board-regulated institution, a Category II

Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) has a significant investment in the capital of an unconsolidated financial institution, the Board-regulated institution must deduct from capital any such investment issued by the unconsolidated financial institution that is held by the Board-regulated institution other than an investment in the form of common stock, as well as any investment in a covered debt instrument issued by the unconsolidated financial institution, by applying the corresponding deduction approach in paragraph (c)(2) of this section.[28] The deductions described in this section are net of associated DTLs in accordance with paragraph (e) of this section. In addition, with the prior written approval of the Board, for the period of time stipulated by the Board, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) that underwrites a failed underwriting is not required to deduct the significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph (c)(6) if such investment is related to such failed underwriting.

* * * * *

(d) * * *

(2) A Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) must make deductions from regulatory capital as described in this paragraph (d)(2).

(i) A Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) must deduct from common equity tier 1 capital elements the amount of each of the

items set forth in this paragraph (d)(2) that, individually, exceeds 10 percent of the sum of the Board-regulated institution's common equity tier 1 capital elements, less adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section (the 10 percent common equity tier 1 capital deduction threshold).

(A) DTAs arising from temporary differences that the Board-regulated institution could not realize through net operating loss carrybacks, net of any related valuation allowances and net of DTLs, in accordance with paragraph (e) of this section. A Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) is not required to deduct from the sum of its common equity tier 1 capital elements DTAs (net of any related valuation allowances and net of DTLs, in accordance with § 217.22(e)) arising from timing differences that the Board-regulated institution could realize through net operating loss carrybacks. The Board-regulated institution must risk weight these assets at 100 percent. For a state member bank that is a member of a consolidated group for tax purposes, the amount of DTAs that could be realized through net operating loss carrybacks may not exceed the amount that the state member bank could reasonably expect to have refunded by its parent holding company.

(B) Significant investments in the capital of unconsolidated financial institutions in the form of common stock, net of associated DTLs in accordance with paragraph (e) of this section.[30] Significant investments in the capital of unconsolidated financial institutions in the form of common stock subject to the 10 percent common equity tier 1 capital deduction threshold may be reduced by any goodwill embedded in the valuation of such investments deducted by the Board-regulated institution pursuant to paragraph (a)(1) of this section. In addition, with the prior written approval of the Board, for the period of time stipulated by the

Board, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) that underwrites a failed underwriting is not required to deduct a significant investment in the capital of an unconsolidated financial institution in the form of common stock pursuant to this paragraph (d)(2) if such investment is related to such failed underwriting.

(ii) A Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) must deduct from common equity tier 1 capital elements the items listed in paragraph (d)(2)(i) of this section that are not deducted as a result of the application of the 10 percent common equity tier 1 capital deduction threshold, and that, in aggregate, exceed 17.65 percent of the sum of the Board-regulated institution's common equity tier 1 capital elements, minus adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section, minus the items listed in paragraph (d)(2)(i) of this section (the 15 percent common equity tier 1 capital deduction threshold). Any goodwill that has been deducted under paragraph (a)(1) of this section can be excluded from the significant investments in the capital of unconsolidated financial institutions in the form of common stock.[31]

(iii) For purposes of calculating the amount of DTAs subject to the 10 and 15 percent common equity tier 1 capital deduction thresholds, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) may exclude DTAs and DTLs relating to adjustments made to common equity tier 1 capital under paragraph (b) of this section. A Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5)

that elects to exclude DTAs relating to adjustments under paragraph (b) of this section also must exclude DTLs and must do so consistently in all future calculations. A Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) may change its exclusion preference only after obtaining the prior approval of the Board.

* * * * *

[26] With the prior written approval of the Board, for the period of time stipulated by the Board, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) is not required to deduct a non-significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph if the financial institution is in distress and if such investment is made for the purpose of providing financial support to the financial institution, as determined by the Board.

[27] Any non-significant investment in the capital of an unconsolidated financial institution or any investment in a covered debt instrument that is not required to be deducted under this paragraph (c)(5) or otherwise under this section must be assigned the appropriate risk weight under subparts E or F of this part, as applicable.

[28] With prior written approval of the Board, for the period of time stipulated by the Board, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) is not required to deduct a significant investment in the capital of an unconsolidated financial institution, including an investment in a covered debt instrument, under this paragraph

(c)(6) or otherwise under this section if such investment is made for the purpose of providing financial support to the financial institution as determined by the Board.

* * * * *

[30] With the prior written approval of the Board, for the period of time stipulated by the Board, a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) is not required to deduct a significant investment in the capital instrument of an unconsolidated financial institution in distress in the form of common stock pursuant to this section if such investment is made for the purpose of providing financial support to the financial institution as determined by the Board.

[31] The amount of the items in paragraph (d)(2) of this section that is not deducted from common equity tier 1 capital pursuant to this section must be included in the risk-weighted assets of the Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) and assigned the appropriate risk weight for the investment under subpart E of this part for purposes of expanded total risk-weighted assets.

Subpart D—Risk-Weighted Assets—Standardized Approach

§ 217.30 [Amended]

49. In § 217.30

a. Revise paragraph (a);

b. In paragraph (b), remove the words “covered positions” and add in their place the words “market risk covered positions”.

The revisions read as follows:

* * * * *

(a) This subpart sets forth methodologies for determining standardized total risk-weighted assets. This subpart applies to any Board-regulated institution that elects to use this subpart under § __.10(b).

* * * * *

§ 217.34 Derivative Contracts.

50. In § 217.34, revise paragraph (a) to read as follows:

* * * * *

(a) *Exposure amount for derivatives contracts* — (1) A Board-regulated institution must use the current exposure methodology (CEM) described in paragraph (b) of this section to calculate the exposure amount for all its OTC derivative contracts, unless the Board-regulated institution makes the election provided in paragraph (a)(2) of this section.

(2) A Board-regulated institution may elect to calculate the exposure amount for all its OTC derivative contracts under the standardized approach for counterparty credit risk (SA-CCR) in § 217.114 by notifying the Board, rather than calculating the exposure amount for all its derivative contracts using CEM. A Board-regulated institution that elects under this paragraph (a)(2) to calculate the exposure amount for its OTC derivative contracts under SA-CCR must apply the treatment of cleared transactions under § 217.116 to its derivative contracts that are cleared transactions and to all default fund contributions associated with such derivative contracts, rather than applying § 217.35. A Board-regulated institution must use the same methodology to calculate the exposure amount for all its derivative contracts and, if a Board-regulated institution has elected to use SA-CCR under this paragraph (a)(2), the Board-regulated institution may change its election only with prior approval of the Board.

* * * * *

§ 217.35 Cleared transactions.

51. In § 217.35, revise paragraph (a)(3) to read as follows:

(a) * * *

(3) *Alternate requirements.* Notwithstanding any other provision of this section, a Board-regulated institution that has elected to use SA-CCR under § 217.34(a) must apply § 217.116 to its derivative contracts that are cleared transactions rather than this section.

* * * * *

52. In § 217.37, revise paragraph (c)(1) to read as follows:

§ 217. 37 Collateralized transactions.

* * * * *

(c) *Collateral haircut approach*—(1) *General.* A Board-regulated institution may recognize the credit risk mitigation benefits of financial collateral that secures an eligible margin loan, repo-style transaction, collateralized derivative contract, or single-product netting set of such transactions, and of any collateral that secures a repo-style transaction that is included in the Board-regulated institution's measure for market risk under subpart F of this part by using the collateral haircut approach in this section. A Board-regulated institution may use the standard supervisory haircuts in paragraph (c)(3) of this section or, with prior written approval of the Board, its own estimates of haircuts according to paragraph (c)(4) of this section.

* * * * *

§ 217.61 [Amended]

53. In § 217.61:

a. Remove the citation "§ 217.172" wherever it appears, and add in its place the citations "§§ 217.160 and 217.161"; and

b. Remove the sentence "An advanced approaches Board-regulated institution that has not received approval from the Board to exit parallel run pursuant to § 217.121(d) is subject to the disclosure requirements described in §§ 217.62 and 217.63.".

54. In § 217.63:

a. In table 3, revise entry (c); and

b. Remove paragraphs (d) and (e).

The revision reads as follows:

§ 217.63 Disclosures by Board-regulated institutions described in § 217.61.

* * * * *

Table 3 to § 217.63—Capital Adequacy

* * * * * * *

	(c)	Market risk-weighted assets as calculated under subpart F of this part 217.

* * * * * * *

* * * * *

Subpart E—Risk-weighted Assets—Expanded Risk-based Approach

§ 217.141 Simple risk-weight approach (SRWA).

55. In § 217.141, revise paragraph (b)(3)(i) to read as follows:

(b) * * *

(3) * * *

(i) Community development equity exposures.

(A) For state member banks and bank holding companies, an equity exposure that qualifies as a community development investment under 12 U.S.C. 24 (Eleventh), excluding equity exposures to an unconsolidated small business investment company and equity exposures held through a consolidated small business investment company described in section 302 of the Small Business Investment Act of 1958 (15 U.S.C. 682).

(B) For savings and loan holding companies, an equity exposure that is designed primarily to promote community welfare, including the welfare of low- and moderate-income communities or families, such as by providing services or employment, and excluding equity exposures to an unconsolidated small business investment company and equity exposures held through a small business investment company described in section 302 of the Small Business Investment Act of 1958 (15 U.S.C. 682).

* * * * *

Subpart G—Transition Provisions

56. In § 217.300:

a. Revise paragraph (a);

b. Remove and reserve paragraphs (f) through (i).

The revision and addition read as follows:

§ 217.300 Transitions.

(a) *Transition adjustments for AOCI.* Beginning [January 1, 2027], a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) that had made an AOCI opt-out election under § 217.22(b)(2) effective [December 31, 2026] must subtract from the sum of its common equity tier 1 elements, before making deductions required under § 217.22(c) or (d), the AOCI adjustment amount multiplied by the percentage provided in Table 1 to § 217.300.

The transition AOCI adjustment amount is the sum of:

(1) Net unrealized gains or losses on available-for-sale debt securities, plus

(2) Accumulated net gains or losses on cash flow hedges, plus

(3) Any amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans, plus

(4) Net unrealized holding gains or losses on held-to-maturity securities that are included in AOCI.

Table 1 to § 217.300

Transition AOCI Adjustment

Transition period	Percentage applicable to transition AOCI adjustment amount
January 1, 2027 to December 31, 2027	100
January 1, 2028 to December 31, 2028	80
January 1, 2029 to December 31, 2029	60
January 1, 2030 to December 31, 2030	40
January 1, 2031 to December 31, 2031	20
January 1, 2032 and thereafter	0

* * * * *

§ 217.301 [Removed and Reserved]

57. Remove and reserve § 217.301.

* * * * *

§ 217.303 [Removed and Reserved]

58. Remove and reserve § 217.303.

§ 217.304 [Removed and Reserved]

59. Remove and reserve § 217.304.

§§ 217.1, 217.2, 217.10, 217.12, 217.22, 217.35, 217.61, 217.300, 217.302, 217.305, Appendix A to Part 217 [Amended]

60. In the table below, for each section indicated in the left column, remove the words indicated in the middle column from wherever it appears in the section, and add the words indicated in the right column:

Sections:	**Remove the following words:**	**Add the following words:**
217.1	"an advanced approaches Board-regulated institution"	"a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) "
217.2		
217.12(a)(2) introductory text		
217.22(b)(1)(ii), (b)(1)(iii), (c)(1), (c)(2)(ii)(D), (c)(3)(ii), footnote [24] of (c)(4), (c)(5)(iii), (d)(1), and (f);		
217.61		
217.300(c)		

217.1(c)(5)(iii)	"advanced approaches Board-regulated institution"	"Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5) "
217.2		
217.22(b)(1)(ii), (b)(1)(iii), (c)(1), (c)(2)(ii)(D), (c)(3)(ii), (c)(5)(iii), (d)(1), and (f); and		
217.1	"advanced approaches total risk-weighted assets"	"expanded total risk-weighted assets"
217.10(d);		
217.22(g);		
217.302; and		
217.305.		
217.22(b)(1)(ii) and (b)(1)(iii)	"an advanced approaches Board-regulated institution"	"a Category I Board-regulated institution, a Category II Board-regulated institution, or a Board-regulated institution that uses expanded total risk-weighted assets for purposes of § 217.10(a)(5)"
217.2, in the definition of "qualifying central counterparty (QCCP)"	"§ 217.133"	"§ 217.114"
217.35(a)(3)		
Part 217 Appendix A	"advanced approaches institutions"	"Category I-II institutions and institutions the elect to use the expanded risk-based approach"
	"advanced approaches banking organizations"	"Category I-II banking organizations and institutions that elect to use the expanded risk-based approach"
Part 217 Appendix A, paragraph 1.(a)	"(FDIC)"	"(FDIC, and together with the Board and OCC, the agencies)"

61. In Appendix A to part 217, revise footnotes 2 and 4 to read as follows:

Appendix A to Part 217 – The Federal Reserve Board's Framework for Implementing the Countercyclical Capital Buffer

* * * * *

[2] 12 CFR 217.11(b). The CCyB applies only to Category I-III banking organizations. *See, e.g.*, 12 CFR 217.100(b).

* * * * *

[4] The CcyB was subject to a phase-in arrangement between 2016 and 2019.

* * * * *

62. Redesignate the footnotes in part 217, as follows:

Section	Current Footnote Number	New Footnote Number
217.2 – "Cleared transaction"	3	1
217.2 – "Collateral agreement"	4	2
217.2 – "Eligible margin loan"	5	3
217.2 – "Eligible margin loan"	6	4
217.2 – "Qualifying master netting agreement"	7	5
217.2 – "Repo-style transaction"	8	6
217.2 – "Statutory multifamily mortgage"	9	7
217.20(b)(3)	11	1
217.20(c)(1)(v)(C)	12	2
217.20(c)(1)(xiii)	13	3
217.20(c)(3)(i)	14	4
217.20(c)(3)(i)	15	5
217.20(c)(3)(ii)	16	6
217.20(d)(1)(iv)	16	7
217.20(d)(1)(v)(C)	17	8
217.20(d)(1)(ix)	18	9
217.20(d)(4)(i)	19	10
217.20(d)(4)(i)	20	11
217.20(d)(4)(ii)	21	12
217.22(b)(2)(iv)(A)	22	1
217.22(c) paragraph heading	23	2
217.22(c)(4)	24	3
217.22(c)(4)	25	4
217.22(c)(5)(i)	26	5
217.22(c)(5)(i)	27	6
217.22(c)(6)	28	7
217.22(d)(1)(i)	29	8
217.22(d)(2)(i)(C)	30	9
217.22(d)(2)(ii)	31	10

PART 225—BANK HOLDING COMPANIES AND CHANGE IN BANK CONTROL (REGULATION Y)

63. The authority citation for part 225 continues to read as follows:

Authority: 12 U.S.C. 1817(j)(13), 1818, 1828(o), 1831i, 1831p–1, 1843(c)(8), 1844(b), 1972(1), 3106, 3108, 3310, 3331–3351, 3906, 3907, and 3909; 15 U.S.C. 1681s, 1681w, 6801, and 6805.

Subpart A—General Provisions

64. In § 225.8:

a. Remove paragraph (d)(1);

b. Redesignate paragraphs (d)(2) through (21) as (d)(1) through (20), respectively;

c. Revise newly redesignated paragraphs (d)(9) and (16); and

d. Revise paragraph (f)(2).

The revisions and addition read as follows:

§ 225.8 Capital planning and stress capital buffer requirement.

* * * * *

(d) * * *

(9) *Effective capital distribution limitations* means any limitations on capital distributions established by the Board by order or regulation, including pursuant to 12 CFR 217.11, 225.4, 252.63, 252.165, and 263.202.

