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OCC 2011-3

**Subject: Proposed Revisions to Market Risk Capital Rule**  
**Date: January 12, 2011**

**To: Chief Executive Officers of All National Banks, Federal Branches and Agencies, Department and Division Heads, and All Examining Personnel**

## Description: 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 (agencies) are seeking comment on a notice of proposed rulemaking (NPR) that would revise their market risk capital rules. The revisions would broaden the scope of these rules to better capture the risk inherent in trading positions. Specifically, the proposal would improve the rules' sensitivity to risks not adequately captured under the current regulatory measurement methodologies, such as the default and migrations risks associated with less liquid products. The agencies' analysis indicates that, for those banking organizations subject to the market risk capital rules, these revisions will significantly increase the risk-based capital allocated to market risk.

### BACKGROUND

The NPR proposes modifications to the OCC's existing risk-based capital rule for market risk, 12 CFR 3, appendix B. The current market risk rule applies to national banks for which (1) the sum of the bank's trading assets and liabilities is at least 10 percent of total assets, (2) the sum of the bank's trading assets and liabilities is at least \$1 billion, or (3) an election to apply the market risk rule has been made. The NPR does not change the scope of application of the rule.

Consistent with the July 2009 publication by the Basel Committee on Banking Supervision of "Revisions to the Basel II market risk framework," the NPR proposes changes to the current market risk rule. The NPR incorporates: (1) a revised definition of "trading position" that excludes trading assets and liabilities not held for the purpose of short-term resale or to lock in arbitrage profits, (2) a stressed value-at-risk measure, in which the calibration of the model reflects a period of significant financial stress, (3) a new capital charge for default risk and migration risk—the incremental default risk charge, (4) a substantially revised treatment of positions that comprise the correlation trading portfolio, (5) an expanded set of requirements for internal models, and (6) revised requirements for regulatory back testing.

The NPR was published in the *Federal Register* on January 11, 2011. Comments on the proposal are due on or before April 11, 2011.

### FURTHER INFORMATION

You may direct questions or comments to Roger Tufts, Senior Economic Advisor, Capital Policy Division, at (202) 874-4925; or Carl Kaminski, Senior Attorney, at (202) 874-5405.

Timothy W. Long  
Senior Deputy Comptroller and Chief National Bank Examiner

### Related Link

- [Proposed Revisions to Market Risk Capital Rule](#)



# FEDERAL REGISTER

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## Part IV

### Department of the Treasury

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Office of the Comptroller of the Currency

12 CFR Part 3

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### Federal Reserve System

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12 CFR Parts 208 and 225

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### Federal Deposit Insurance Corporation

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12 CFR Part 325

Risk-Based Capital Guidelines: Market Risk; Proposed Rule

**DEPARTMENT OF THE TREASURY****Office of the Comptroller of the Currency****12 CFR Part 3**

[Docket ID: OCC–2010–0003]

RIN 1557–AC99

**FEDERAL RESERVE SYSTEM****12 CFR Parts 208 and 225**

[Regulations H and Y; Docket No. R–1401]

RIN No. 7100–AD61

**FEDERAL DEPOSIT INSURANCE CORPORATION****12 CFR Part 325**

RIN 3064–AD70

**Risk-Based Capital Guidelines: Market Risk**

**AGENCY:** Office of the Comptroller of the Currency, Department of the Treasury; Board of Governors of the Federal Reserve System; and Federal Deposit Insurance Corporation.

**ACTION:** Notice of proposed rulemaking with request for public comment.

**SUMMARY:** The Office of the Comptroller of the Currency (OCC), Board of Governors of the Federal Reserve System (Board), and Federal Deposit Insurance Corporation (FDIC) are requesting comment on a proposal to revise their market risk capital rules to modify their scope to better capture positions for which the market risk capital rules are appropriate; reduce procyclicality in market risk capital requirements; enhance the rules' sensitivity to risks that are not adequately captured under the current regulatory measurement methodologies; and increase transparency through enhanced disclosures. The proposal does not include the methodologies adopted by the Basel Committee on Banking Supervision for calculating the specific risk capital requirements for debt and securitization positions due to their reliance on credit ratings, which is impermissible under the Dodd-Frank Wall Street Reform and Consumer Protection Act. The proposal, therefore, retains the current specific risk treatment for these positions until the agencies develop alternative standards of creditworthiness as required by the Act. The proposed rules are substantively the same across the agencies.

**DATES:** Comments on this notice of proposed rulemaking must be received by April 11, 2011.

**ADDRESSES:** Comments should be directed to:

OCC: Because paper mail in the Washington, DC area and at the Agencies is subject to delay, commenters are encouraged to submit comments by the Federal eRulemaking Portal or e-mail, if possible. Please use the title "Risk-Based Capital Guidelines: Market Risk" to facilitate the organization and distribution of the comments. You may submit comments by any of the following methods:

- *Federal eRulemaking Portal—“regulations.gov”:* Go to <http://www.regulations.gov>. Select “Document Type” of “Proposed Rules,” and in “Enter Keyword or ID Box,” enter Docket ID “OCC–2010–0003,” and click “Search.” On “View By Relevance” tab at bottom of screen, in the “Agency” column, locate the proposed rule for OCC, in the “Action” column, click on “Submit a Comment” or “Open Docket Folder” to submit or view public comments and to view supporting and related materials for this rulemaking action.

- Click on the “Help” tab on the Regulations.gov home page to get information on using Regulations.gov, including instructions for submitting or viewing public comments, viewing other supporting and related materials, and viewing the docket after the close of the comment period.

- *E-mail:* [regs.comments@occ.treas.gov](mailto:regs.comments@occ.treas.gov).

- *Mail:* Office of the Comptroller of the Currency, 250 E Street, SW., Mail Stop 2–3, Washington, DC 20219.

- *Fax:* (202) 874–5274.

- *Hand Delivery/Courier:* 250 E Street, SW., Mail Stop 2–3, Washington, DC 20219.

**Instructions:** You must include “OCC” as the agency name and “Docket ID OCC–2010–0003” in your comment. In general, OCC will enter all comments received into the docket and publish them on the Regulations.gov Web site without change, including any business or personal information that you provide 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 enclose 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

proposed rule by any of the following methods:

- *Viewing Comments Electronically:* Go to <http://www.regulations.gov>. Select “Document Type” of “Public Submissions,” in “Enter Keyword or ID Box,” enter Docket ID “OCC–2010–0003,” and click “Search.” Comments will be listed under “View By Relevance” tab at bottom of screen. If comments from more than one agency are listed, the “Agency” column will indicate which comments were received by the OCC.

- *Viewing Comments Personally:* You may personally inspect and photocopy comments at the OCC, 250 E Street, SW., Washington, DC. For security reasons, the OCC requires that visitors make an appointment to inspect comments. You may do so by calling (202) 874–4700. Upon arrival, visitors will be required to present valid government-issued photo identification and to submit to security screening in order to inspect and photocopy comments.

- *Docket:* You may also view or request available background documents and project summaries using the methods described above.

- *Board:* You may submit comments, identified by Docket No. R–1401 and RIN No. 7100–AD61, by any of the following methods:

- *Agency Web Site:* <http://www.federalreserve.gov>. Follow the instructions for submitting comments at <http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm>.

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *E-mail:* [regs.comments@federalreserve.gov](mailto:regs.comments@federalreserve.gov). Include docket number in the subject line of the message.

- *Federal eRulemaking Portal:* “Regulations.gov”: Go to <http://www.regulations.gov> and follow the instructions for submitting comments.

- *FAX:* (202) 452–3819 or (202) 452–3102.

- *Mail:* Jennifer J. Johnson, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, NW., Washington, DC 20551.

All public comments are available from the Board's Web site at <http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm> as submitted, unless modified for technical reasons. Accordingly, your comments will not be edited to remove any identifying or contact information. Public comments may also be viewed electronically or in paper form in Room MP–500 of the Board's Martin Building (20th and C

Street, NW.) between 9 a.m. and 5 p.m. on weekdays.

FDIC: You may submit comments by any of the following methods:

- *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *Agency Web site*: <http://www.FDIC.gov/regulations/laws/Federal/propose.html>.

- *Mail*: Robert E. Feldman, Executive Secretary, Attention: Comments/Legal ESS, Federal Deposit Insurance Corporation, 550 17th Street, NW., Washington, DC 20429.

- *Hand Delivered/Courier*: The guard station at the rear of the 550 17th Street Building (located on F Street), on business days between 7 a.m. and 5 p.m.

- *E-mail*: [comments@FDIC.gov](mailto:comments@FDIC.gov).

*Instructions*: Comments submitted must include "FDIC" and "RIN [3064-AD70]." Comments received will be posted without change to <http://www.FDIC.gov/regulations/laws/Federal/propose.html>, including any personal information provided.

#### FOR FURTHER INFORMATION CONTACT:

OCC: Roger Tufts, Senior Economic Advisor, Capital Policy Division, (202) 874-4925, or Ron Shimabukuro, Senior Counsel, Carl Kaminski, Senior Attorney, or Hugh Carney, Attorney, Legislative and Regulatory Activities Division, (202) 874-5090, Office of the Comptroller of the Currency, 250 E Street, SW., Washington, DC 20219.

Board: Anna Lee Hewko, (202) 530-6260, Assistant Director, Capital and Regulatory Policy, or Connie Horsley, (202) 452-5239, Senior Supervisory Financial Analyst, Division of Banking Supervision and Regulation; or April C. Snyder, Counsel, (202) 452-3099, or Benjamin W. McDonough, Counsel, (202) 452-2036, Legal Division. For the hearing impaired only, Telecommunication Device for the Deaf (TDD), (202) 263-4869.

FDIC: Bobby R. Bean, Chief, Policy Section, (202) 898-6705; Karl Reitz, Senior Capital Markets Specialist, (202) 898-6775; Jim Weinberger, Senior Policy Analyst, (202) 898-7034, Division of Supervision and Consumer Protection; or Mark Handzlik, Counsel, (202) 898-3990; or Michael Phillips, Counsel, (202) 898-3581, Supervision Branch, Legal Division.

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## I. Introduction

### A. Background

The first international capital framework for banks<sup>1</sup> entitled *International Convergence of Capital Measurement and Capital Standards* (1988 Capital Accord) was developed by the Basel Committee on Banking Supervision (BCBS)<sup>2</sup> and endorsed by

<sup>1</sup> For simplicity, and unless otherwise indicated, the preamble to this notice of proposed rulemaking uses the term "bank" to include banks, savings associations, and bank holding companies (BHCs). The terms "bank holding company" and "BHC" refer only to bank holding companies regulated by the Board.

<sup>2</sup> The BCBS is a committee of banking supervisory authorities, which was established by the central bank governors of the G-10 countries in 1975. It consists of senior representatives of bank supervisory authorities and central banks from Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey,

the G-10 governors in 1988. The OCC, the Board, and the FDIC (collectively, the agencies) implemented the 1988 Capital Accord in 1989 through the issuance of the general risk-based capital rules.<sup>3</sup> In 1996, the BCBS amended the 1988 Capital Accord to require banks to measure and hold capital to cover their exposure to market risk associated with foreign exchange and commodity positions and positions located in the trading account (the Market Risk Amendment (MRA) or market risk framework).<sup>4</sup> The agencies implemented the MRA with an effective date of January 1, 1997 (market risk capital rule).<sup>5</sup>

In June 2004, the BCBS issued a document entitled *International Convergence of Capital Measurement and Capital Standards: A Revised Framework* (New Accord or Basel II), which was intended for use by individual countries as the basis for national consultation and implementation. The New Accord sets forth a "three-pillar" framework that includes (i) risk-based capital requirements for credit risk, market risk, and operational risk (Pillar 1); (ii) supervisory review of capital adequacy (Pillar 2); and (iii) market discipline through enhanced public disclosures (Pillar 3).