* * * * *

(16) *Regulatory capital ratio* means a capital ratio for which the Board has established minimum requirements for the bank holding company by regulation or order, including, as

applicable, any regulatory capital ratios calculated under 12 CFR part 217 and the deductions required under 12 CFR 248.12.

* * * * *

(f) * * *

(2) *Stress capital buffer requirement calculation.* A bank holding company's stress capital buffer requirement is equal to the greater of:

(i) The following calculation:

(A) The bank holding company's common equity tier 1 capital ratio as of the last day of the previous capital plan cycle, unless otherwise determined by the Board; minus

(B) The bank holding company's lowest projected common equity tier 1 capital ratio in any quarter of the planning horizon under a supervisory stress test; plus

(C) The ratio of:

(*1*) The sum of the bank holding company's planned common stock dividends (expressed as a dollar amount) for each of the fourth through seventh quarters of the planning horizon; to

(*2*) The risk-weighted assets of the bank holding company in the quarter in which the bank holding company had its lowest projected common equity tier 1 capital ratio in any quarter of the planning horizon under a supervisory stress test; and

(ii) 2.5 percent.

* * * * *

PART 238—SAVINGS AND LOAN HOLDING COMPANIES (REGULATION LL)

65. The authority citation for part 238 continues to read as follows:

Authority: 5 U.S.C. 552, 559; 12 U.S.C. 1462, 1462a, 1463, 1464, 1467, 1467a, 1468, 5365; 1813, 1817, 1829e, 1831i, 1972; 15 U.S.C. 78*l*.

Subpart O—Supervisory Stress Test Requirements for Covered Savings and Loan Holding Companies

66. In § 238.130:

a. Remove the definition of "Advanced approaches"; and

b. Revise the definition of "Regulatory capital ratio".

The revision reads as follows:

§ 238.130 Definitions.

* * * * *

Regulatory capital ratio means a capital ratio for which the Board has established minimum requirements for the company by regulation or order, including, as applicable, any regulatory capital ratios calculated under 12 CFR part 217 and the deductions required under 12 CFR 248.12.

* * * * *

Subpart P—Company-Run Stress Test Requirements for Savings and Loan Holding Companies

67. In § 238.141:

a. Remove the definition of "Advanced approaches"; and

b. Revise the definition of "Regulatory capital ratio".

The revision reads as follows:

§ 238.141 Definitions.

* * * * *

Regulatory capital ratio means a capital ratio for which the Board has established minimum requirements for the company by regulation or order, including, as applicable, any

regulatory capital ratios calculated under 12 CFR part 217 and the deductions required under 12 CFR 248.12.

* * * * *

Subpart Q—Single Counterparty Credit Limits for Covered Savings and Loan Holding Companies

68. In § 238.151:

a. Remove the words "in table 1 to § 217.132 of this chapter" wherever they appear and add in their place the words "in table 1 to § 217.37 of this chapter or in table 1 to § 217.121 of this chapter, as applicable";

b. Remove the words "(12 CFR part 217, subpart D)" in paragraph (e)(4) and add in their place the words "(12 CFR part 217, subpart D or E, as applicable)"; and

c. Revise paragraph (q).

The revisions read as follows:

§ 238.151 Definitions.

* * * * *

(q) *Exempt counterparty* means an entity that is identified as exempt from the requirements of this subpart under § 252.77, or that is otherwise excluded from this subpart, including any sovereign entity assigned a zero percent risk weight under the standardized approach or the expanded risk-based approach in the Board's Regulation Q, as applicable (12 CFR part 217, subpart D or E, as applicable).

* * * * *

§ 238.153 [Amended]

69. In § 238.153, remove the words “any of the methods that the covered company is authorized to use under 12 CFR part 217, subparts D and E” wherever they appear and add in their place the words ““any of the methods that the covered company is authorized to use under 12 CFR part 217, subparts D or E, as applicable””.

§ 238.154 [Amended]

70. Remove the words “the currency mismatch adjustment approach of § 217.37(c)(3)(ii) of the Board’s Regulation Q (12 CFR 217.37(c)(3)(ii))” in paragraph (h)(1) and add in their place “the currency mismatch adjustment approach of § 217.37(c)(3)(ii) or § 217.115(c)(2), as applicable, of the Board’s Regulation Q (12 CFR 217.37(c)(3)(ii) or 217.115(c)(2), as applicable)”.

Subpart S—Capital Planning and Stress Capital Buffer Requirement

71. In § 238.170:

a. Remove paragraph (d)(1);

b. Redesignate paragraphs (d)(2) through (18) as (d)(1) through (17), respectively;

c. Revise newly redesignated paragraphs (d)(9) and (14); and

d. Revise paragraph (f)(2).

The revisions and addition read as follows:

§ 238.170 Capital planning and stress capital buffer requirement.

* * * * *

(d) * * *

(9) *Effective capital distribution limitations* means any limitations on capital distributions established by the Board by order or regulation, including pursuant to 12 CFR 217.11.

* * * * *

(14) *Regulatory capital ratio* means a capital ratio for which the Board has established minimum requirements for the covered savings and loan holding company by regulation or order, including, as applicable, any regulatory capital ratios calculated under 12 CFR part 217 and the deductions required under 12 CFR 248.12.

* * * * *

(f) * * *

(2) *Stress capital buffer requirement calculation.* A covered savings and loan holding company's stress capital buffer requirement is equal to the greater of:

(i) The following calculation:

(A) The covered savings and loan holding company's common equity tier 1 capital ratio as of the last day of the previous capital plan cycle, unless otherwise determined by the Board; minus

(B) The covered savings and loan holding company's lowest projected common equity tier 1 capital ratio in any quarter of the planning horizon under a supervisory stress test; plus

(C) The ratio of:

(*1*) The sum of the covered savings and loan holding company's planned common stock dividends (expressed as a dollar amount) for each of the fourth through seventh quarters of the planning horizon; to

(*2*) The risk-weighted assets of the covered savings and loan holding company in the quarter in which the covered savings and loan holding company had its lowest projected common equity tier 1 capital ratio in any quarter of the planning horizon under a supervisory stress test; and

(ii) 2.5 percent.

* * * * *

PART 252—ENHANCED PRUDENTIAL STANDARDS (REGULATION YY)

72. The authority citation for part 252 continues to read as follows:

Authority: 12 U.S.C. 321–338a, 481–486, 1467a, 1818, 1828, 1831n, 1831o, 1831p–1, 1831w, 1835, 1844(b), 1844(c), 3101 *et seq.*, 3101 note, 3904, 3906–3909, 4808, 5361, 5362, 5365, 5366, 5367, 5368, 5371.

Subpart B—Company-Run Stress Test Requirements for State Member Banks With Total Consolidated Assets Over $250 Billion

73. In § 252.12:

a. Remove the definition of "Advanced approaches"; and

b. Revise the definition of "Regulatory capital ratio".

The revision reads as follows:

§ 252.12 Definitions.

* * * * *

Regulatory capital ratio means a capital ratio for which the Board has established minimum requirements for the state member bank by regulation or order, including, as applicable, any regulatory capital ratios calculated under 12 CFR part 217 and the deductions required under 12 CFR 248.12.

* * * * *

Subpart E—Supervisory Stress Test Requirements for Certain U.S. Banking Organizations With $100 Billion or More in Total Consolidated Assets and Nonbank Financial Companies Supervised by the Board

74. In § 252.42:

a. Remove the definition of “Advanced approaches”; and

b. Revise the definition of “Regulatory capital ratio”.

The revision reads as follows:

§ 252.42 Definitions.

* * * * *

Regulatory capital ratio means a capital ratio for which the Board has established minimum requirements for the company by regulation or order, including, as applicable, any regulatory capital ratios calculated under 12 CFR part 217 and the deductions required under 12 CFR 248.12.

* * * * *

Subpart F—Company-Run Stress Test Requirements for Certain U.S. Bank Holding Companies and Nonbank Financial Companies Supervised by the Board

75. In § 252.52:

a. Remove the definition of “Advanced approaches”; and

b. Revise the definition of “Regulatory capital ratio”.

The revision reads as follows:

§ 252.52 Definitions.

* * * * *

Regulatory capital ratio means a capital ratio for which the Board has established minimum requirements for the company by regulation or order, including, as applicable, any regulatory capital ratios calculated under 12 CFR part 217 and the deductions required under 12 CFR 248.12.

* * * * *

Subpart G—External Long-term Debt Requirement, External Total Loss-absorbing Capacity Requirement and Buffer, and Restrictions on Corporate Practices for U.S. Global Systemically Important Banking Organizations

76. In § 252.61:

a. Revise the definition of "Common equity tier 1 capital ratio";

b. Revision the definition of "Supplementary leverage ratio";

c. Revise the definition of "Total leverage exposure"; and

d. Revise the definition of "Total risk-weighted assets".

The revisions read as follows:

§ 252.61 Definitions.

* * * * *

Common equity tier 1 capital ratio has the same meaning as in 12 CFR 217.10(b)(1) and 12 CFR 217.10(d)(1).

* * * * *

Supplementary leverage ratio has the same meaning as in 12 CFR 217.10(c)(1).

* * * * *

Total leverage exposure has the same meaning as in 12 CFR 217.10(c)(2).

Total risk-weighted assets means standardized total risk-weighted assets or expanded total risk-weighted assets, as applicable under part 217 of this chapter.

* * * * *

Subpart H—Single-Counterparty Credit Limits

77. In § 252.71:

a. Remove the words "in Table 1 to § 217.132 of the Board's Regulation Q (12 CFR 217.132)" wherever they appear and add in their place the words "in Table 1 to § 217.121 of the Board's Regulation Q (12 CFR 217.121)";

b. Remove the words "(12 CFR part 217, subpart D)" in paragraph (e)(4) and add in their place the words "(12 CFR part 217, subpart D or E, as applicable)"; and

c. Revise paragraph (q).

The revisions read as follows:

§ 252.71 Definitions.

* * * * *

(q) *Exempt counterparty* means an entity that is identified as exempt from the requirements of this subpart under § 252.77, or that is otherwise excluded from this subpart, including any sovereign entity assigned a zero percent risk weight under the standardized approach or the expanded risk-based approach in the Board's Regulation Q, as applicable (12 CFR part 217, subpart D or E, as applicable).

* * * * *

§ 252.73 [Amended]

78. In § 252.73, remove the words "any of the methods that the covered company is authorized to use under the Board's Regulation Q (12 CFR part 217, subparts D and E)" wherever they appear and add, in their place, the words "any of the methods that the covered company is authorized to use under the Board's Regulation Q (12 CFR part 217, subparts D or E, as applicable)".

§ 272.74 [Amended]

79. In § 252.74, remove the words "the currency mismatch adjustment approach of § 217.37(c)(3)(ii) of the Board's Regulation Q (12 CFR 217.37(c)(3)(ii))" in paragraph (h)(1) and add in their place "the currency mismatch adjustment approach of § 217.37(c)(3)(ii) or § 217.115(c)(2), as applicable, of the Board's Regulation Q (12 CFR 217.37(c)(3)(ii) or 217.115(c)(2), as applicable)".

Subpart N—Enhanced Prudential Standards for Foreign Banking Organizations With Total Consolidated Assets of $100 Billion or More and Combined U.S. Assets of Less Than $100 Billion

80. In § 252.147, revise paragraph (e)(1)(i) to read as follows:

§ 252.147 U.S. intermediate holding company requirement for foreign banking organizations with combined U.S. assets of less than $100 billion and U.S. non-branch assets of $50 billion or more.

* * * * *

(e) * * *

(1) * * *

(i) A U.S. intermediate holding company must comply with 12 CFR part 217 in the same manner as a bank holding company.

* * * * *

Subpart O—Enhanced Prudential Standards for Foreign Banking Organizations With Total Consolidated Assets of $100 Billion or More and Combined U.S. Assets of $100 Billion or More

81. In § 252.153, revise paragraph (e)(1)(i) to read as follows:

§ 252.153 U.S. intermediate holding company requirement for foreign banking organizations with combined U.S. assets of $100 billion or more and U.S. non-branch assets of $50 billion or more.

* * * * *

(e) * * *

(1) * * *

(i) A U.S. intermediate holding company must comply with 12 CFR part 217 in the same manner as a bank holding company.

* * * * *

Subpart P—Covered IHC Long-Term Debt Requirement, Covered IHC Total Loss absorbing Capacity Requirement and Buffer, and Restrictions on Corporate Practices for Intermediate Holding Companies of Global Systemically Important Foreign Banking Organizations

82. In § 252.161:

a. Revise the definition of "Common equity tier 1 capital ratio";

b. Remove the definition of "Standardized total risk-weighted assets";

c. Revise the definition of "Supplementary leverage ratio";

d. Revise the definition of "Total leverage exposure"; and

e. Revise the definition of "Total risk-weighted assets".

The revisions read as follows:

§ 252.161 Definitions.

* * * * *

Common equity tier 1 capital ratio has the same meaning as in 12 CFR 217.10(b)(1) and 12 CFR 217.10(d)(1).

* * * * *

Supplementary leverage ratio has the same meaning as in 12 CFR 217.10(c)(1).

* * * * *

Total leverage exposure has the same meaning as in 12 CFR 217.10(c)(2).

Total risk-weighted assets means standardized total risk-weighted assets or expanded total risk-weighted assets, as applicable under part 217 of this chapter.

* * * * *

Subpart Q—Single Counterparty Credit Limits

83. In § 252.171:

a. Remove the words "in Table 1 to § 217.132 of the Board's Regulation Q (12 CFR 217.132)" wherever they appear and add in their place the words "in Table 1 to § 217.121 of the Board's Regulation Q (12 CFR 217.121)";

b. Remove the words "(12 CFR part 217, subpart D)" in paragraph (f)(4) and add in their place the words "(12 CFR part 217, subpart D or E, as applicable)"; and

c. Revise paragraph (r).

The revisions read as follows:

§ 252.171 Definitions.

* * * * *

(r) *Exempt counterparty* means an entity that is identified as exempt from the requirements of this subpart under § 252.177, or that is otherwise excluded from this subpart, including any

sovereign entity assigned a zero percent risk weight under the standardized approach or the expanded risk-based approach in the Board's Regulation Q, as applicable (12 CFR part 217, subpart D or E, as applicable).

* * * * *

§ 252.173 [Amended]

84. In § 252.173, remove the words "any of the methods that the covered company is authorized to use under the Board's Regulation Q (12 CFR part 217, subparts D and E)" wherever they appear and add, in their place, the words "any of the methods that the covered company is authorized to use under the Board's Regulation Q (12 CFR part 217, subparts D or E, as applicable)".

§ 252.174 [Amended]

85. In § 252.174, remove the words "the currency mismatch adjustment approach of § 217.37(c)(3)(ii) of the Board's Regulation Q (12 CFR 217.37(c)(3)(ii))" in paragraph (h)(1) and add in their place "the currency mismatch adjustment approach of § 217.37(c)(3)(ii) or § 217.115(c)(2), as applicable, of the Board's Regulation Q (12 CFR 217.37(c)(3)(ii) or 217.115(c)(2), as applicable)".

Federal Deposit Insurance Corporation

12 CFR Chapter III

Authority and Issuance

For the reasons stated in the common preamble, the Federal Deposit Insurance Corporation proposes to amend 12 CFR part 324 as follows:

PART 324—CAPITAL ADEQUACY OF FDIC-SUPERVISED INSTITUTIONS

86. The authority citation for part 324 continues to read as follows:

Authority: 12 U.S.C. 1815(a), 1815(b), 1816, 1818(a), 1818(b), 1818(c), 1818(t), 1819(Tenth), 1828(c), 1828(d), 1828(i), 1828(n), 1828(o), 1831o, 1835, 3907, 3909, 4808; 5371; 5412; Pub. L. 102–233, 105 Stat. 1761, 1789, 1790 (12 U.S.C. 1831n note); Pub. L. 102–242, 105 Stat. 2236, 2355, as amended by Pub. L. 103–325, 108 Stat. 2160, 2233 (12 U.S.C. 1828 note); Pub. L. 102–242, 105 Stat. 2236, 2386, as amended by Pub. L. 102–550, 106 Stat. 3672, 4089 (12 U.S.C. 1828 note); Pub. L. 111–203, 124 Stat. 1376, 1887 (15 U.S.C. 78o–7 note), Pub. L. 115–174; section 4014 § 201, Pub. L. 116–136, 134 Stat. 281 (15 U.S.C. 9052).