The New Accord retained much of the MRA; however, after its release, the BCBS announced that it would develop improvements to the market risk framework, especially with respect to the treatment of specific risk, which refers to the risk of loss on a position due to factors other than broad-based movements in market prices. As a result, in July 2005, the BCBS and the International Organization of Securities Commissions (IOSCO) published *The Application of Basel II to Trading Activities and the Treatment of Double Default Effects*. The BCBS incorporated the July 2005 changes into the June 2006 comprehensive version of the New Accord and follow its "three-pillar" structure. Specifically, the Pillar 1

the United Kingdom, and the United States. Documents issued by the BCBS are available through the Bank for International Settlements Web site at <http://www.bis.org>.

<sup>3</sup> The agencies' general risk-based capital rules are at 12 CFR part 3, Appendix A (OCC); 12 CFR part 208, Appendix A and 12 CFR part 225, Appendix A (Board); and 12 CFR part 325, Appendix A (FDIC).

<sup>4</sup> In 1997, the BCBS modified the MRA to remove a provision pertaining to the specific risk capital charge under the internal models approach (see <http://www.bis.org/press/p970918a.htm>).

<sup>5</sup> 61 FR 47358 (September 6, 1996). The agencies' market risk capital rules are 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).

changes narrow the types of positions that are subject to the market risk framework and revise modeling standards and procedures for calculating minimum regulatory capital requirements; the Pillar 2 changes require banks to conduct internal assessments of their capital adequacy with respect to market risk, taking into account the output of their internal models, valuation adjustments, and stress tests; and the Pillar 3 changes require banks to disclose certain quantitative and qualitative information, including their valuation techniques for covered positions, the soundness standard used for modeling purposes, and their internal capital adequacy assessment methodologies.

In September 2006, the agencies issued a joint notice of proposed rulemaking (2006 proposal) in which they proposed amendments to their market risk capital rules that would implement the BCBS's changes to the market risk framework.<sup>6</sup> The BCBS began work on significant changes to the market risk framework in 2007 due to issues highlighted by the financial crisis. As a result, the agencies did not finalize the 2006 proposal. This joint notice of proposed rulemaking (proposed rule) incorporates aspects of the agencies' 2006 proposal as well as further revisions to the New Accord (and associated guidance) published by the BCBS in July 2009. These publications include *Revisions to the Basel II Market Risk Framework, Guidelines for Computing Capital for Incremental Risk in the Trading Book, and Enhancements to the Basel II Framework* (collectively, the 2009 revisions).

The 2009 revisions to the market risk framework place additional prudential requirements on banks' internal models for measuring market risk and require enhanced qualitative and quantitative disclosures, particularly with respect to banks' securitization activities. The revisions also introduce an incremental risk capital requirement to capture default and credit quality migration risk for non-securitization credit products. With respect to securitizations, the 2009 revisions require banks to apply the standardized measurement method for specific risk to these positions, except for "correlation trading" positions (described further below), for which banks may choose to model all material price risks. The 2009 revisions also add a stressed Value-at-Risk (VaR)-based

capital requirement to banks' VaR-based capital requirement under the existing framework. In June, 2010, the BCBS published additional revisions to the market risk framework that included establishing a floor on the risk-based capital requirement for modeled correlation trading positions.<sup>7</sup>

These revisions to the market risk framework and other proposed revisions are discussed more fully below. Part I.B. of this preamble summarizes and provides background on the current market risk capital rule. Part II describes the proposed revisions to the market risk capital rule that incorporate aspects of the BCBS 2005 and 2009 revisions to the market risk framework.

*Question 1: The agencies request comment on all aspects of the proposed rule and specifically on whether and for what reasons certain aspects of the proposed rule present particular implementation challenges. Responses should be detailed as to the nature and impact of such challenges. What, if any, specific approaches (for example, transitional arrangements) should the agencies consider to address such challenges and why?*

#### *B. Summary of the Current Market Risk Capital Rule*

The current market risk capital rule supplements both the agencies' general risk-based capital rules and the advanced capital adequacy guidelines (advanced approaches rules) (collectively, the credit risk capital rules)<sup>8</sup> by requiring any bank subject to the market risk capital rule to adjust its risk-based capital ratios to reflect market risk in its trading activities. The rule applies to a bank with worldwide, consolidated trading activity equal to 10 percent or more of total assets, or \$1 billion or more. The primary Federal supervisor of a bank may apply the market risk capital rule to a bank if the supervisor deems it necessary or appropriate for safe and sound banking practices. In addition, the supervisor may exempt a bank that meets the threshold criteria from application of the rule if the supervisor determines the bank meets such criteria as a consequence of accounting, operational, or similar considerations, and the supervisor deems such an exemption to

be consistent with safe and sound banking practices.

#### 1. Covered Positions

The current market risk capital rule requires a bank to maintain regulatory capital against the market risk of its covered positions. Covered positions are defined as all on- and off-balance sheet positions in the bank's trading account (as defined in the instructions to the Consolidated Reports of Condition and Income (Call Report) or to the FR Y-9C Consolidated Financial Statements for Bank Holding Companies (FR Y-9C)), and all foreign exchange and commodity positions, whether or not they are in the trading account. Covered positions exclude all positions in the trading account that, in form or substance, act as liquidity facilities that provide liquidity support to asset-backed commercial paper.

#### 2. Capital Requirement for Market Risk

The current market risk capital rule defines market risk as the risk of loss resulting from movements in market prices. Market risk consists of general market risk and specific risk components. General market risk is defined as changes in the market value of positions resulting from broad market movements, such as changes in the general level of interest rates, equity prices, foreign exchange rates, or commodity prices. Specific risk is defined as changes in the market value of a position due to factors other than broad market movements and includes event and default risk, as well as idiosyncratic risk.<sup>9</sup>

A bank that is subject to the market risk capital rule is required to use an internal model to calculate a VaR-based measure of its exposure to market risk. A bank's total risk-based capital requirement for covered positions generally consists of a VaR-based capital requirement plus an add-on for specific risk, if specific risk is not captured in the bank's internal VaR model.<sup>10</sup> The VaR-based capital requirement is based

<sup>9</sup> Idiosyncratic risk is the risk of loss in the value of a position that arises from changes in risk factors unique to that position. Event risk is the risk of loss on a position that could result from sudden and unexpected large changes in market prices or specific events other than the default of the issuer. Default risk is the risk of loss on a position that could result from the failure of an obligor to make timely payments of principal or interest on its debt obligation, and the risk of loss that could result from bankruptcy, insolvency, or similar proceeding. For credit derivatives, default risk means the risk of loss on a position that could result from the default of the reference exposure(s).

<sup>10</sup> The primary Federal supervisor of a bank may also permit the use of alternative techniques to measure the market risk of *de minimis* exposures, if the techniques adequately measure associated market risk.

<sup>7</sup> The June 2010 revisions can be found, in their entirety, at <http://bis.org/press/p100618/annex.pdf>.

<sup>8</sup> The agencies' advanced approaches rules are at 12 CFR part 3, Appendix C (OCC); 12 CFR part 208, Appendix F and 12 CFR part 225, Appendix G (Board); and 12 CFR part 325, Appendix D (FDIC). For purposes of this preamble, the term "credit risk capital rules" refers to the general risk-based capital rules and the advanced approaches rules (that also apply to operational risk), as applicable to the bank using the proposed rule.

<sup>6</sup> 71 FR 55958. (September 25, 2006). The 2006 proposal was issued jointly by the agencies and the Office of Thrift Supervision (OTS). In the proposal, the OTS, which had not previously adopted the MRA, proposed adopting a market risk capital rule.

on an estimate of the amount that the value of one or more positions could decline over a stated time horizon and at a stated confidence level. A bank may determine its capital requirement for specific risk using a standardized method or, with supervisory approval, may use internal models to measure its minimum capital requirement for specific risk.

### 3. Internal Models-Based Capital Requirement

In calculating the capital requirement for market risk, a bank is required to use an internal model that meets specified qualitative and quantitative criteria. The qualitative requirements reflect basic components of sound market risk management. For example, the current market risk capital rule requires an independent risk control unit that reports directly to senior management and an internal risk measurement model that is integrated into the daily management process. The quantitative criteria include the use of a VaR-based measure based on a 99.0 percent, one-tailed confidence level. The VaR-based measure must be based on a price shock equivalent to a 10-business-day movement in rates or prices. Price changes estimated using shorter time periods must be adjusted to the 10-business-day standard. The minimum effective historical observation period for deriving the rate or price changes is one year and data sets must be updated at least every three months or more frequently if market conditions warrant. In all cases, under the current rule, a bank must have the capability to update its data sets more frequently than every three months in anticipation of market conditions that would require such updating.

A bank need not use a single model to calculate its VaR-based measure. A bank's internal model may use any generally accepted approach, such as variance-covariance models, historical simulations, or Monte Carlo simulations. However, the level of sophistication of the bank's internal model must be commensurate with the nature and size of the positions it covers. The internal model must use risk factors sufficient to measure the market risk inherent in all covered positions. The risk factors must address interest rate risk, equity price risk, foreign exchange rate risk, and commodity price risk.

The current market risk capital rule imposes backtesting requirements that must be calculated quarterly. A bank must compare its daily VaR-based measure for each of the preceding 250 business days to its actual daily trading

profit or loss, which typically includes realized and unrealized gains and losses on portfolio positions as well as fee income and commissions associated with trading activities. If the quarterly backtesting shows that the bank's daily net trading loss exceeded its corresponding daily VaR-based measure, a backtesting exception has occurred. If a bank experiences more than four backtesting exceptions over the preceding 250 business days, it is generally required to apply a multiplication factor in excess of 3 when it calculates its risk-based capital ratio (*see* section I.B.5 of this preamble).

A bank subject to the market risk capital rule is also required to conduct stress tests to assess the impact of adverse market events on its positions. The market risk capital rule does not prescribe specific stress-testing methodologies.

### 4. Specific Risk

Under the current market risk capital rule, a bank may use an internal model to measure its exposure to specific risk if it has demonstrated to its primary Federal supervisor that the model measures the specific risk, including event and default risk, as well as idiosyncratic risk, of its debt and equity positions. A bank that incorporates specific risk in its internal model but fails to demonstrate that the model adequately measures all aspects of specific risk is subject to a specific risk add-on. In this case, if the bank can validly separate its VaR-based measure into a specific risk portion and a general market risk portion, the add-on is equal to the previous day's specific risk portion. If the bank cannot separate the VaR-based measure into a specific risk portion and a general market risk portion, the add-on is equal to the sum of the previous day's VaR-based measures for subportfolios of debt and equity positions that contain specific risk.

If the bank does not model specific risk, it must calculate its specific risk capital requirement, or "add-on," using a standardized method.<sup>11</sup> Under this method, the specific risk add-on for debt positions is calculated by multiplying the absolute value of the current market value of each net long and net short position in a debt instrument by the appropriate specific risk-weighting factor in the rule. These specific risk-weighting factors range from zero to 8.0 percent and are based on the identity of the obligor and, in the case of some positions, the credit rating and

<sup>11</sup> See section 5(c) of the agencies' market risk capital rules for a description of this method.

remaining contractual maturity of the position. Derivative instruments are risk-weighted according to the market value of the effective notional amount of the underlying position. A bank may net long and short debt positions (including derivatives) in identical debt issues or indices. A bank may also offset a "matched" position in a derivative and its corresponding underlying instrument.