87. Revise subpart E and subpart F of part 324 as set forth at the end of the common preamble.

88. For purposes of part 324, subpart E and subpart F of the common rule are amended as follows:

a. Remove “[AGENCY]” and add “FDIC” in its place wherever it appears;

b. Remove “[BANKING ORGANIZATION]” and add “FDIC-supervised institution” in its place wherever it appears;

c. Remove “[BANKING ORGANIZATIONS]” and add “FDIC-supervised institutions” in its place wherever it appears;

d. Remove “[REAL ESTATE LENDING GUIDELINES]” and add “12 CFR part 365, Subpart A, Appendix A” in its place wherever it appears;

e. Remove “[APPRAISAL RULE]” and add “12 CFR part 323, Subpart A” in its place wherever it appears;

f. Remove “__.” and add “324.” in its place wherever it appears;

g. Remove “[REGULATORY REPORT]” and add “Call Report” in its place wherever it appears.

Subpart A—General Provisions

89. In § 324.1:

a. Revise paragraph (c)(3);

b. Revise paragraph (e);

c. Revise paragraph (f); and

d. Add paragraph (g).

The additions and revisions read as follows:

§ 324.1 Purpose, applicability, reservations of authority, and timing.

* * * * *

(c) * * *

(3) *Risk-weighted assets.* Each FDIC-supervised institution must calculate either standardized total risk-weighted assets or expanded total risk-weighted assets, as necessary to satisfy the requirements of § 324.10(b) or (d), as applicable.

* * * * *

(e) *Notice and response procedures.* In making a determination under this part, unless more specifically provided for, the FDIC will apply notice and response procedures in the same manner and to the same extent as the notice and response procedures in 12 CFR 324.7(c).

* * * * *

(f) *Transitions and timing*—(1) *Transitions*. Notwithstanding any other provision of this part, an FDIC-supervised institution must make any adjustments provided in subpart G of this part for purposes of implementing this part.

(2) *Timing.* An FDIC-supervised institution that changes from one category to another category, or that changes from having no category to having a category, must comply with the requirements of its category in this part, including applicable transition provisions of the requirements in this part, no later than on the first day of the second quarter following the change in the FDIC-supervised institution's category.

* * * * *

(g) *Severability.* If any provision of this part, or the application thereof to any person or circumstances, is held invalid, such invalidity shall not affect the validity of other provisions or the application of such provision to other persons or circumstances that can be given effect without the invalid provision or application.

* * * * *

90. Amend § 324.2 as follows:

a. Redesignate footnotes 3 through 9 as footnotes 1 through 7, respectively;

b. Revise the definition of "Adjusted allowances for credit losses (AACL)";

c. Remove the definitions for "Advanced approaches FDIC-supervised institution", "Advanced approaches total risk-weighted assets", and "Advanced market risk-weighted assets";

d. Remove the definition of “Allowances for loan and lease losses (ALLL)”;

e. Remove the definition for “Bank”;

f. Revise the definition for “Carrying value”;

g. Add, in alphabetical order, the definition for “Category I FDIC-supervised institution”;

h. Revise the definitions for “Category II FDIC-supervised institution” and “Category III FDIC-supervised institution”;

i. Add the definition for “Category IV FDIC-supervised institution” in alphabetical order;

j. Revise newly redesignated footnote 1 to paragraph (2) of the definition for “Cleared transaction”;

k. Revise the definition for “Commitment”;

l. Revise the definition for “Corporate exposure”;

m. Remove the definition for “Credit-risk-weighted assets”;

n. Add the definition for “CVA risk-weighted assets” in alphabetical order;

o Add the definition of “Dependent on the cash flows generated by the real estate” in alphabetical order;

p. Revise the definitions for “Effective notional amount” and “Eligible clean-up call”;

q. Remove the definition for “Eligible credit reserves”;

r. Revise the definition for “Eligible guarantee”;

s. Add the definitions for “Eligible prepaid credit protection arrangement”, “ERBA FDIC-supervised institution”, and “Expanded total risk-weighted assets” in alphabetical order;

t. Remove the definition for “Expected credit loss (ECL)”;

u. Revise the definitions for “Exposure amount”, “FDIC-supervised institution”, paragraphs (4)(i)(A) and (5)(i) of “Financial institution”, and “Market risk FDIC-supervised

institution";

v. Add the definition for "Market risk-weighted assets" in alphabetical order;

w. Revise the definitions for "Net independent collateral amount" and "Netting set";

x. Add, in alphabetical order, the definitions for "Non-performing loan securitization (NPL securitization)" and "Nonrefundable purchase price discount (NRPPD)";

y. Revise the definition for "Protection amount (P)";

z. Add the definition for "Prepaid credit protection arrangement" and "Qualifying cross-product master netting agreement" in alphabetical order;

aa. In the definition for "Residential mortgage exposure":

i. Remove paragraph (2);

ii. Redesignate paragraphs (1)(i) and (ii) as paragraphs (1) and (2), respectively; and

iii. In newly redesignated paragraph (2), remove the words "family; and" and add, in their place, the word "family.";

bb. Remove the definition for "Securitization special purpose entity (securitization SPE)";

cc. Remove the definition for "Specific wrong-way risk";

dd. Add the definition of "Specified supranational entity" in alphabetical order;

ee. Revise the definitions for "Speculative grade", "Standardized market risk-weighted assets", "Standardized total risk-weighted assets", and "Sub-speculative grade";

ff. Add, in alphabetical order, the definition for "Synthetic excess spread";

gg. Revise the definition of "Synthetic securitization";

hh. Add the definition for "Total credit risk-weighted assets" in alphabetical order;

ii. Revise the definition for "Traditional securitization";

jj. Remove the definition for “Value-at-Risk (VaR)”;

kk. Revise the definition for “Variation margin amount”; and

ll. Remove the definition of “Unconditionally cancelable”.

The additions and revisions read as follows:

§ 324.2 Definitions

* * * * *

Adjusted allowances for credit losses (AACL) means valuation allowances that have been established through a charge against earnings or retained earnings for expected credit losses on financial assets measured at amortized cost and a lessor’s net investment in leases that have been established to reduce the amortized cost basis of the assets to amounts expected to be collected as determined in accordance with GAAP. For purposes of this part, adjusted allowances for credit losses include allowances for expected credit losses on off-balance sheet credit exposures not accounted for as insurance as determined in accordance with GAAP. Adjusted allowances for credit losses exclude allocated transfer risk reserves and allowances created that reflect credit losses on purchased credit deteriorated assets, purchased seasoned loans, assets required to record an allowance for credit losses through a gross-up adjustment to the purchase price of the asset, and available-for-sale debt securities.

* * * * *

Carrying value means, with respect to an asset, the value of the asset on the balance sheet of the FDIC-supervised institution as determined in accordance with GAAP. For all assets other than available-for-sale debt securities, purchased credit deteriorated assets, purchased seasoned loans, or assets required to record an allowance for credit losses through a gross-up adjustment to the purchase price of the asset, the carrying value is not reduced by any associated credit loss

allowance that is determined in accordance with GAAP.

Category I FDIC-supervised institution means an FDIC-supervised institution that is a subsidiary of a global systemically important BHC, as defined pursuant to 12 CFR 252.5.

Category II FDIC-supervised institution means an FDIC-supervised institution that is not a subsidiary of a global systemically important BHC, as defined pursuant to 12 CFR 252.5, and that:

(1) Is a subsidiary of a Category II banking organization, as defined pursuant to 12 CFR 252.5 or 12 CFR 238.10, as applicable; or

(2)(i) Has total consolidated assets, calculated based on the average of the FDIC-supervised institution's total consolidated assets for the four most recent calendar quarters, as reported on the Call Report, equal to $700 billion or more. If the FDIC-supervised institution has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or the average of the most recent quarters, as applicable; or

(ii)(A) Has total consolidated assets, calculated based on the average of the FDIC-supervised institution's total consolidated assets for the four most recent calendar quarters, as reported on the Call Report, of $100 billion or more but less than $700 billion. If the FDIC-supervised institution has not filed the Call Report for each of the four most recent quarters, total consolidated assets is based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or average of the most recent quarters, as applicable; and

(B) Has cross-jurisdictional activity, calculated based on the average of its cross-jurisdictional activity for the four most recent calendar quarters, of $75 billion or more. Cross-

jurisdictional activity is the sum of cross-jurisdictional claims and cross-jurisdictional liabilities, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form.

(3) After meeting the criteria in paragraph (2) of this definition, an FDIC supervised-institution continues to be a Category II FDIC-supervised institution until the FDIC-supervised institution has:

(i) Less than $700 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters; and

(ii) (A) Less than $75 billion in cross-jurisdictional activity for each of the four most recent calendar quarters. Cross-jurisdictional activity is the sum of cross-jurisdictional claims and cross-jurisdictional liabilities, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form; or

(B) Less than $100 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters.

Category III FDIC-supervised institution means an FDIC-supervised institution that is not a Category II FDIC-supervised institution and that:

(1) Is a subsidiary of a Category III banking organization, as defined pursuant to 12 CFR 252.5 or 12 CFR 238.10, as applicable; or

(2)(i) Has total consolidated assets, calculated based on the average of the FDIC-supervised institution’s total consolidated assets for the four most recent calendar quarters as reported on the Call Report, equal to $250 billion or more. If the FDIC-supervised institution has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or average of the most recent quarters, as applicable; or

(ii)(A) Has total consolidated assets, calculated based on the average of the FDIC-supervised institution's total consolidated assets for the four most recent calendar quarters as reported on the Call Report, of $100 billion or more but less than $250 billion. If the FDIC-supervised institution has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on its total consolidated assets, as reported on the Call Report, for the most recent quarter or average of the most recent quarters, as applicable; and

(B) Has at least one of the following in paragraphs (*2*)(ii)(B)(*1*) through (*3*) of this definition, each calculated as the average of the four most recent calendar quarters, or if the FDIC-supervised institution has not filed each applicable reporting form for each of the four most recent calendar quarters, for the most recent quarter or quarters, as applicable:

(*1*) Total nonbank assets, calculated in accordance with the instructions to the FR Y–9LP or equivalent reporting form, equal to $75 billion or more;

(*2*) Off-balance sheet exposure equal to $75 billion or more. Off-balance sheet exposure is the FDIC-supervised institution's total exposure, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form, minus the FDIC-supervised institution's total consolidated assets, as reported on the Call Report; or

(*3*) Weighted short-term wholesale funding, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form, equal to $75 billion or more.

(iii) After meeting the criteria in paragraph (2)(ii) of this definition, an FDIC-supervised institution continues to be a Category III FDIC-supervised institution until the FDIC-supervised institution:

(A) Has:

(*1*) Less than $250 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters;

(*2*) Less than $75 billion in total nonbank assets, calculated in accordance with the instructions to the FR Y–9LP or equivalent reporting form, for each of the four most recent calendar quarters;

(*3*) Less than $75 billion in weighted short-term wholesale funding, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form, for each of the four most recent calendar quarters; and

(*4*) Less than $75 billion in off-balance sheet exposure for each of the four most recent calendar quarters. Off-balance sheet exposure is an FDIC-supervised institution's total exposure, calculated in accordance with the instructions to the FR Y–15 or equivalent reporting form, minus the total consolidated assets of the FDIC-supervised institution, as reported on the Call Report; or

(B) Has less than $100 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters; or

(C) Is a Category II FDIC-supervised institution.

Category IV FDIC-supervised institution means an FDIC-supervised institution that is not a Category II FDIC-supervised institution or a Category III FDIC-supervised institution, and that:

(1) Is a subsidiary of a Category IV banking organization, as defined pursuant to 12 CFR 252.5 or 12 CFR 238.10, as applicable; or:

(2) Has total consolidated assets, calculated based on the average of the FDIC-supervised institution's total consolidated assets for the four most recent calendar quarters as reported on the

Call Report, of $100 billion or more. If the FDIC-supervised institution has not filed the Call Report for each of the four most recent calendar quarters, total consolidated assets is calculated based on the average of its total consolidated assets, as reported on the Call Report, for the most recent quarter(s) available.

(3) After meeting the criterion in paragraph (2) of this definition, an FDIC-supervised institution continues to be a Category IV FDIC-supervised institution until it:

(i) Has less than $100 billion in total consolidated assets, as reported on the Call Report, for each of the four most recent calendar quarters; or

(ii) Is a Category II FDIC-supervised institution or Category III FDIC-supervised institution.

* * * * *

Cleared transaction * * *

(2) * * *[1]

[1] For the standardized approach treatment of these exposures, see § 324.34(e) (OTC derivative contracts) or § 324.37(c) (repo-style transactions). For the expanded risk-based approach treatment of these exposures, see § 324.113.

* * * * *

Commitment means a contractual arrangement, under which an FDIC-supervised institution and an obligor agree to terms applicable to one or more future extensions of credit, purchases of assets, or issuances of credit substitutes by the FDIC-supervised institution, whether or not such arrangement is unconditionally cancelable. A commitment is unconditionally cancelable if, by its terms, it either: (a) provides that an FDIC-supervised institution is not obligated to extend credit, purchase assets, or issue credit substitutes; or (b) permits a FDIC-

supervised institution, at any time, with or without cause, to refuse to extend credit, purchase assets, or issue credit substitutes under the arrangement (to the extent permitted under applicable law).

* * * * *

Corporate exposure means an exposure to a company that is not:

(1) An exposure to a sovereign, a specified supranational entity, a multi-lateral development bank (MDB), a depository institution, a foreign bank, or a credit union, a public sector entity (PSE);

(2) An exposure to a government-sponsored enterprise (GSE);

(3) For purposes of subpart D of this part, a residential mortgage exposure;

(4) A pre-sold construction loan;

(5) A statutory multifamily mortgage;

(6) A high volatility commercial real estate (HVCRE) exposure;

(7) A cleared transaction;

(8) A default fund contribution;

(9) A securitization exposure;

(10) An equity exposure;

(11) An unsettled transaction;

(12) A policy loan;

(13) A separate account;

(14) A Paycheck Protection Program covered loan as defined in section 7(a)(36) or (37) of the Small Business Act (15 U.S.C. 636(a)(36)-(37));

(15) For purposes of subpart E of this part, a real estate exposure, as defined in §

324.101; or

(16) For purposes of subpart E of this part, a retail exposure as defined in § 324.101.

* * * * *

CVA risk-weighted assets means the measure for CVA risk calculated under § 324.221(a) multiplied by 12.5.

* * * * *

Dependent on the cash flows generated by the real estate means, for a real estate exposure, the underwriting, at the time of origination, includes the cash flows generated by lease, rental, or sale of the real estate securing the loan as a source of repayment. For purposes of this definition, a residential mortgage exposure that is secured by the borrower's principal residence is deemed not dependent on the cash flows generated by the real estate.

* * * * *

Effective notional amount means for an eligible guarantee, eligible credit derivative, or eligible prepaid credit protection arrangement, the lesser of the contractual notional amount of the credit risk mitigant and the exposure amount of the hedged exposure, multiplied by the percentage coverage of the credit risk mitigant.

* * * * *

Eligible clean-up call means a clean-up call that:

(1) Is exercisable solely at the discretion of the originating FDIC-supervised institution or servicer;

(2) Is not structured to avoid allocating losses to securitization exposures held by investors or otherwise structured to provide credit enhancement to the securitization; and

(3) Is only exercisable:

(i) For a traditional securitization, when 10 percent or less of the principal amount of the underlying exposures or securitization exposures (determined as of the inception of the securitization) is outstanding;

(ii) For a synthetic securitization, when 10 percent or less of the principal amount of the reference portfolio of underlying exposures (determined as of the inception of the securitization) is outstanding;

(iii) Upon the occurrence of a regulatory event that significantly changes the risk-weighted asset amount for the securitization exposure under this part; or

(iv) Upon the occurrence of a tax event that significantly changes the tax treatment of the securitization exposure under applicable tax laws.

* * * * *

Eligible guarantee means a guarantee that:

(1) Is written;

(2) Is either:

(i) Unconditional, or

(ii) A contingent obligation of the U.S. government or its agencies, the enforceability of which is dependent upon some affirmative action on the part of the beneficiary of the guarantee or a third party (for example, meeting servicing requirements);

(3) Covers all or a pro rata portion of all contractual payments of the obligated party on the reference exposure;

(4) Gives the beneficiary a direct claim against the protection provider;

(5) Is not unilaterally cancelable by the protection provider for reasons other than the breach of the contract by the beneficiary;

(6) Except for a guarantee by a sovereign, is legally enforceable against the protection provider in a jurisdiction where the protection provider has sufficient assets against which a judgment may be attached and enforced;

(7) Requires the protection provider to make payment to the beneficiary on the occurrence of a default (as defined in the guarantee) of the obligated party on the reference exposure in a timely manner without the beneficiary first having to take legal actions to pursue the obligor for payment;

(8) Does not increase the beneficiary's cost of credit protection on the guarantee in response to deterioration in the credit quality of the reference exposure;

(9) Is not provided by an affiliate of the FDIC-supervised institution, unless the affiliate is an insured depository institution, foreign bank, securities broker or dealer, or insurance company that:

(i) Does not control the FDIC-supervised institution; and

(ii) Is subject to consolidated supervision and regulation comparable to that imposed on depository institutions, U.S. securities broker-dealers, or U.S. insurance companies (as the case may be); and

(10) Is provided by an eligible guarantor.

* * * * *

Eligible prepaid credit protection arrangement means a prepaid credit protection arrangement that:

(1) Is written;

(2) Is unconditional;

(3) Covers all or a pro rata portion of all contractual payments due to be paid on the reference exposure or reference exposures;

(4) Provides that the amount and timing of payments due from the protection purchaser to the protection provider are incorporated into the arrangement and the arrangement only allows these terms to change in the event of a breach of the arrangement by the protection purchaser;

(5) Provides that entry of the protection provider into receivership, insolvency, liquidation, conservatorship, or similar proceeding does not change the amounts or timing of payments due to be paid by the protection purchaser under the arrangement;

(6) Is legally valid and enforceable under applicable law of the relevant jurisdictions;

(7) Upon a failure by the obligor on the one or more reference exposures to make a contractually required payment, or the occurrence of other credit events as described in the arrangement, allows the protection purchaser promptly to reduce the outstanding balance of the initial principal amount due to the protection provider by the loss of the protection purchaser on the reference exposures without input from the protection provider; and

(8) Does not increase the protection purchaser's cost of credit protection in response to deterioration in the credit quality of any of the reference exposures.

* * * * *

ERBA FDIC-supervised institution means an FDIC-supervised institution that is described in § 324.100(b).

* * * * *

Expanded total risk-weighted assets means the sum of:

(1) Total credit risk-weighted assets;

(2) Total risk-weighted assets for equity exposures as calculated under §§ 324.141 and

324.142;

(3) Risk-weighted assets for operational risk as calculated under § 324.150;

(4) Market risk-weighted assets, if applicable; and

(5) CVA risk-weighted assets, if applicable; minus

(6) Any amount of the FDIC-supervised institution's adjusted allowance for credit losses that is not included in tier 2 capital and any amount of allocated transfer risk reserves.

* * * * *

Exposure amount means:

(1) For the on-balance sheet component of an exposure (other than an available-for-sale or held-to-maturity security, if the FDIC-supervised institution has made an AOCI opt-out election (as defined in § 324.22(b)(2)); a derivative contract; a repo-style transaction or an eligible margin loan for which the FDIC-supervised institution determines the exposure amount under § 324.37, §§ 324.113 through 324.115, or § 324.121, as applicable; a cleared transaction; a default fund contribution; or a securitization exposure), the FDIC-supervised institution's carrying value of the exposure.

(2) For a security (that is not a securitization exposure, equity exposure, or preferred stock classified as an equity security under GAAP) classified as available-for-sale or held-to-maturity if the FDIC-supervised institution has made an AOCI opt-out election (as defined in § 324.22(b)(2)), the FDIC-supervised institution's carrying value (including net accrued but unpaid interest and fees) for the exposure less any net unrealized gains on the exposure and plus any net unrealized losses on the exposure.

(3) For available-for-sale preferred stock classified as an equity security under GAAP if the FDIC-supervised institution has made an AOCI opt-out election (as defined in §

324.22(b)(2)), the FDIC-supervised institution's carrying value of the exposure less any net unrealized gains on the exposure that are reflected in such carrying value but excluded from the FDIC-supervised institution's regulatory capital components.

(4) For the off-balance sheet component of an exposure (other than a derivative contract; a repo-style transaction or an eligible margin loan for which the FDIC-supervised institution calculates the exposure amount under § 324.37 or § 324.121, as applicable; a cleared transaction; a default fund contribution; or a securitization exposure), the notional amount of the off-balance sheet component multiplied by the appropriate credit conversion factor (CCF) in § 324.33 or § 324.112, as applicable.

(5) For an exposure that is a derivative contract (other than a cleared transaction), the exposure amount determined under § 324.34 or §§ 324.113 through 324.114, as applicable.

(6) For an exposure that is a cleared transaction, the exposure amount determined under § 324.35 or § 324.116, as applicable.

(7) For an exposure that is an eligible margin loan or repo-style transaction (other than a cleared transaction) for which the FDIC-supervised institution calculates the exposure amount as provided in § 324.37 or §§ 324.113 through 324.115, as applicable, the exposure amount determined under § 324.37 or § 324.113 through 324.115, as applicable.

(8) For an exposure that is a securitization exposure, the exposure amount determined under § 324.42 or § 324.131, as applicable.

* * * * *

FDIC-supervised institution means an FDIC-insured, state-chartered commercial or savings bank that is not a member of the Federal Reserve System and for which the FDIC is the appropriate Federal banking agency pursuant to section 3(q) of the Federal Deposit Insurance

Act (12 U.S.C. 1813(q)), or a state savings association.

* * * * *

Financial institution * * *

(4) * * *

(i) * * *

(A) An investment in GAAP equity instruments of the company with an adjusted carrying value or exposure amount equal to or greater than $10 million, as adjusted pursuant to § 217.4; or

* * * * *

(5) * * *

(i) 85 percent or more of the total consolidated annual gross revenues (as determined in accordance with applicable accounting standards) of the company in either of the two most recent calendar years were derived, directly or indirectly, by the company on a consolidated basis from the activities; or

* * * * *

Market risk FDIC-supervised institution means an FDIC-supervised institution that is described in § 324.201(b)(1).

Market risk-weighted assets means the measure for market risk calculated pursuant to § 324.204(a) multiplied by 12.5.

* * * * *

Net independent collateral amount means the fair value amount of the independent collateral, as adjusted by the haircuts under § 324.121(c)(2)(iii), as applicable, that a

counterparty to a netting set has posted to an FDIC-supervised institution less the fair value amount of the independent collateral, as adjusted by the haircuts under § 324.121(c)(2)(iii), as applicable, posted by the FDIC-supervised institution to the counterparty, excluding such amounts held in a bankruptcy-remote manner or posted to a QCCP and held in conformance with the operational requirements in § 324.3.

Netting set means a group of transactions with a single counterparty that are subject to a qualifying master netting agreement. For derivative contracts, netting set also includes a single derivative contract between an FDIC-supervised institution and a single counterparty.

* * * * *

Non-performing loan securitization (NPL securitization) means a traditional securitization, that is not a resecuritization, where parameter W (as defined in § 324.133(b)(1)) for the underlying exposures is greater than or equal to 90 percent at the origination cut-off date and at any subsequent date on which exposures are added to or removed from the pool of underlying exposures due to replenishment or restructuring.

Nonrefundable purchase price discount (NRPPD) means the difference between the outstanding principal balance of the underlying exposures at the time of sale and the price at which these exposures are sold by the originator to a company the activities of which are limited to those appropriate for the specific purpose of holding the underlying exposures of a securitization, when neither originator nor the original lender are reimbursed for this difference. In cases where the originator underwrites tranches of an NPL securitization for subsequent sale, the NRPPD may include the differences between the outstanding principal balance of the underlying exposures at the time of sale and the price at which all of the tranches are first sold to unrelated third parties. For any given piece of a securitization tranche, only its initial sale from

the originator to investors is taken into account in the determination of NRPPD. The purchase prices of subsequent re-sales of a securitization tranche are not considered.

* * * * *

Prepaid credit protection arrangement means a contractual arrangement under which a protection purchaser transfers the credit risk of one or more reference exposures to a protection provider where:

(1) The protection provider pays an initial principal amount in cash to the protection purchaser at the inception of the transaction; and

(2) The protection purchaser is obligated to repay the initial principal amount to the protection provider on or before the maturity date of the transaction, less any losses that the protection purchaser realizes or otherwise recognizes due to nonpayment of all contractual payments due to be paid on the reference exposure or reference exposures by the obligors.

* * * * *

Protection amount (P) means, with respect to an exposure hedged by an eligible guarantee, eligible credit derivative, or eligible prepaid credit protection arrangement, or secured by financial collateral, the effective notional amount of the guarantee, credit derivative, or prepaid credit protection arrangement, or the fair value of the financial collateral, reduced to reflect any currency mismatch, maturity mismatch, or lack of restructuring coverage (as provided in § 324.36-324.37 or § 324.120-121, as applicable).

* * * * *

Qualifying cross-product master netting agreement means a qualifying master netting agreement that provides for termination and close-out netting across multiple types of financial transactions or qualifying master netting agreements in the event of a counterparty's default,

provided that the underlying financial transactions are derivative contracts or repo-style transactions that are not cleared transactions. In order to treat an agreement as a qualifying cross-product master netting agreement, an FDIC-supervised institution must comply with the requirements of § 324.3(c) of this part with respect to that agreement.

* * * * *

Specified supranational entity means the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund, the European Stability Mechanism, or the European Financial Stability Facility.

* * * * *

Speculative grade means that the entity to which the FDIC-supervised institution is exposed through a loan or security, or the reference entity with respect to a credit derivative, has adequate capacity to meet financial commitments in the near term, but is vulnerable to adverse economic conditions, such that should economic conditions deteriorate, the issuer or the reference entity would present an elevated default risk.

Standardized market risk-weighted assets means the standardized measure for market risk calculated under § 324.204(b) multiplied by 12.5.

Standardized total risk-weighted assets means:

(1) The sum of:

(i) Total risk-weighted assets for general credit risk as calculated under § 324.31;

(ii) Total risk-weighted assets for cleared transactions and default fund contributions as calculated under § 324.35;

(iii) Total risk-weighted assets for unsettled transactions as calculated under § 324.38;

(iv) Total risk-weighted assets for securitization exposures as calculated under § 324.42;

(v) Total risk-weighted assets for equity exposures as calculated under § 324.52 and § 324.53; and

(vi) For a market risk FDIC-supervised institution only, market risk-weighted assets; less

(2) Any amount of the FDIC-supervised institution's adjusted allowance for credit losses that is not included in tier 2 capital and any amount of allocated transfer risk reserves.

* * * * *

Sub-speculative grade means that the entity to which the FDIC-supervised institution is exposed through a loan or security, or the reference entity with respect to a credit derivative, depends on favorable economic conditions to meet its financial commitments, such that should such economic conditions deteriorate the issuer or the reference entity likely would default on its financial commitments.

* * * * *

Synthetic securitization means a transaction in which:

(1) All or a portion of the credit risk of one or more underlying exposures is retained or transferred to one or more third parties through the use of one or more credit derivatives, guarantees (other than a guarantee that transfers only the credit risk of an individual retail exposure), or prepaid credit protection arrangements;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends solely upon the performance of the underlying exposures; and

(4) All or substantially all of the underlying exposures are financial exposures (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities).

* * * * *

Total credit risk-weighted assets means the sum of:

(1) Total risk-weighted assets for general credit risk as calculated under §324.110;

(2) Total risk-weighted assets for cleared transactions and default fund contributions as calculated under § 324.116;

(3) Total risk-weighted assets for unsettled transactions as calculated under § 324.117; and

(4) Total risk-weighted assets for securitization exposures as calculated under § 324.132.

* * * * *

Traditional securitization means a transaction in which:

(1) All or a portion of the credit or equity risk of one or more underlying exposures is transferred to one or more third parties other than through the use of credit derivatives, guarantees, or prepaid credit protection arrangements;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;

(3) Performance of the securitization exposures depends solely upon the performance of the underlying exposures;

(4) All or substantially all of the underlying exposures are financial exposures (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities);

(5) The underlying exposures are not owned by an operating company;

(6) The underlying exposures are not owned by a small business investment company defined in section 302 of the Small Business Investment Act;

(7) The underlying exposures are not owned by a firm an investment in which qualifies as a community development investment under section 24(Eleventh) of the National Bank Act;

(8) The FDIC may determine that a transaction in which the underlying exposures are owned by an investment firm that exercises substantially unfettered control over the size and composition of its assets, liabilities, and off-balance sheet exposures is not a traditional securitization based on the transaction's leverage, risk profile, or economic substance;

(9) The FDIC may deem a transaction that meets the definition of a traditional securitization, notwithstanding paragraph (5), (6), or (7) of this definition, to be a traditional securitization based on the transaction's leverage, risk profile, or economic substance; and

(10) The transaction is not:

(i) An investment fund;

(ii) A collective investment fund (as defined in 12 CFR 344.3 (state nonmember bank), and 12 CFR 390.203 (state savings association);

(iii) An employee benefit plan (as defined in paragraphs (3) and (32) of section 3 of ERISA), a “governmental plan” (as defined in 29 U.S.C. 1002(32)) that complies with the tax deferral qualification requirements provided in the Internal Revenue Code, or any similar employee benefit plan established under the laws of a foreign jurisdiction;

(iv) A synthetic exposure to the capital of a financial institution to the extent deducted from capital under § 324.22; or

(v) Registered with the SEC under the Investment Company Act of 1940 or foreign equivalents thereof.

* * * * *

Variation margin amount means the fair value amount of the variation margin, as adjusted by the standard supervisory haircuts under § 324.121(c)(2)(iii), as applicable, that a counterparty to a netting set has posted to an FDIC-supervised institution less the fair value amount of the variation margin, as adjusted by the standard supervisory haircuts under § 324.121(c)(2)(iii), as applicable, posted by the FDIC-supervised institution to the counterparty.

* * * * *

91. In § 324.3, revise paragraph (c) to read as follows:

§ 324.3 Operational requirements for counterparty credit risk.

* * * * *

(c) *Qualifying cross-product master netting agreement.* In order to recognize an agreement as a qualifying cross-product master netting agreement as defined in § 324.2, an FDIC-supervised institution must obtain a written legal opinion verifying the validity and enforceability of the agreement under applicable law of the relevant jurisdictions if the counterparty fails to perform upon an event of default, including upon receivership, insolvency, liquidation, or similar proceeding

* * * * *

§ 324.4 [Redesignated as § 324.6]

92. Redesignate § 324.4 as § 324.6.

a. Redesignate footnote 10 as footnote 1.

b. Revise newly redesignated footnote 1.