Under the standardized method, the specific risk add-on for equity positions is the sum of the bank's net long and short positions in an equity, multiplied by a specific risk-weighting factor. A bank may net long and short positions (including derivatives) in identical equity issues or equity indices in the same market. The specific risk add-on is 8.0 percent of the net equity position, unless the bank's portfolio is both liquid and well-diversified, in which case the specific risk add-on is 4.0 percent. For positions that are index contracts comprising a well-diversified portfolio of equities, the specific risk add-on is 2.0 percent of the net long or net short position in the index.<sup>12</sup>

### 5. Calculation of the Risk-Based Capital Ratio

A bank subject to the current market risk capital rule must calculate its adjusted risk-based capital ratios as follows. First, the bank must calculate its adjusted risk-weighted assets, which equals its risk-weighted assets calculated under the general risk-based capital rule excluding the risk-weighted amounts of covered positions (except foreign exchange positions outside the trading account and over-the-counter derivative instruments)<sup>13</sup> and cash-secured securities borrowing receivables that meet the criteria of the market risk capital rule.

The bank then must calculate its measure for market risk, which equals the sum of the VaR-based capital requirement for market risk, the specific risk add-on (if any), and the capital

<sup>12</sup> In addition, for futures contracts on broadly based indices that are matched by offsetting equity baskets, a bank may apply a 2.0 percent specific risk requirement to the futures and stock basket positions if the basket comprises at least 90 percent of the capitalization of the index. The 2.0 percent specific risk requirement applies to only one side of certain futures-related arbitrage strategies when either: (i) The long and short positions are in exactly the same index at different dates or in different markets; or (ii) the long and short positions are in different but similar indices at the same date.

<sup>13</sup> Foreign exchange positions outside the trading account and all over-the-counter derivative positions, regardless of whether they are in the trading account, must be included in a bank's risk-weighted assets as determined under the general risk-based capital rules.

requirement for *de minimis* exposures (if any). The VaR-based capital requirement equals the greater of (i) the previous day's VaR-based measure; or (ii) the average of the daily VaR-based measures for each of the preceding 60 business days multiplied by three, or such higher multiplier as may be required under the backtesting requirements of the market risk capital rule. The measure for market risk is multiplied by 12.5 to calculate market-risk-equivalent assets. The market-risk-equivalent assets are added to adjusted risk-weighted assets to compute the denominator of the bank's risk-based capital ratio.

To calculate the numerator, the bank must allocate tier 1 and tier 2 capital equal to 8.0 percent of adjusted risk-weighted assets, and further allocate excess tier 1, excess tier 2, and tier 3<sup>14</sup> capital equal to the measure for market risk. The sum of tier 2 and tier 3 capital allocated for market risk may not exceed 250 percent of tier 1 capital. As a result, tier 1 capital must equal at least 28.6 percent of the measure for market risk. The sum of tier 2 (both allocated and excess) and allocated tier 3 capital may not exceed 100 percent of tier 1 capital (both allocated and excess). Term subordinated debt and intermediate-term preferred stock and related surplus included in tier 2 capital (both allocated and excess) may not exceed 50 percent of tier 1 capital (both allocated and excess). The sum of tier 1 and tier 2 capital (both allocated and excess) and allocated tier 3 capital is the numerator of the bank's total risk-based capital ratio.

## II. Proposed Revisions to the Market Risk Capital Rule

### A. Objectives of the Proposed Revisions

The key objectives of the proposed revisions to the current market risk capital rule are to enhance the rule's sensitivity to risks that are not adequately captured by the current rule; to enhance modeling requirements in a manner that is consistent with advances in risk management since the initial implementation of the rule; to modify the definition of covered position to

<sup>14</sup> Tier 1 and tier 2 capital are defined in the general risk-based capital rules. Tier 3 capital is subordinated debt that is unsecured, is fully paid up, has an original maturity of at least two years, is not redeemable before maturity without prior approval by the primary Federal supervisor, includes a lock-in clause precluding payment of either interest or principal (even at maturity) if the payment would cause the issuing bank's risk-based capital ratio to fall or remain below the minimum required under the credit risk capital rules, and does not contain and is not covered by any covenants, terms, or restrictions that are inconsistent with safe and sound banking practices.

better capture positions for which treatment under the rule is appropriate; to address shortcomings in the modeling of certain risks; to address certain procyclicality concerns; and to increase transparency through enhanced disclosures. The objective of enhancing the risk sensitivity of the rule is particularly important because of banks' increased exposure to traded credit products, such as credit default swaps (CDSs) and asset-backed securities, in other structured products, and in less liquid products. The risks of these products are generally not fully captured in current VaR models, which rely on a 10-business-day, one-tail, 99.0 percent confidence level soundness standard.

For example, the growth in traded credit products has increased default and credit migration risks that should be captured in a regulatory capital requirement for specific risk but have proved difficult to capture adequately within current specific risk models. The agencies did not contemplate risks associated with less liquid credit products when the market risk capital rule was first adopted. Therefore, the agencies propose to implement an incremental risk capital requirement that would apply to a bank that models specific risk for one or more portfolios of debt or, if applicable, equity positions, and to incorporate explicit measures of liquidity.

In addition, to address the agencies' concerns about the appropriate treatment of covered positions that have limited price transparency, the agencies propose to require banks to have a well-defined valuation process for all covered positions. The specific proposals are discussed below.

### B. Description of the Proposed Revisions to the Market Risk Capital Rule

#### 1. Scope

The proposed market risk capital rule does not change the set of banks to which the rule applies. That is, the proposed rule continues to apply to any bank with aggregate trading assets and trading liabilities equal to 10 percent or more of total assets, or \$1 billion or more. The proposed rule applies to a bank that meets the market risk capital rule applicability threshold regardless of whether the bank uses the general risk-based capital rules or the advanced approaches rules.