The revision reads as follows:

§ 324.6 Inadequate capital as an unsafe or unsound practice or condition.

* * * * *

[1] The term total assets shall have the same meaning as provided in 12 CFR 324.401(g).

§ 324.5 [Redesignated as § 324.7]

93. Redesignate § 324.5 as § 324.7.

a. In paragraph (a), remove the reference "§§ 324.4 and 324.10" and adding in its place the reference "§§ 324.6 and 324.10".

94. Add section § 324.4 to read as follows:

§ 324.4 Threshold Indexing.

(a) *Methodology*. The dollar thresholds specified in paragraph (c) of this section shall be adjusted by multiplying the baseline threshold values specified in paragraph (c) of this section by one plus the cumulative percent change in the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers, measured from the effective date of this rule, as further described in paragraph (b) of this section, and shall be rounded in accordance with paragraph (d) of this section.

(b) *Frequency*. (1) *In general – biennial adjustments*. Except as otherwise provided in paragraph (b)(2) and (b)(3) of this section, the adjustments described in paragraph (a) of this section shall be effective on October 1 following each consecutive two year period ending August 30, and using the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers as of August 30 of that year.

(2) *Off-year adjustments*. In the event that the FDIC determines, during a year where no adjustment would be made under paragraph (b)(1), that the non-seasonally adjusted Consumer

Price Index for Urban Wage Earners and Clerical Workers, measured over the twelve month period ending August 30 of that year, is such that an adjustment under this section would be appropriate for that year, the FDIC may make an adjustment under this section for that year.

(3) *Periods of negative inflation*. Notwithstanding paragraph (b)(1) or (b)(2) of this section, if an adjustment of dollar thresholds using the cumulative percent change of the non-seasonally adjusted Consumer Price Index for Urban Wage Earners and Clerical Workers from the effective date of this rule or the most recent adjustment, as applicable, would not result in an increase from the current dollar thresholds, no adjustment will be made pursuant to paragraph (a) of this section.

(c) *Specified thresholds*. The thresholds in the following sections shall be adjusted in accordance with paragraph (a) of this section relative to the baseline threshold values as specified below.

(1) § 324.2, definition of Financial institution, paragraph (4)(i)(A), baseline threshold value $10 million;

(2) § 324.101, definition of Regulatory retail exposure, paragraph (2), baseline threshold value $1 million;

(3) § 324.101, definition of Small or medium-sized entity (SME), baseline threshold value $50 million;

(4) § 324.150(b)(1), baseline threshold value $1 billion;

(5) § 324.150(b)(2), baseline threshold values $1 billion, $30 billion, and $120 million;

(6) § 324.150(b)(2)(i), baseline threshold value $1 billion;

(7) § 324.150(b)(3), baseline threshold values $30 billion and $4.47 billion

(8) § 324.150(b)(3)(i), baseline threshold value $30 billion;

(9) § 324.150(d)(2)(i)(A), baseline threshold value $20,000;

(10) § 324.201(b)(1)(ii)(B), baseline threshold value $5 billion;

(11) § 324.201(b)(2)(ii), baseline threshold value $1 trillion;

(12) § 324.202 “Large market cap”, baseline threshold value $2 billion;

(15) § 324.202, “Market risk covered position” (1)(ii)(D), baseline value $20 million;

(16) § 324.202, “Small market cap”, baseline threshold value $2 billion.

(d) *Rounding*. When adjusting thresholds under this section, each threshold shall be rounded based on the size of the threshold (e.g., thousands, millions, billions) to the nearest number with two significant digits.

(e) *Effective date of threshold adjustments*. The FDIC shall announce the thresholds adjusted in accordance with this section by publication in the Federal Register. Such adjusted thresholds shall be effective on October 1 of the year during which an adjustment is made.

(f) *Failure to publish in the Federal Register*. In the event, for any reason, the thresholds adjusted in accordance with this section are not published in the Federal Register in a year in which an adjustment is made under this section, the thresholds specified in paragraph (c) of this section will adjust as provided in this section and be effective on October 1, notwithstanding the lack of publication in the Federal Register.

* * * * *

95. Add § 324.5 “Calculation of loan-to-value (LTV) ratio.”

The addition reads as follows:

§ 324.5 Calculation of loan-to-value (LTV) ratio.

(a) *Loan-to-Value ratio.* The loan-to-value (LTV) ratio must be calculated as the extension of credit divided by the value of the property.

(b) *Extension of credit.* For purposes of a LTV ratio calculated under this section, the extension of credit is equal to the total outstanding amount of the loan including any undrawn committed amount of the loan.

(c) *Value of the property.* (1) For purposes of a LTV ratio calculated under this section, the value of the property is the market value of all real estate properties securing or being improved by the extension of credit plus the amount of any readily marketable collateral and other acceptable collateral, as defined in 12 CFR part 365, Subpart A, Appendix A, that secures the extension of credit, subject to the following:

(i) For exposures subject to 12 CFR part 323, Subpart A, the market value of property is a valuation that meets all requirements of that rule.

(ii) For exposures not subject to 12 CFR part 323, Subpart A:

(A) The market value of real estate must be obtained from an independent valuation of the property using prudently conservative valuation criteria;

(B) The valuation must be done independently from the FDIC-supervised institution's origination and underwriting process, and

(C) To ensure that the market value of the real estate is determined in a prudently conservative manner, the valuation must exclude expectations of price increases and must be adjusted downward to account for the potential for the current market price to be significantly above the value that would be sustainable over the life of the loan.

(2) In the case where the exposure includes the financing to purchase the property, the value of the property is the lower of the market value obtained under paragraph (c)(1)(i) or (c)(1)(ii) of this section, as applicable, and the actual acquisition cost.

(3) The value of the property must be measured at the time of origination, except in the following circumstances:

(i) The FDIC requires an FDIC-supervised institution to revise the value of the property downward;

(ii) The value of the property must be adjusted downward due to an extraordinary event that results in a permanent reduction of the property value; or

(iii) The value of the property may be increased to reflect modifications made to the property that increase the market value, as determined according to the requirements in paragraphs (c)(1)(i) or (ii) of this section.

(4) Readily marketable collateral and other acceptable collateral, as defined in 12 CFR part 365, Subpart A, Appendix A, must be appropriately discounted by the FDIC-supervised institution consistent with the FDIC-supervised institution's usual practices for making loans secured by such collateral.

Subpart B—Capital Ratio Requirements and Buffers

96. In § 324.10:

a. Revise paragraphs (a)(1)(v), (b), (c), (d); and

b. Add paragraph (b)(6).

The revisions read as follows:

§ 324.10 Minimum capital requirements.

* * * * *

(a) * * *

(1) * * *

(v) For an Category I FDIC-supervised institution, Category II FDIC-supervised institution, or Category III FDIC-supervised institution, a supplementary leverage ratio of 3 percent.

* * * * *

(b) *Standardized capital ratio calculations.* For an FDIC-supervised institution that is not a Category I FDIC-supervised institution or Category II FDIC-supervised institution:

(1) *Common equity tier 1 capital ratio.* The FDIC-supervised institution's common equity tier 1 capital ratio is the ratio of the FDIC-supervised institution's common equity tier 1 capital to selected total risk-weighted assets;

(2) *Tier 1 capital ratio.* The FDIC-supervised institution's tier 1 capital ratio is the ratio of the FDIC-supervised institution's tier 1 capital to selected total risk-weighted assets;

(3) *Total capital ratio.* The FDIC-supervised institution's total capital ratio is the ratio of the FDIC-supervised institution's total capital to selected total risk-weighted assets; and

(4) *Leverage ratio.* The FDIC-supervised institution's leverage ratio is the ratio of the FDIC-supervised institution's tier 1 capital to the FDIC-supervised institution's average total consolidated assets as reported on the FDIC-supervised institution's Call Report, minus amounts deducted from tier 1 capital under § 324.22(a), (c) and (d).

(5) *State savings association tangible capital ratio.* A state savings association's tangible capital ratio is the ratio of the state savings association's core capital (tier 1 capital) to total assets. For purposes of this paragraph (b)(5), the term total assets shall have the meaning provided in § 324.401(g).

(6) *Selected total risk-weighted assets*. An FDIC-supervised institution's selected total risk-weighted assets is either the FDIC-supervised institution's standardized total risk-weighted assets or expanded total risk-weighted assets, as selected by the FDIC-supervised institution. An FDIC-supervised institution may change its choice for selected total risk-weighted assets by providing the FDIC with prior notice of the change at least four full calendar quarters before the calendar quarter in which the change will take effect.

(c) *Supplementary leverage ratio.* (1) The supplementary leverage ratio of a Category I FDIC-supervised institution, Category II FDIC-supervised institution, or Category III FDIC-supervised institution is the ratio of its tier 1 capital to total leverage exposure. Total leverage exposure is calculated as the sum of:

(i) The mean of the on-balance sheet assets calculated as of each day of the reporting quarter; and

(ii) The mean of the off-balance sheet exposures calculated as of the last day of each of the most recent three months, minus the applicable deductions under § 324.22(a), (c), and (d).

(2) For purposes of this part, *total leverage exposure* means the sum of the items described in paragraphs (c)(2)(i) through (viii) of this section, as adjusted pursuant to paragraph (c)(2)(ix) of this section for a clearing member FDIC-supervised institution and paragraph (c)(2)(x) of this section for a custody bank:

(i) The balance sheet carrying value of all of the FDIC-supervised institution's on-balance sheet assets, net of adjusted allowances for credit losses, *plus* the value of securities sold under a repurchase transaction or a securities lending transaction that qualifies for sales treatment under GAAP, *less* amounts deducted from tier 1 capital under § 324.22(a), (c), and (d), *less* the value of securities received in security-for-security repo-style transactions, where the FDIC-supervised institution acts as a securities lender and includes the securities received in its on-balance sheet assets but has not sold or re-hypothecated the securities received, and, for an FDIC-supervised institution that uses the standardized approach for counterparty credit risk (SA-CCR) under § 324.114 for its standardized total risk-weighted assets or expanded total risk-weighted assets, *less* the fair value of any derivative contracts;

(ii) (A) For an FDIC-supervised institution that uses the current exposure methodology

under § 324.34(b) for its standardized total risk-weighted assets, the potential future credit exposure (PFE) for each derivative contract or each single-product netting set of derivative contracts (including a cleared transaction except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the FDIC-supervised institution, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP), to which the FDIC-supervised institution is a counterparty as determined under § 324.34, but without regard to § 324.34(c), provided that:

(*1*) An FDIC-supervised institution may choose to exclude the PFE of all credit derivatives or other similar instruments through which it provides credit protection when calculating the PFE under § 324.34, but without regard to § 324.34(c), provided that it does not adjust the net-to-gross ratio (NGR); and

(*2*) An FDIC-supervised institution that chooses to exclude the PFE of credit derivatives or other similar instruments through which it provides credit protection pursuant to paragraph (c)(2)(ii)(A) of this section must do so consistently over time for the calculation of the PFE for all such instruments; or

(B) (*1*) For an FDIC-supervised institution that uses SA-CCR under § 324.114 for its standardized total risk-weighted assets or expanded total risk-weighted assets, the PFE under SA-CCR each derivative contract or single product netting set of derivative contracts to which the FDIC-supervised institution is a counterparty (including cleared transactions except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the FDIC-supervised institution, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies

for sales treatment under GAAP), as determined under § 324.114(g), in which the term C in § 324.114(g)(1) equals zero, and, for any counterparty that is not a commercial end-user, multiplied by 1.4. For purposes of this paragraph (c)(2)(ii)(A), an FDIC-supervised institution may set the value of the term C in § 324.114(g)(1) equal to the amount of collateral posted by a clearing member client of the FDIC-supervised institution in connection with the client-facing derivative transactions within the netting set; and

(*2*) An FDIC-supervised institution may choose to exclude the PFE of all credit derivatives or other similar instruments through which it provides credit protection when calculating the PFE under § 324.114, provided that it does so consistently over time for the calculation of the PFE for all such instruments;

(iii)(A)(*1*) For an FDIC-supervised institution that uses the current exposure methodology under § 324.34(b) for its standardized total risk-weighted assets, the amount of cash collateral that is received from a counterparty to a derivative contract and that has offset the mark-to-fair value of the derivative asset, or cash collateral that is posted to a counterparty to a derivative contract and that has reduced the FDIC-supervised institution's on-balance sheet assets, unless such cash collateral is all or part of variation margin that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section; and

(*2*) The variation margin is used to reduce the current credit exposure of the derivative contract, calculated as described in § 324.34(b), and not the PFE; and

(*3*) For the purpose of the calculation of the NGR described in § 324.34(b)(2)(ii)(B), variation margin described in paragraph (c)(2)(iii)(A)(2) of this section may not reduce the net current credit exposure or the gross current credit exposure; or

(B)*(1)* For an FDIC-supervised institution that uses SA-CCR under § 324.114 for its

standardized total risk-weighted assets or expanded total risk-weighted assets, the replacement cost under § 324.114 of each derivative contract or single product netting set of derivative contracts to which the FDIC-supervised institution is a counterparty, calculated according to the following formula, and, for any counterparty that is not a commercial end-user, multiplied by 1.4:

$$\text{Replacement Cost} = \max\{V - CVM_r + CVM_p; 0\}$$

Where:

V equals the fair value for each derivative contract or each netting set of derivative contracts (including a cleared transaction except as provided in paragraph (c)(2)(ix) of this section and, at the discretion of the FDIC-supervised institution, excluding a forward agreement treated as a derivative contract that is part of a repurchase or reverse repurchase or a securities borrowing or lending transaction that qualifies for sales treatment under GAAP);

CVM_r equals the amount of cash collateral received from a counterparty to a derivative contract and that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section, or, in the case of a client-facing derivative transaction, the amount of collateral received from the clearing member client; and

CVM_p equals the amount of cash collateral that is posted to a counterparty to a derivative contract and that has not offset the fair value of the derivative contract and that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section, or, in the case of a client-facing derivative transaction, the amount of collateral posted to the clearing member client;

(2) Notwithstanding paragraph (c)(2)(iii)(A)*(1)* of this section, where multiple netting sets are subject to a single variation margin agreement, an FDIC-supervised institution must apply the formula for replacement cost provided in § 324.114(j)(1), in which the term CMA may

only include cash collateral that satisfies the conditions in paragraphs (c)(2)(iii)(C) through (G) of this section; and

(3) For purposes of paragraph (c)(2)(iii)(A) of this section, an FDIC-supervised institution must treat a derivative contract that references an index as if it were multiple derivative contracts each referencing one component of the index if the FDIC-supervised institution elected to treat the derivative contract as multiple derivative contracts under § 324.114(e)(6);

(C) For derivative contracts that are not cleared through a QCCP, the cash collateral received by the recipient counterparty is not segregated (by law, regulation, or an agreement with the counterparty);

(D) Variation margin is calculated and transferred on a daily basis based on the mark-to-fair value of the derivative contract;

(E) The variation margin transferred under the derivative contract or the governing rules of the CCP or QCCP for a cleared transaction is the full amount that is necessary to fully extinguish the net current credit exposure to the counterparty of the derivative contracts, subject to the threshold and minimum transfer amounts applicable to the counterparty under the terms of the derivative contract or the governing rules for a cleared transaction;

(F) The variation margin is in the form of cash in the same currency as the currency of settlement set forth in the derivative contract, provided that for the purposes of this paragraph (c)(2)(iii)(F), currency of settlement means any currency for settlement specified in the governing qualifying master netting agreement and the credit support annex to the qualifying master netting agreement, or in the governing rules for a cleared transaction; and

(G) The derivative contract and the variation margin are governed by a qualifying master

netting agreement between the legal entities that are the counterparties to the derivative contract or by the governing rules for a cleared transaction, and the qualifying master netting agreement or the governing rules for a cleared transaction must explicitly stipulate that the counterparties agree to settle any payment obligations on a net basis, taking into account any variation margin received or provided under the contract if a credit event involving either counterparty occurs;

(iv) The effective notional principal amount (that is, the apparent or stated notional principal amount multiplied by any multiplier in the derivative contract) of a credit derivative, or other similar instrument, through which the FDIC-supervised institution provides credit protection, provided that:

(A) The FDIC-supervised institution may reduce the effective notional principal amount of the credit derivative by the amount of any reduction in the mark-to-fair value of the credit derivative if the reduction is recognized in common equity tier 1 capital;

(B) The FDIC-supervised institution may reduce the effective notional principal amount of the credit derivative by the effective notional principal amount of a purchased credit derivative or other similar instrument, provided that the remaining maturity of the purchased credit derivative is equal to or greater than the remaining maturity of the credit derivative through which the FDIC-supervised institution provides credit protection and that:

(1) With respect to a credit derivative that references a single exposure, the reference exposure of the purchased credit derivative is to the same legal entity and ranks pari passu with, or is junior to, the reference exposure of the credit derivative through which the FDIC-supervised institution provides credit protection; or

(2) With respect to a credit derivative that references multiple exposures, the reference exposures of the purchased credit derivative are to the same legal entities and rank pari passu

with the reference exposures of the credit derivative through which the FDIC-supervised institution provides credit protection, and the level of seniority of the purchased credit derivative ranks pari passu to the level of seniority of the credit derivative through which the FDIC-supervised institution provides credit protection;

(3) Where an FDIC-supervised institution has reduced the effective notional principal amount of a credit derivative through which the FDIC-supervised institution provides credit protection in accordance with paragraph (c)(2)(iv)(A) of this section, the FDIC-supervised institution must also reduce the effective notional principal amount of a purchased credit derivative used to offset the credit derivative through which the FDIC-supervised institution provides credit protection, by the amount of any increase in the mark-to-fair value of the purchased credit derivative that is recognized in common equity tier 1 capital; and

(4) Where the FDIC-supervised institution purchases credit protection through a total return swap and records the net payments received on a credit derivative through which the FDIC-supervised institution provides credit protection in net income, but does not record offsetting deterioration in the mark-to-fair value of the credit derivative through which the FDIC-supervised institution provides credit protection in net income (either through reductions in fair value or by additions to reserves), the FDIC-supervised institution may not use the purchased credit protection to offset the effective notional principal amount of the related credit derivative through which the FDIC-supervised institution provides credit protection;

(v) Where an FDIC-supervised institution acting as a principal has more than one repo-style transaction with the same counterparty and has offset the gross value of receivables due from a counterparty under reverse repurchase transactions by the gross value of payables under repurchase transactions due to the same counterparty, the gross value of receivables associated

with the repo-style transactions *less* any on-balance sheet receivables amount associated with these repo-style transactions included under paragraph (c)(2)(i) of this section, unless the following criteria are met:

(A) The offsetting transactions have the same explicit final settlement date under their governing agreements;

(B) The right to offset the amount owed to the counterparty with the amount owed by the counterparty is legally enforceable in the normal course of business and in the event of receivership, insolvency, liquidation, or similar proceeding; and

(C) Under the governing agreements, the counterparties intend to settle net, settle simultaneously, or settle according to a process that is the functional equivalent of net settlement, (that is, the cash flows of the transactions are equivalent, in effect, to a single net amount on the settlement date), where both transactions are settled through the same settlement system, the settlement arrangements are supported by cash or intraday credit facilities intended to ensure that settlement of both transactions will occur by the end of the business day, and the settlement of the underlying securities does not interfere with the net cash settlement;

(vi) The counterparty credit risk of a repo-style transaction, including where the FDIC-supervised institution acts as an agent for a repo-style transaction and indemnifies the customer with respect to the performance of the customer's counterparty in an amount limited to the difference between the fair value of the security or cash its customer has lent and the fair value of the collateral the borrower has provided, calculated as follows:

(A) If the transaction is not subject to a qualifying master netting agreement, the counterparty credit risk (E*) for transactions with a counterparty must be calculated on a transaction by transaction basis, such that each transaction *i* is treated as its own netting set, in

accordance with the following formula, where E_i is the fair value of the instruments, gold, or cash that the FDIC-supervised institution has lent, sold subject to repurchase, or provided as collateral to the counterparty, and C_i is the fair value of the instruments, gold, or cash that the FDIC-supervised institution has borrowed, purchased subject to resale, or received as collateral from the counterparty:

$E_i^* = \max \{0, [E_i — C_i]\}$; and

(B) If the transaction is subject to a qualifying master netting agreement, the counterparty credit risk (E*) must be calculated as the greater of zero and the total fair value of the instruments, gold, or cash that the FDIC-supervised institution has lent, sold subject to repurchase or provided as collateral to a counterparty for all transactions included in the qualifying master netting agreement (ΣE_i), *less* the total fair value of the instruments, gold, or cash that the FDIC-supervised institution borrowed, purchased subject to resale or received as collateral from the counterparty for those transactions (ΣC_i), in accordance with the following formula:

$E^* = \max \{0, [\Sigma ei - \Sigma ci]\}$

(vii) If an FDIC-supervised institution acting as an agent for a repo-style transaction provides a guarantee to a customer of the security or cash its customer has lent or borrowed with respect to the performance of the customer's counterparty and the guarantee is not limited to the difference between the fair value of the security or cash its customer has lent and the fair value of the collateral the borrower has provided, the amount of the guarantee that is greater than the difference between the fair value of the security or cash its customer has lent and the value of the collateral the borrower has provided;

(viii) The credit equivalent amount of all off-balance sheet exposures of the FDIC-

supervised institution, excluding repo-style transactions, repurchase or reverse repurchase or securities borrowing or lending transactions that qualify for sales treatment under GAAP, and derivative transactions, determined using:

(A) For an FDIC-supervised institution that elects to calculate its standardized total risk-weighted assets under § 324.10(b), the applicable credit conversion factor under § 324.33(b), provided, however, that the minimum credit conversion factor that may be assigned to an off-balance sheet exposure under this paragraph is 10 percent; or

(B) For an FDIC-supervised institution that elects to calculate its expanded total risk-weighted assets under § 324.10(b), a Category I FDIC-supervised institution, a Category II FDIC-supervised institution, the applicable credit conversion factor under § 324.112(b), provided, however, that the minimum credit conversion factor that may be assigned to an off-balance sheet exposure under this paragraph is 10 percent; and

(ix) For an FDIC-supervised institution that is a clearing member:

(A) A clearing member FDIC-supervised institution that guarantees the performance of a clearing member client with respect to a cleared transaction must treat its exposure to the clearing member client as a derivative contract or repo-style transaction, as applicable, for purposes of determining its total leverage exposure;

(B) A clearing member FDIC-supervised institution that guarantees the performance of a CCP with respect to a transaction cleared on behalf of a clearing member client must treat its exposure to the CCP as a derivative contract or repo-style transaction, as applicable, for purposes of determining its total leverage exposure;

(C) A clearing member FDIC-supervised institution that does not guarantee the performance of a CCP with respect to a transaction cleared on behalf of a clearing member client

may exclude its exposure to the CCP for purposes of determining its total leverage exposure;

(D) An FDIC-supervised institution that is a clearing member may exclude from its total leverage exposure the effective notional principal amount of credit protection sold through a credit derivative contract, or other similar instrument, that it clears on behalf of a clearing member client through a CCP as calculated in accordance with paragraph (c)(2)(iv) of this section;

(E) Notwithstanding paragraphs (c)(2)(ix)(A) through (C) of this section, an FDIC-supervised institution may exclude from its total leverage exposure a clearing member's exposure to a clearing member client for a derivative contract if the clearing member client and the clearing member are affiliates and consolidated for financial reporting purposes on the FDIC-supervised institution's balance sheet; and

(F) Notwithstanding paragraph (c)(2)(ix)(A), an FDIC-supervised institution that has elected under § 324.113(c) to treat any repo-style transactions subject to a qualifying cross-product master netting agreement as derivative contracts must treat any such repo-style transactions as a derivative contract for purposes of this paragraph (c).

(x) A custody bank shall exclude from its total leverage exposure the lesser of:

(A) The amount of funds that the custody bank has on deposit at a qualifying central bank; and

(B) The amount of funds in deposit accounts at the custody bank that are linked to fiduciary or custodial and safekeeping accounts at the custody bank. For purposes of this paragraph (c)(2)(x), a deposit account is linked to a fiduciary or custodial and safekeeping account if the deposit account is provided to a client that maintains a fiduciary or custodial and safekeeping account with the custody bank and the deposit account is used to facilitate the

administration of the fiduciary or custodial and safekeeping account.

* * * * *

(d) *Expanded capital ratio calculations.* For a Category I FDIC-supervised institution, a Category II FDIC-supervised institution, or an ERBA FDIC-supervised institution:

(1) *Common equity tier 1 capital ratio.* The FDIC-supervised institution's common equity tier 1 capital ratio is the ratio of the FDIC-supervised institution's common equity tier 1 capital to expanded total risk-weighted assets;

(2) *Tier 1 capital ratio.* The FDIC-supervised institution's tier 1 capital ratio is the ratio of the FDIC-supervised institution's tier 1 capital to expanded total risk-weighted assets;

(3) *Total capital ratio.* The FDIC-supervised institution's total capital ratio is the ratio of the FDIC-supervised institution's total capital to expanded total risk-weighted assets; and

(4) *Leverage ratio.* The FDIC-supervised institution's leverage ratio is the ratio of the FDIC-supervised institution's tier 1 capital to the FDIC-supervised institution's average total consolidated assets as reported on the FDIC-supervised institution's Call Report, minus amounts deducted from tier 1 capital under § 324.22(a), (c) and (d).

(5) *State savings association tangible capital ratio.* A state savings association's tangible capital ratio is the ratio of the state savings association's core capital (tier 1 capital) to total assets. For purposes of this paragraph, the term total assets shall have the meaning provided in 12 CFR 324.401(g).

* * * * *

97. In § 324.11:

a. Revise paragraph (a)(2)(iv);

b. In paragraph (b)(1), remove the words "An advanced approaches FDIC-supervised

institution or a Category III FDIC-supervised institution" and add in their place the words "A Category I FDIC-supervised institution, a Category II FDIC-supervised institution, or a Category III FDIC-supervised institution";

c. Revise paragraph (b)(1)(iii); and

d. In paragraph (b)(2)(ii), redesignate footnote 11 as footnote 1.

The revision reads as follows:

§ 324.11 Capital conservation buffer and countercyclical capital buffer amount

* * * * *

(a) * * *

(2) * * *

(iv) Private sector credit exposure. Private sector credit exposure means an exposure to a company or an individual that is not an exposure to a sovereign, a specified supranational entity, a MDB, a PSE, or a GSE.

(b) * * *

(1) * * *

(iii) *Weighting*. The weight assigned to a jurisdiction's countercyclical capital buffer amount is calculated by dividing the total risk-weighted assets for the FDIC-supervised institution's private sector credit exposures located in the jurisdiction by the total risk-weighted assets for all of the FDIC-supervised institution's private sector credit exposures. The methodology an FDIC-supervised institution uses for determining risk-weighted assets for purposes of this paragraph (b) must be the methodology that determines its risk-based capital ratios under § 324.10. Notwithstanding the previous sentence, the risk-weighted asset amount for a private sector credit exposure that is a covered position under subpart F of this part is its

standardized default risk capital requirement as determined under § 324.210 multiplied by 12.5.

* * * * *

§ 324.12 [Amended]

98. In § 324.12, remove paragraph (a)(4).

Subpart C—Definition of Capital

99. In § 324.20:

a. Revise paragraphs (c)(1)(xiv), (d)(1)(xi), and (d)(3); and

b. Redesignate footnotes 12 through 23 as footnotes 1 through 12, respectively;

The revisions read as follows:

§ 324.20 Capital components and eligibility criteria for regulatory capital instruments.

* * * * *

(c) * * *

(1) * * *

(xiv) For an ERBA FDIC-supervised institution, the governing agreement, offering circular, or prospectus of an instrument issued after the date upon which the FDIC-supervised institution becomes subject to this part must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the FDIC-supervised institution enters into a receivership, insolvency, liquidation, or similar proceeding.

* * * * *

(d) * * *

(1) * * *

(xi) For an ERBA FDIC-supervised institution, the governing agreement, offering circular, or prospectus of an instrument issued after the date on which the FDIC-supervised

institution becomes subject to this part must disclose that the holders of the instrument may be fully subordinated to interests held by the U.S. government in the event that the FDIC-supervised institution enters into a receivership, insolvency, liquidation, or similar proceeding.

* * * * *

(3) AACL up to 1.25 percent of the FDIC-supervised institution's standardized total risk-weighted assets or total credit risk-weighted assets, as applicable, not including any amount of the AACL (and excluding the case of a market risk FDIC-supervised institution, its market risk weighted assets).

* * * * *

100. In § 324.21:

a. Revise paragraph (b).

The revision reads as follows:

§ 324.21 Minority interest.

* * * * *

(b) (1) *Applicability*. For purposes of § 324.20, an ERBA FDIC-supervised institution is subject to the minority interest limitations in this paragraph (b) if:

(i) A consolidated subsidiary of the FDIC-supervised institution has issued regulatory capital that is not owned by the FDIC-supervised institution; and

(ii) For each relevant regulatory capital ratio of the consolidated subsidiary, the ratio exceeds the sum of the subsidiary's minimum regulatory capital requirements plus its capital conservation buffer.

(2) *Difference in capital adequacy standards at the subsidiary level*. For purposes of the minority interest calculations in this section, if the consolidated subsidiary issuing the capital is

not subject to capital adequacy standards similar to those of the ERBA FDIC-supervised institution, the ERBA FDIC-supervised institution must assume that the capital adequacy standards of the FDIC-supervised institution apply to the subsidiary.

(3) *Common equity tier 1 minority interest includable in the common equity tier 1 capital of the FDIC-supervised institution*. For each consolidated subsidiary of an ERBA FDIC-supervised institution, the amount of common equity tier 1 minority interest the FDIC-supervised institution may include in common equity tier 1 capital is equal to:

(i) The common equity tier 1 minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's common equity tier 1 capital that is not owned by the FDIC-supervised institution, multiplied by the difference between the common equity tier 1 capital of the subsidiary and the lower of:

(A) The amount of common equity tier 1 capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 324.11 or equivalent standards established by the subsidiary's home country supervisor; or

(B) (*1*) The expanded total risk-weighted assets of the FDIC-supervised institution that relate to the subsidiary multiplied by

(*2*) The common equity tier 1 capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 324.11 or equivalent standards established by the subsidiary's home country supervisor.

(4) *Tier 1 minority interest includable in the tier 1 capital of the FDIC-supervised institution*. For each consolidated subsidiary of the ERBA FDIC-supervised institution, the amount of tier 1 minority interest the FDIC-supervised institution may include in tier 1 capital is

equal to:

(i) The tier 1 minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's tier 1 capital that is not owned by the FDIC-supervised institution multiplied by the difference between the tier 1 capital of the subsidiary and the lower of:

(A) The amount of tier 1 capital the subsidiary must hold, or would be required to hold pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 324.11 or equivalent standards established by the subsidiary's home country supervisor, or

(B) (*1*) The expanded total risk-weighted assets of the FDIC-supervised institution that relate to the subsidiary multiplied by

(*2*) The tier 1 capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 324.11 or equivalent standards established by the subsidiary's home country supervisor.