The primary Federal supervisor of a bank that does not meet the threshold criteria may apply the market risk capital rule to the bank if the supervisor deems it necessary or appropriate given the level of market risk of the bank or

to ensure safe and sound banking practices. The primary Federal supervisor may also exclude a bank that meets the threshold criteria from application of the rule if the supervisor determines that the exclusion is appropriate based on the level of market risk of the bank and is consistent with safe and sound banking practices.

*Question 2: The agencies seek comment on the appropriateness of the proposed applicability thresholds. What, if any, alternative thresholds should the agencies consider and why?*

#### 2. Reservation of Authority

The proposed rule contains a reservation of authority that affirms the authority of a bank's primary Federal supervisor to require the bank to hold an overall amount of capital greater than would otherwise be required under the rule if the supervisor determines that the bank's risk-based capital requirements under the rule are not commensurate with the market risk of the bank's covered positions. In addition, the agencies anticipate that there may be instances when the proposed rule would generate a risk-based capital requirement for a specific covered position or portfolio of covered positions that is not commensurate with the risks of the covered position or portfolio. In these cases, a bank's primary Federal supervisor may require the bank to assign a different risk-based capital requirement to the covered position or portfolio of covered positions that better reflects the risk of the position or portfolio. The proposed rule also provides authority for a bank's primary Federal supervisor to require the bank to calculate capital requirements for specific positions or portfolios under the market risk capital rule or under either the general risk-based capital rules or advanced approaches rules, as appropriate, to more appropriately reflect the risks of the positions.

#### 3. Modification of the Definition of Covered Position

The proposed rule modifies the definition of a covered position to include trading assets and trading liabilities (as reported on schedule RC-D of the Call Report or Schedule HC-D of the Consolidated Financial Statements for Bank Holding Companies) that are trading positions. Under the proposal, a trading position is defined as a position that is held by the bank 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. Thus, the characterization of an

asset or liability as “trading” for purposes of U.S. Generally Accepted Accounting Principles (GAAP) will not necessarily determine whether the asset or liability is a “trading position” for purposes of the proposed rule.

Commenters on the 2006 proposal expressed concerns that the proposed covered position definition would create inconsistencies between the regulatory capital treatment of certain trading assets and trading liabilities and the treatment of those positions under GAAP. The agencies, however, continue to believe that relying on the accounting definition of trading assets and trading liabilities, without modification, would not be appropriate because it includes positions that are not held with the intent or ability to trade.

The proposed covered position definition includes trading assets and trading liabilities that hedge covered positions. In addition, the trading asset or trading liability must be free of any restrictive covenants on its tradability or the bank must be able to hedge its material risk elements in a two-way market. A trading asset or trading liability that hedges a trading position is a covered position only if the hedge is within the scope of the bank’s hedging strategy (discussed below). The agencies encourage the sound risk management of trading positions. Therefore, the agencies include in the definition of a covered position any hedges that offset the risk of trading positions. The agencies are concerned, however, that a bank could craft its hedging strategies in order to bring non-trading positions that are more appropriately treated under the credit risk capital rules into the bank’s covered positions. The agencies will review a bank’s hedging strategies to ensure that they are not being manipulated in this manner. For example, mortgage-backed securities that are not held with the intent to trade, but that are hedged with interest rate swaps to mitigate interest rate risk, would be subject to the credit risk capital rules.

Consistent with the current definition of covered position, under the proposed rule, a covered position also includes any foreign exchange or commodity position, whether or not it is a trading asset or trading liability. With prior supervisory approval, a bank may exclude from its 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 bank’s tier 1 and tier 2 capital; or (iv) a position designed to hedge a bank’s capital ratios or earnings against the effect of adverse exchange rate movements on (i), (ii), or (iii).

Also consistent with the current rule, the proposed definition of a covered position explicitly excludes any position that, in form or substance, acts as a liquidity facility that provides support to asset-backed commercial paper. In addition, the definition of covered position excludes all intangible assets, including servicing assets. Intangible assets are excluded because their risks are explicitly addressed in the credit risk capital rules, often through a deduction from capital.

The proposed covered position definition excludes any equity position that is not publicly traded, other than a derivative that references a publicly traded equity; any direct real estate holding; and any position that a bank holds with the intent to securitize. Equity positions that are not publicly traded would include private equity investments, most hedge fund investments, and other such closely-held and non-liquid investments that are not easily marketable. Direct real estate holdings include real estate for which the bank holds title, such as “other real estate owned” held from foreclosure activities, and bank premises used by a bank as part of its ongoing business activities. With such real estate holdings, marketability and liquidity are uncertain or even impractical as the assets are an integral part of the bank’s ongoing business. Indirect investments in real estate, such as through real estate investment trusts or special purpose vehicles, must meet the definition of a trading position in order to be a covered position. Positions that a bank holds with the intent to securitize include a “pipeline” or “warehouse” of loans being held for securitization; the agencies do not view the intent to securitize these positions as synonymous with the intent to trade them. Consistent with the 2009 revisions, the agencies believe all of these excluded positions have significant constraints in terms of a bank’s ability to liquidate them readily and value them reliably on a daily basis.

The proposed covered position definition excludes a credit derivative that the bank recognizes as a guarantee for purposes of calculating the amount of risk-weighted assets under the credit

risk capital rules<sup>15</sup> if it is used to hedge a position that is not a covered position (for example, a credit derivative hedge of a loan that is not a covered position). This requires the bank to include the credit derivative in its risk-weighted assets for credit risk and exclude it from its VaR-based measure for market risk. This proposed treatment of a credit derivative hedge avoids the mismatch that arises when the hedged position (for example, a loan) is not a covered position and the credit derivative hedge is a covered position. This mismatch has the potential to overstate the VaR-based measure of market risk if only one side of the transaction were reflected in that measure.

*Question 3: The agencies request comment on all aspects of the proposed definition of covered position.*

Under the proposed rule, in addition to commodities and foreign exchange positions, covered positions include debt positions, equity positions and securitization positions. The proposal defines a debt position as a 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. Examples of debt positions include corporate and government bonds, certain nonconvertible preferred stock, certain convertible bonds, and derivatives (including written and purchased options) for which the underlying instrument is a debt position.

The proposal defines an equity position as a 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. Examples of equity positions include voting or nonvoting common stock, certain convertible bonds, commitments to buy or sell equity instruments, equity indices, and a derivative for which the underlying instrument is an equity position.

Under the proposal, a securitization is a transaction in which: (i) All or a portion of the credit risk of one or more underlying exposures is transferred to one or more third parties; (ii) the credit risk associated with the underlying exposures has been separated into at least two tranches that reflect different levels of seniority; (iii) performance of the securitization exposures depends upon the performance of the underlying exposures; (iv) all or substantially all of

<sup>15</sup> See 12 CFR part 3, section 3 (OCC); 12 CFR part 208, Appendix A, section II.B and 12 CFR part 225, Appendix A, section II.B (Board); and 12 CFR part 325, Appendix A, section II.B.3 (FDIC). The treatment of guarantees is described in sections 33 and 34 of the advanced approaches rules.



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); (v) for non-synthetic securitizations, the underlying exposures are not owned by an operating company;<sup>16</sup> (vi) the underlying exposures are not owned by a small business investment company described in section 302 of the Small Business Investment Act of 1958 (15 U.S.C. 682); and (vii) the underlying exposures are not owned by a firm an investment in which qualifies as a community development investment under 12 U.S.C. 24 (Eleventh). Further, a bank's primary Federal supervisor 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 securitization based on the transaction's leverage, risk profile, or economic substance. Generally, the agencies would consider investment firms that can easily change the size and composition of their capital structure, as well as the size and composition of their assets and off-balance sheet exposures as eligible for exclusion from the securitization definition under this provision. Based on a particular transaction's leverage, risk profile, or economic substance, a bank's primary Federal supervisor may deem an exposure to a transaction to be a securitization exposure, even if the exposure does not meet the criteria in provisions (v), (vi), or (vii) above. A securitization position is a covered position that is (i) an on-balance sheet or off-balance sheet credit exposure (including credit-enhancing representations and warranties) that arises from a securitization (including a resecuritization); or (ii) an exposure that directly or indirectly references a securitization exposure described in (i) above.

A securitization position includes nth-to-default credit derivatives and resecuritization positions. The proposal defines an nth-to-default credit derivative as a credit derivative that provides credit protection only for the nth-defaulting reference exposure in a group of reference exposures. In addition, under the proposal, a resecuritization is a securitization in

which one or more of the underlying exposures is a securitization exposure. A resecuritization position is (i) an on- or off-balance sheet exposure to a resecuritization; or (ii) an exposure that directly or indirectly references a resecuritization exposure described in (i).

The proposal defines a correlation trading position as (i) a securitization position for which all or substantially all of the value of the underlying exposures is based on the credit quality of a single company for which a two-way market exists, or on commonly traded indices based on such exposures for which a two-way market exists on the indices; or (ii) a position that is not a securitization position and that hedges a position described in clause (i) above. Under the proposed definition, a correlation trading position does not include a resecuritization position, a derivative of a securitization position that does not provide a pro rata share in the proceeds of a securitization tranche, or a securitization position for which the underlying assets or reference exposures are retail exposures, residential mortgage exposures, or commercial mortgage exposures. Correlation trading positions are typically not rated by external credit rating agencies and may include CDO index tranches, bespoke CDO tranches, and nth-to-default credit derivatives. Standardized CDS indices and single-name CDSs are examples of instruments used to hedge these positions. While banks typically hedge correlation trading positions, hedging frequently does not reduce a bank's net exposure to a position because the hedges often do not perfectly match the position.

#### 4. Requirements for the Identification of Trading Positions and Management of Covered Positions

Section 3 of the proposal introduces new requirements for the identification of trading positions and the management of covered positions. The agencies believe that these new requirements are warranted based on the inclusion of more credit risk-related, less liquid, and less actively traded products in banks' covered positions. The risks of these positions may not be fully reflected in the requirements of the market risk capital rule and may be more appropriately captured under credit risk capital rules.

The proposed rule requires a bank to have clearly defined policies and procedures for determining which of its trading assets and trading liabilities are trading positions as well as which of its trading positions are correlation trading positions. In determining the scope of

trading positions, the bank must consider (i) 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; and (ii) possible impairments to the liquidity of a position or its hedge.

In addition, the bank must have clearly defined trading and hedging strategies. The bank's trading and hedging strategies for its trading positions must be approved by senior management. The trading strategy must articulate the expected holding period of, and the market risk associated with, each portfolio of trading positions. The hedging strategy must articulate for each portfolio the level of market risk the bank is willing to accept and must detail the instruments, techniques, and strategies the bank will use to hedge the risk of the portfolio. The hedging strategy should be applied at the level at which trading positions are risk managed at the bank (for example, trading desk, portfolio levels).

The proposed rule requires a bank to have clearly defined policies and procedures for actively managing all covered positions. In the context of non-traded commodities and foreign exchange positions, active management includes managing the risks of those positions within the bank's risk limits. For all covered positions, these policies and procedures, at a minimum, must require (i) marking positions to market or model on a daily basis; (ii) assessing on a daily basis the bank's ability to hedge position and portfolio risks and the extent of market liquidity; (iii) establishment and daily monitoring of limits on positions by a risk control unit independent of the trading business unit; (iv) daily monitoring by senior management of the information described in (i) through (iii) above; (v) at least annual reassessment by senior management of established limits on positions; and (vi) at least annual assessments by qualified personnel 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.