(5) *Total capital minority interest includable in the total capital of the FDIC-supervised institution*. For each consolidated subsidiary of the ERBA FDIC-supervised institution, the amount of total capital minority interest the FDIC-supervised institution may include in total capital is equal to:

(i) The total capital minority interest of the subsidiary; minus

(ii) The percentage of the subsidiary's total capital that is not owned by the FDIC-supervised institution multiplied by the difference between the total capital of the subsidiary and the lower of:

(A) The amount of total capital the subsidiary must hold, or would be required to hold

pursuant to this paragraph (b), to avoid restrictions on distributions and discretionary bonus payments under § 324.11 or equivalent standards established by the subsidiary's home country supervisor, or

(B) (*1*) The expanded total risk-weighted assets of the FDIC-supervised institution that relate to the subsidiary multiplied by

(*2*) The total capital ratio the subsidiary must maintain to avoid restrictions on distributions and discretionary bonus payments under § 324.11 or equivalent standards established by the subsidiary's home country supervisor.

* * * * *

101. In § 324.22:

a. Redesignate footnotes 22 through 31 as footnotes 1 through 10, respectively;

b. Revise newly redesignated footnotes 1, 5, 6, 7, 9, and 10;

c. Revise paragraph (a)(4);

d. Remove and reserve paragraph (a)(6);

e. Revise paragraph (b)(1)(ii);

f. Revise paragraphs (b)(2)(i), (b)(2)(ii), (b)(2)(iii), and (b)(2)(iv) introductory text, and (c)(2) introductory text; and

g. Revise paragraphs (c)(5), (c)(6), (d)(1) introductory text, (d)(2), and (f),

The revisions read as follows:

§ 324.22 Regulatory capital adjustments and deductions

* * * * *

(a) * * *

(4) (i) Any gain-on-sale in connection with a securitization exposure;

(ii) For an ERBA FDIC-supervised institution, the portion of any CEIO that does not constitute an after-tax gain-on-sale;

* * * * *

(b) * * *

(1) * * *

(ii) An ERBA FDIC-supervised institution, and an FDIC-supervised institution that has not made an AOCI opt-out election (as defined in paragraph (b)(2) of this section), must deduct any accumulated net gains and add any accumulated net losses on cash flow hedges included in AOCI that relate to the hedging of items that are not recognized at fair value on the balance sheet.

* * * * *

(2) AOCI opt-out election.

(i) An FDIC-supervised institution that is not an ERBA FDIC-supervised institution may make a one-time election to opt out of the requirement to include all components of AOCI (with the exception of accumulated net gains and losses on cash flow hedges related to items that are not fair-valued on the balance sheet) in common equity tier 1 capital (AOCI opt-out election). An FDIC-supervised institution that makes an AOCI opt-out election in accordance with this paragraph (b)(2) must adjust common equity tier 1 capital as follows:

(A) Subtract any net unrealized gains and add any net unrealized losses on available-for-sale securities;

(B) Subtract any accumulated net gains and add any accumulated net losses on cash flow hedges;

(C) Subtract any amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans (excluding, at the FDIC-supervised institution's option, the portion relating to pension assets deducted under paragraph (a)(5) of this section); and

(D) Subtract any net unrealized gains and add any net unrealized losses on held-to-maturity securities that are included in AOCI.

* * * * *

(ii) An FDIC-supervised institution that is not an ERBA FDIC-supervised institution must make its AOCI opt-out election in the Call Report during the first reporting period after the FDIC-supervised institution is required to comply with subpart A of this part. If the FDIC-supervised institution was previously an ERBA FDIC-supervised institution, the FDIC-supervised institution may not make an AOCI opt-out election under this paragraph (b)(2)(ii).

(iii) With respect to an FDIC-supervised institution that is not an ERBA FDIC-supervised institution, each of its subsidiary banking organizations that is subject to regulatory capital requirements issued by the Federal Reserve, the FDIC, or the OCC[1] must elect the same option as the FDIC-supervised institution pursuant to this paragraph (b)(2).

(iv) With prior notice to the FDIC, an FDIC-supervised institution resulting from a merger, acquisition, or purchase transaction and that is not an ERBA FDIC-supervised institution may change its AOCI opt-out election in its Call Report filed for the first reporting period after the date required for such FDIC-supervised institution to comply with subpart A of this part as set forth in § 324.1(f) if:

* * * * *

(c) * * *

(2) *Corresponding deduction approach.* For purposes of subpart C of this part, the corresponding deduction approach is the methodology used for the deductions from regulatory capital related to reciprocal cross holdings (as described in paragraph (c)(3) of this section), investments in the capital of unconsolidated financial institutions for an FDIC-supervised institution that is not an ERBA FDIC-supervised institution (as described in paragraph (c)(4) of this section), non-significant investments in the capital of unconsolidated financial institutions for an ERBA FDIC-supervised institution (as described in paragraph (c)(5) of this section), and non-common stock significant investments in the capital of unconsolidated financial institutions for an ERBA FDIC-supervised institution (as described in paragraph (c)(6) of this section). Under the corresponding deduction approach, an FDIC-supervised institution must make deductions from the component of capital for which the underlying instrument would qualify if it were issued by the FDIC-supervised institution itself, as described in paragraphs (c)(2)(i) through (iii) of this section. If the FDIC-supervised institution does not have a sufficient amount of a specific component of capital to effect the required deduction, the shortfall must be deducted according to paragraph (f) of this section.

* * * * *

(5) * * *

(i) An ERBA FDIC-supervised institution must deduct its non-significant investments in the capital of unconsolidated financial institutions (as defined in § 324.2) that, in the aggregate and together with any investment in a covered debt instrument (as defined in § 324.2) issued by a financial institution in which the FDIC-supervised institution does not have a significant investment in the capital of the unconsolidated financial institution (as defined in § 324.2), exceeds 10 percent of the sum of the FDIC-supervised institution’s common equity tier 1 capital

elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section (the 10 percent threshold for non-significant investments) by applying the corresponding deduction approach in paragraph (c)(2) of this section.[5] The deductions described in this paragraph are net of associated DTLs in accordance with paragraph (e) of this section. In addition, with the prior written approval of the FDIC, an ERBA FDIC-supervised institution that underwrites a failed underwriting, for the period of time stipulated by the FDIC, is not required to deduct from capital a non-significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph (c)(5) to the extent the investment is related to the failed underwriting.[6] For any calculation under this paragraph (c)(5)(i), an ERBA FDIC-supervised institution may exclude the amount of an investment in a covered debt instrument under paragraph (c)(5)(iii) or (iv) of this section, as applicable.

(ii) For an ERBA FDIC-supervised institution, the amount to be deducted under this paragraph (c)(5) from a specific capital component is equal to:

(A) The FDIC-supervised institution's aggregate non-significant investments in the capital of an unconsolidated financial institution and, if applicable, any investments in a covered debt instrument subject to deduction under this paragraph (c)(5), exceeding the 10 percent threshold for non-significant investments, multiplied by

(B) The ratio of the FDIC-supervised institution's aggregate non-significant investments in the capital of an unconsolidated financial institution (in the form of such capital component) to the FDIC-supervised institution's total non-significant investments in unconsolidated financial institutions, with an investment in a covered debt instrument being treated as tier 2 capital for this purpose.

* * * * *

(iii) For purposes of applying the deduction under paragraph (c)(5)(i) of this section, an ERBA FDIC-supervised institution that is not a Category I FDIC-supervised institution may exclude from the deduction the amount of the FDIC-supervised institution's gross long position, in accordance with § 324.22(h)(2), in investments in covered debt instruments issued by financial institutions in which the FDIC-supervised institution does not have a significant investment in the capital of the unconsolidated financial institutions up to an amount equal to 5 percent of the sum of the FDIC-supervised institution's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section, net of associated DTLs in accordance with paragraph (e) of this section.

(iv) Prior to applying the deduction under paragraph (c)(5)(i) of this section:

(A) A Category I FDIC-supervised institution may designate any investment in a covered debt instrument as an excluded covered debt instrument, as defined in § 324.2.

(B) A Category I FDIC-supervised institution must deduct, according to the corresponding deduction approach in paragraph (c)(2) of this section, its gross long position, calculated in accordance with paragraph (h)(2) of this section, in a covered debt instrument that was originally designated as an excluded covered debt instrument, in accordance with paragraph (c)(5)(iv)(A) of this section, but no longer qualifies as an excluded covered debt instrument.

(C) A Category I FDIC-supervised institution must deduct according to the corresponding deduction approach in paragraph (c)(2) of this section the amount of its gross long position, calculated in accordance with paragraph (h)(2) of this section, in a direct or indirect investment in a covered debt instrument that was originally designated as an excluded covered

debt instrument, in accordance with paragraph (c)(5)(iv)(A) of this section, and has been held for more than thirty business days.

(D) A Category I FDIC-supervised institution must deduct according to the corresponding deduction approach in paragraph (c)(2) of this section its gross long position, calculated in accordance with paragraph (h)(2) of this section, of its aggregate position in excluded covered debt instruments that exceeds 5 percent of the sum of the FDIC-supervised institution's common equity tier 1 capital elements minus all deductions from and adjustments to common equity tier 1 capital elements required under paragraphs (a) through (c)(3) of this section, net of associated DTLs in accordance with paragraph (e) of this section.

* * * * *

(6) *Significant investments in the capital of unconsolidated financial institutions that are not in the form of common stock.* If an ERBA FDIC-supervised institution has a significant investment in the capital of an unconsolidated financial institution, the FDIC-supervised institution must deduct from capital any such investment issued by the unconsolidated financial institution that is held by the FDIC-supervised institution other than an investment in the form of common stock, as well as any investment in a covered debt instrument issued by the unconsolidated financial institution, by applying the corresponding deduction approach in paragraph (c)(2) of this section.[7] The deductions described in this section are net of associated DTLs in accordance with paragraph (e) of this section. In addition, with the prior written approval of the FDIC, for the period of time stipulated by the FDIC, an ERBA FDIC-supervised institution that underwrites a failed underwriting is not required to deduct the significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph (c)(6) if such investment is related to such failed

underwriting.

(d) *Certain DTAs subject to common equity tier 1 capital deduction thresholds*.

(1) An FDIC-supervised institution that is not an ERBA FDIC-supervised institution must make deductions from regulatory capital as described in this paragraph (d)(1).

* * * * *

(2) An ERBA FDIC-supervised institution must make deductions from regulatory capital as described in this paragraph (d)(2).

(i) An ERBA FDIC-supervised institution must deduct from common equity tier 1 capital elements the amount of each of the items set forth in this paragraph (d)(2) that, individually, exceeds 10 percent of the sum of the FDIC-supervised institution's common equity tier 1 capital elements, less adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section (the 10 percent common equity tier 1 capital deduction threshold).

(A) DTAs arising from temporary differences that the FDIC-supervised institution could not realize through net operating loss carrybacks, net of any related valuation allowances and net of DTLs, in accordance with paragraph (e) of this section. An ERBA FDIC-supervised institution is not required to deduct from the sum of its common equity tier 1 capital elements DTAs (net of any related valuation allowances and net of DTLs, in accordance with § 324.22(e)) arising from timing differences that the FDIC-supervised institution could realize through net operating loss carrybacks. The FDIC-supervised institution must risk weight these assets at 100 percent. For an FDIC-supervised institution that is a member of a consolidated group for tax purposes, the amount of DTAs that could be realized through net operating loss carrybacks may not exceed the amount that the FDIC-supervised institution could reasonably expect to have

refunded by its parent holding company.

(B) Significant investments in the capital of unconsolidated financial institutions in the form of common stock, net of associated DTLs in accordance with paragraph (e) of this section.[9] Significant investments in the capital of unconsolidated financial institutions in the form of common stock subject to the 10 percent common equity tier 1 capital deduction threshold may be reduced by any goodwill embedded in the valuation of such investments deducted by the FDIC-supervised institution pursuant to paragraph (a)(1) of this section. In addition, with the prior written approval of the FDIC, for the period of time stipulated by the FDIC, an ERBA FDIC-supervised institution that underwrites a failed underwriting is not required to deduct a significant investment in the capital of an unconsolidated financial institution in the form of common stock pursuant to this paragraph (d)(2) if such investment is related to such failed underwriting.

(ii) An ERBA FDIC-supervised institution must deduct from common equity tier 1 capital elements the items listed in paragraph (d)(2)(i) of this section that are not deducted as a result of the application of the 10 percent common equity tier 1 capital deduction threshold, and that, in aggregate, exceed 17.65 percent of the sum of the FDIC-supervised institution's common equity tier 1 capital elements, minus adjustments to and deductions from common equity tier 1 capital required under paragraphs (a) through (c) of this section, minus the items listed in paragraph (d)(2)(i) of this section (the 15 percent common equity tier 1 capital deduction threshold). Any goodwill that has been deducted under paragraph (a)(1) of this section can be excluded from the significant investments in the capital of unconsolidated financial institutions in the form of common stock.[10]

(iii) For purposes of calculating the amount of DTAs subject to the 10 and 15 percent

common equity tier 1 capital deduction thresholds, an ERBA FDIC-supervised institution may exclude DTAs and DTLs relating to adjustments made to common equity tier 1 capital under paragraph (b) of this section. An ERBA FDIC-supervised institution that elects to exclude DTAs relating to adjustments under paragraph (b) of this section also must exclude DTLs and must do so consistently in all future calculations. An ERBA FDIC-supervised institution may change its exclusion preference only after obtaining the prior approval of the FDIC.

* * * * *

(f) *Insufficient amounts of a specific regulatory capital component to effect deductions.* Under the corresponding deduction approach, if an FDIC-supervised institution does not have a sufficient amount of a specific component of capital to effect the full amount of any deduction from capital required under paragraph (d) of this section, the FDIC-supervised institution must deduct the shortfall amount from the next higher (that is, more subordinated) component of regulatory capital. Any investment by an ERBA FDIC-supervised institution in a covered debt instrument must be treated as an investment in the tier 2 capital for purposes of this paragraph (f). Notwithstanding any other provision of this section, a qualifying community banking organization (as defined in § 324.12) that has elected to use the community bank leverage ratio framework pursuant to § 324.12 is not required to deduct any shortfall of tier 2 capital from its additional tier 1 capital or common equity tier 1 capital.

* * * * *

[1] These rules include the regulatory capital requirements set forth at 12 CFR part 3 (OCC); 12 CFR part 217 (Board); 12 CFR part 324 (FDIC).

* * * * *

[5] With the prior written approval of the FDIC, for the period of time stipulated by the

FDIC, an ERBA FDIC-supervised institution is not required to deduct a non-significant investment in the capital of an unconsolidated financial institution or an investment in a covered debt instrument pursuant to this paragraph if the financial institution is in distress and if such investment is made for the purpose of providing financial support to the financial institution, as determined by the FDIC.

[6] Any non-significant investment in the capital of an unconsolidated financial institution or any investment in a covered debt instrument that is not required to be deducted under this paragraph (c)(5) or otherwise under this section must be assigned the appropriate risk weight under subparts E or F of this part, as applicable.

[7] With prior written approval of the FDIC, for the period of time stipulated by the FDIC, an ERBA FDIC-supervised institution is not required to deduct a significant investment in the capital of an unconsolidated financial institution, including an investment in a covered debt instrument, under this paragraph (c)(6) or otherwise under this section if such investment is made for the purpose of providing financial support to the financial institution as determined by the FDIC.

* * * * *

[9] With the prior written approval of the FDIC, for the period of time stipulated by the FDIC, an ERBA FDIC-supervised institution is not required to deduct a significant investment in the capital instrument of an unconsolidated financial institution in distress in the form of common stock pursuant to this section if such investment is made for the purpose of providing financial support to the financial institution as determined by the FDIC.

[10] The amount of the items in paragraph (d)(2) of this section that is not deducted from common equity tier 1 capital pursuant to this section must be included in the risk-weighted assets

of the ERBA FDIC-supervised institution and assigned the appropriate risk weight for the investment under subpart E of this part for purposes of expanded total risk-weighted assets.

Subpart D—Risk-Weighted Assets—Standardized Approach

§ 324.30 [Amended]

102. In § 324.30

a. Revise paragraph (a);

b. In paragraph (b), remove the words "covered positions" and add in their place the words "market risk covered positions".

The revision reads as follows:

* * * * *

(a) This subpart sets forth methodologies for determining standardized total risk-weighted assets. This subpart applies to any FDIC-supervised institution that elects to use this subpart under § 324.10(b).

* * * * *

§ 324.34 Derivative contracts.

103. In § 324.34, revise paragraph (a) to read as follows:

* * * * *

(a) *Exposure amount for derivative contracts*—(1) An FDIC-supervised institution must use the current exposure methodology (CEM) described in paragraph (b) of this section to calculate the exposure amount for all its OTC derivative contracts, unless the FDIC-supervised institution makes the election provided in paragraph (a)(2)of this section.

(2) An FDIC-supervised institution may elect to calculate the exposure amount for all its

OTC derivative contracts under the standardized approach for counterparty credit risk (SA–CCR) in § 324.114 by notifying the FDIC, rather than calculating the exposure amount for all its derivative contracts using CEM. An FDIC-supervised institution that elects under this paragraph (a)(2) to calculate the exposure amount for its OTC derivative contracts under SA–CCR must apply the treatment of cleared transactions under § 324.116 to its derivative contracts that are cleared transactions and to all default fund contributions associated with such derivative contracts, rather than applying § 324.35. An FDIC-supervised institution must use the same methodology to calculate the exposure amount for all its derivative contracts and, if an FDIC-supervised institution has elected to use SA-CCR under this paragraph (a)(2), the FDIC-supervised institution may change its election only with prior approval of the FDIC.

* * * * *

104. In § 324.35, revise paragraph (a)(3) to read as follows:

§ 324.35 Cleared transactions.

(a) * * *

(3) *Alternate requirements.* Notwithstanding any other provision of this section, an FDIC-supervised institution that has elected to use SA-CCR under § 324.34(a) must apply § 324.116 to its derivative contracts that are cleared transactions rather than this section.

* * * * *

105. In § 324.37, revise paragraph (c)(1) to read as follows:

§ 324.37 Collateralized transactions.

* * * * *

(c) *Collateral haircut approach* —(1) *General.* An FDIC-supervised institution may recognize the credit risk mitigation benefits of financial collateral that secures an eligible margin

loan, repo-style transaction, collateralized derivative contract, or single-product netting set of such transactions, and of any collateral that secures a repo-style transaction that is included in the FDIC-supervised institution's measure for market risk under subpart F of this part by using the collateral haircut approach in this section. An FDIC-supervised institution may use the standard supervisory haircuts in paragraph (c)(3) of this section or, with prior written approval of the FDIC, its own estimates of haircuts according to paragraph (c)(4) of this section.

* * * * *

§ 324.61 [Amended]

106. In § 324.61:

a. Remove the citation "§ 324.172" wherever it appears, and add in its place the citations "§§ 324.160 and 324.161"; and

b. Remove the sentence "An advanced approaches FDIC-supervised institution that has not received approval from the FDIC to exit parallel run pursuant to § 324.121(d) is subject to the disclosure requirements described in §§ 324.62 and 324.63.".

107. In § 324.63:

a. In table 3, revise entry (c); and

b. Remove paragraphs (d) and (e).

The revision reads as follows:

§ 324.63 Disclosures by FDIC-supervised institutions described in § 324.61.

* * * * *

Table 3 to § 324.63—Capital Adequacy

* * * * * * *

	(c)	Market risk-weighted assets as calculated under subpart F of this part.
* * * * * * *		

* * * * *

Subpart E – Risk-Weighted Assets – Expanded Risk-Based Approach

§ 324.111[Amended]

108. In § 324.111:

a. Remove paragraph (j)(1)(i) and redesignate paragraph (j)(1)(ii) as paragraph (j)(1); and

b. Remove paragraphs (k).

109. In § 324.132, revise paragraphs (h)(1)(iv) and (h)(4)(i) to read as follows:

§ 324.132 Risk-weighted assets for securitization exposures.

* * * * *

(h) * * *

(1) * * *

(iv) The FDIC-supervised institution is well capitalized, as defined in subpart H of this part. For purposes of determining whether an FDIC-supervised institution is well capitalized for purposes of this paragraph (h), the FDIC-supervised institution's capital ratios must be calculated without regard to the capital treatment for transfers of small-business obligations with recourse specified in paragraph (h)(1) of this section.

* * * * *

(4) * * *

(i) Determining whether an FDIC-supervised institution is adequately capitalized, undercapitalized, significantly undercapitalized, or critically undercapitalized under subpart H of this part; and

* * * * *

110. In § 324.162:

a. Revise paragraph (c) as follows; and

b. Revise the heading of Table 13 as follows.

§ 324.162 Mechanics of risk-weighted asset calculation.

* * * * *

(c) *Regulatory capital instrument and other instruments eligible for total loss absorbing capacity (TLAC) disclosures.* An FDIC-supervised institution described in § 324.160 must provide a description of the main features of its regulatory capital instruments, in accordance with table 13 to paragraph (c). If the FDIC-supervised institution issues or repays a capital instrument, or in the event of a redemption, conversion, write down, or other material change in the nature of an existing instrument, but in no event less frequently than semiannually, the FDIC-supervised institution must update the disclosures provided in accordance with table 13 to paragraph (c). An FDIC-supervised institution also must disclose the full terms and conditions of all instruments included in regulatory capital.

Table 13 to paragraph (c)—Main Features of Regulatory Capital Instruments and of Other TLAC-Eligible Instruments

Qualitative Disclosures	(a)	For each regulatory capital instrument and any other instrument that is an eligible debt security as defined in 12 CFR 252.61, the FDIC-supervised institution must provide the following information:
		(1) The issuer's legal entity.
		(2) The unique identifier.
		(3) The governing law(s) of the instrument.

(4) The regulatory capital treatment.
(5) The level(s) within the FDIC-supervised institution at which the instrument is included in capital.
(6) The instrument type.
(7) The amount recognized in regulatory capital.
(8) The par value of the instrument.
(9) The accounting classification as debt or equity.
(10) The original date of issuance.
(11) Whether perpetual or dated.
(12) The original maturity date.
(13) Whether an issuer call option subject to prior supervisory approval exists.
(14) For an instrument with an issuer call option: (i) the first date of call if the instrument has a call option on a specific date (day, month, and year); (ii) the instrument has a tax and/or regulatory event call; and (iii) the redemption price.
(15) Whether there are subsequent call option dates and, if so, their frequency.
(16) Whether the coupon or dividend is fixed over the life of the instrument, floating over the life of the instrument, currently fixed but will move to a floating rate in the future, or currently floating but will move to a fixed rate in the future.
(17) The coupon rate of the instrument and any related index that the coupon or dividend rate references.
(18) Whether the non-payment of a coupon or dividend on the instrument prohibits the payment of dividends on common shares.
(19) Whether the issuer has full, partial, or no discretion over whether a coupon or dividend is paid.
(20) Whether there is a step-up or other incentive to redeem.
(21) Whether the dividends or coupons are cumulative or non-cumulative.
(22) Whether the instrument is convertible or non-convertible.
(23) If the instrument is convertible, the conditions under which the instrument will convert, including point of non-viability. Where one or more authorities have the ability to trigger conversion, the authorities should be listed. For each of the authorities, state whether the legal basis for the authority to trigger conversion is provided by the terms of the contract of the instrument (a contractual approach) or statutory means (a statutory approach).
(24) If the instrument is convertible, whether the instrument will: (i) always convert fully; (ii) may convert fully or partially; or (iii) will always convert partially.
(25) If the instrument is convertible, the rate of conversion into the more loss-absorbent instrument.
(26) If the instrument is convertible, whether conversion is mandatory or optional.
(27) If the instrument is convertible, the instrument type into which it is convertible.
(28) If the instrument is convertible, the issuer of the instrument into which it converts.
(29) Whether a write-down feature exists.

		(30) If there is a write-down feature, the trigger at which write-down occurs, including point of non-viability. Where one or more authorities have the ability to trigger write-down, the authorities should be listed. For each of the authorities it should be stated whether the legal basis for the authority to trigger conversion is provided by the terms of the contract of the instrument or statutory means.
		(31) If there is a write-down feature, for each write-down trigger separately, whether the instrument will: (i) always be written down fully; (ii) may be written down partially; or (iii) will always be written down partially.
		(32) If there is a write-down feature, whether the write-down is permanent or temporary.
		(33) For instruments that have a temporary write-down, a description of the writeup mechanism.
		(34) The type of subordination.
		(35) A description of the position in subordination hierarchy in liquidation, including by specifying the instrument type immediately senior to instrument in the insolvency creditor hierarchy of the legal entity concerned.

Subpart F—Risk-weighted Assets – Market Risk and Credit Valuation Adjustment (CVA)

111. In § 324.201:

a. Revise paragraphs (b)(1) and (b)(2); and

b. In paragraph (d), remove "[12 CFR 3.404, 263.202, and 324.5(c)]" and add "12 CFR 324.7(c)" in its place wherever it appears.

The revisions are as follows:

§ 324.201 Purpose, applicability, and reservation of authority.

* * * * *

(b) * * *

(1) *Market risk.* The market risk capital requirements and related reporting and public disclosure requirements specified in §§ __.203 through __.217 apply to an FDIC-supervised institution that has aggregate trading assets and trading liabilities, excluding customer and proprietary broker-dealer reserve bank accounts, equal to:

(i) 10 percent or more of quarter-end total assets as reported on the most recent quarterly Call Report; or

(ii) $5 billion, as adjusted pursuant to § 324.4, or more, on average for the four most recent quarters as reported in the FDIC-supervised institution's Call Reports.

* * * * *

(2) *CVA Risk*. The CVA risk-based capital requirements specified in §§ 324.220 through 324.225 apply to any FDIC-supervised institution that is:

(i) A subsidiary of a global systemically important BHC or a Category II depository institution holding company and subject to the market risk framework pursuant to § 324.201(b)(1); or

(ii) An FDIC-supervised institution that is subject to the market risk framework pursuant to § 324.201(b)(1) and engages in OTC derivative contracts with an aggregate gross notional value, as reported on the FDIC-supervised institution's Call Reports of $1 trillion[, as adjusted pursuant to § 324.4,] or more on average for the prior four quarters.

* * * * *

* * * * *

Subpart G—Transition Provisions

112. In § 324.300:

a. Revise paragraph (a); and

b. Remove and reserve paragraphs (f) through (h).

The revision and addition read as follows:

§ 324.300 Transitions.

(a) *Transition adjustments for AOCI.* Beginning [January 1, 2027], an FDIC-supervised institution that uses expanded total risk-weighted assets for purposes of § 324.10(a)(5) and that had made an AOCI opt-out election under § 324.22(b)(2) effective [December 31, 2026] must

subtract from the sum of its common equity tier 1 elements, before making deduction required under § 324.22(c) or (d), the AOCI adjustment amount multiplied by the percentage provided in Table 1 to § 324.300.

The transition AOCI adjustment amount is the sum of:

(1) Net unrealized gains or losses on available-for-sale debt securities, plus

(2) Accumulated net gains or losses on cash flow hedges, plus

(3) Any amounts recorded in AOCI attributed to defined benefit postretirement plans resulting from the initial and subsequent application of the relevant GAAP standards that pertain to such plans, plus

(4) Net unrealized holding gains or losses on held-to-maturity securities that are included in AOCI.

Table 1 to § 324.300

Transition AOCI Adjustment	
Transition period	**Percentage applicable to transition AOCI adjustment amount**
January 1, 2027 to December 31, 2027	100
January 1, 2028 to December 31, 2028	80
January 1, 2029 to December 31, 2029	60
January 1, 2030 to December 31, 2030	40
January 1, 2031 to December 31, 2031	20
January 1, 2032 and thereafter	0

* * * * *

§ 324.301 Current expected credit losses (CECL) transition.

113. Remove and reserve § 324.301.

§ 324.303 [Removed and Reserved]

114. Remove and reserve § 324.303.

§ 324.304 [Removed and Reserved]

115. Remove and reserve § 324.304.

Subpart H—Prompt Corrective Action

116. In § 324.401, revise paragraphs (c), (f), and (g).

The revisions read as follows:

§ 324.401 Authority, purpose, scope, other supervisory authority, disclosure of capital categories, and transition procedures

* * * * *

(c) *Scope.* This subpart H implements the provisions of section 38 of the FDI Act as they apply to FDIC–supervised institutions and insured branches of foreign banks for which the FDIC is the appropriate Federal banking agency. Certain of these provisions also apply to officers, directors and employees of those insured institutions. In addition, certain provisions of this subpart apply to all insured depository institutions that are deemed critically undercapitalized.

* * * * *

(f) *Timing.* The calculation of the definitions of common equity tier 1 capital, the common equity tier 1 risk-based capital ratio, the leverage ratio, the supplementary leverage ratio, tangible equity, tier 1 capital, the tier 1 risk-based capital ratio, total assets, total leverage exposure, the total risk-based capital ratio, and total risk-weighted assets under this subpart H is subject to the timing provisions at 12 CFR 324.1(f) and the transitions at 12 CFR part 324, subpart G.

(g) For purposes of subpart H, total assets means quarterly average total assets as reported

in an FDIC–supervised institution's Call Report, minus amounts deducted from tier 1 capital under § 324.22(a), (c), and (d). At its discretion, the FDIC may calculate total assets using an FDIC–supervised institution's period-end assets rather than quarterly average assets.

117. Amend § 324.403, by revising paragraphs (a)(1)(iv)(B), (b)(2)(vi), and (b)(3)(v) to read as follows:

§ 324.403 Capital measures and capital category definitions.

(a) * * *

(1) * * *

(iv) * * *

(B) With respect to a Category I FDIC–supervised institution, Category II FDIC-supervised institution, or Category III FDIC-supervised institution, the supplementary leverage ratio.

* * * * *

(b) * * *

(2) * * *

(vi) A Category I FDIC–supervised institution, Category II FDIC-supervised institution, or Category III FDIC-supervised institution will be deemed to be "adequately capitalized" if it satisfies paragraphs (b)(2)(i) through (v) of this section and has a supplementary leverage ratio of 3.0 percent or greater, as calculated in accordance with § 324.10.

(3) * * *

(v) A Category I FDIC–supervised institution, Category II FDIC-supervised institution, or Category III FDIC-supervised institution will be deemed to be "undercapitalized" if it has a supplementary leverage ratio of less than 3.0 percent, as calculated in accordance with § 324.10.

* * * * *

§§ 324.1, 324.2, 324.10, 324.12, 324.22, 324.61, 324.302, 324.305 [Amended]

118. In the table below, for each section indicated in the left column, remove the words indicated in the middle column from wherever it appears in the section, and add the words indicated in the right column:

Sections:	**Remove the following words:**	**Add the following words:**
324.1 324.2 324.12(a)(2) introductory text 324.21(a)(1) 324.22 (a)(1)(ii), (b)(1)(iii), (c)(2)(ii)(D), (c)(3)(ii), and (c)(4), and 324.61	"advanced approaches FDIC-supervised institution"	"ERBA FDIC-supervised institution"
324.22(g) 324.302, and 324.305	"advanced approaches total risk-weighted assets"	"expanded total risk-weighted assets"
324.2, in the definition of "qualifying central counterparty (QCCP)"	"§ 324.133"	"§ 324.114"

* * * * *

Jonathan V. Gould,
Comptroller of the Currency.

By order of the Board of Governors of the Federal Reserve System.

Benjamin W. McDonough,
Secretary of the Board.

Federal Deposit Insurance Corporation.
By order of the Board of Directors,
Dated at Washington, DC, on DATE XX.
Jennifer M. Jones,
Deputy Executive Secretary.