The proposed rule introduces new requirements for the prudent valuation of covered positions that include maintaining policies and procedures for valuation, marking positions to market or to model, independent price verification, and valuation adjustments or reserves. The valuation process must consider, as appropriate, unearned credit spreads, close-out costs, early termination costs, investing and funding

<sup>16</sup> In a synthetic securitization, a company uses credit derivatives or guarantees to transfer a portion of the credit risk of one or more underlying exposures to third-party protection providers. The credit derivative or guarantee may be collateralized or uncollateralized.

costs, future administrative costs, liquidity, and model risk. These new valuation requirements reflect the agencies' concerns about deficiencies in banks' valuation of less liquid trading positions, especially in light of the historical focus of the market risk capital rule on a 10-business-day time horizon and a one-tail, 99.0 percent confidence level, which has proved to be inadequate at times to reflect the full extent of the risks of less liquid positions.

##### 5. General Requirements for Internal Models

*Model Approval and Ongoing Use Requirements.* Under the proposed rule, a bank must receive the prior written approval of its primary Federal supervisor before using any internal model to calculate its market risk capital requirement. The 2006 proposal included a requirement that a bank receive prior written approval from its primary Federal supervisor before extending the use of an approved model to an additional business line or product type. Some commenters raised concerns that this requirement might unduly impede a new product launch pending regulatory approval. The agencies have not included this requirement in the proposed rule. Instead, the proposal requires that a bank promptly notify its primary Federal supervisor when the bank plans to extend the use of a model that the primary Federal supervisor has approved to an additional business line or product type.

The proposed rule also requires a bank to notify its primary Federal supervisor promptly if it makes any change to its internal models that would result in a material change in the bank's amount of risk-weighted assets for a portfolio of covered positions or when the bank makes any material change to its modeling assumptions. The bank's primary Federal supervisor may rescind its approval, in whole or in part, of the use of any internal model, and determine an appropriate regulatory capital requirement for the covered positions to which the model would apply, if it determines that the model no longer complies with the market risk capital rule or fails to reflect accurately the risks of the bank's covered positions. For example, if adverse market events or other developments reveal that a material assumption in a bank's approved model is flawed, the bank's primary Federal supervisor may require the bank to revise its model assumptions and resubmit the model specifications for review by the supervisor.

Financial markets evolve rapidly, and internal models that were state-of-the-art at the time they were approved for use in risk-based capital calculations can become less relevant as the risks of covered positions evolve and as the industry develops more sophisticated modeling techniques that better capture material risks. The proposed rule therefore requires a bank to review its internal models periodically, but no less frequently than annually, in light of developments in financial markets and modeling technologies, and to enhance those models as appropriate to ensure that they continue to meet the agencies' standards for model approval and employ risk measurement methodologies that are most appropriate for the bank's covered positions. It is essential that a bank continually improve its models to ensure that its market risk capital requirement reflects the risk of the bank's covered positions. A bank's primary Federal supervisor will closely scrutinize the bank's model review practices as a matter of safety and soundness.

To support the model review and enhancement requirement discussed above, the agencies are considering imposing a capital supplement in circumstances in which a bank's internal model continues to meet the qualification requirements of the rule, but develops specific shortcomings in risk identification, risk aggregation and representation, or validation. The regulatory capital supplement would reflect the materiality of these shortcomings associated with the bank's current model and could result in a risk-weighted assets surcharge that would apply until such time that the bank enhances its model to the satisfaction of its primary Federal supervisor. For example, the capital supplement could take the form of a model risk multiplier similar to the backtesting multiplier for VaR-type models in section 4 of the proposed rule. Depending on the materiality of the shortcomings, the supervisor could increase the multiplier on any model above three, generally subject to the restriction that the resulting capital requirement not exceed the capital requirement that would apply under the proposed rule's standardized measurement method for specific risk.

*Question 4: Under what circumstances should the agencies require a model-specific capital supplement? What criteria could the agencies use to apply capital supplements consistently across banks? Aside from a capital supplement or withdrawal of model approval, how else*

*could the agencies address concerns about outdated models?*

*Risks Reflected in Models.* Under the proposed rule, a bank must incorporate its internal models into its risk management process and integrate the internal models used for calculating its VaR-based measure into its daily risk management process. The level of sophistication of a bank's models must be commensurate with the complexity and amount of its covered positions. To measure market risk, a bank's internal models may use any generally accepted modeling approach, including but not limited to variance-covariance models, historical simulations, or Monte Carlo simulations. A bank's internal models must properly measure all material risks in the covered positions to which they are applied. The proposed rule requires that risks arising from less liquid positions and positions with limited price transparency be modeled conservatively under realistic market scenarios. The proposed rule also requires a bank to have a rigorous process for reestimating, reevaluating and updating its models to ensure continued applicability and relevance.

*Control, Oversight, and Validation Mechanisms.* The proposed rule maintains the current requirement that a bank have a risk control unit that reports directly to senior management and is independent of its business trading units. In addition, the proposed rule provides specific model validation standards that are similar to those in the advanced approaches rules.

Specifically, the proposal requires a bank to validate its internal models initially and on an ongoing basis. The 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. The review personnel do not necessarily have to be external to the bank in order to achieve the required independence. A bank should ensure that individuals who perform the review are not biased in their assessment due to their involvement in the development, implementation, or operation of the models.

Under the proposed rule, validation must include an evaluation of the conceptual soundness of the internal models. This evaluation should include evaluation of empirical evidence and documentation supporting the methodologies used; important model assumptions and their limitations; adequacy and robustness of empirical data used in parameter estimation and model calibration; and evidence of a model's strengths and weaknesses.

Validation also must include an ongoing monitoring process that includes a review and verification of processes and the comparison of the bank's model outputs 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 bank's models. As part of this comparison, the bank should investigate the source of any differences between the model estimates and the relevant internal or external data or estimation techniques and whether the extent of the differences is appropriate.

Validation of internal models must include an outcomes analysis process that includes backtesting. Consistent with the 2009 revisions, the proposed rule requires a bank's validation process for internal models used to calculate its VaR-based measure to include an outcomes analysis process that includes a comparison of the changes in the bank's portfolio value that would have occurred were end-of-day positions to remain unchanged (therefore, excluding fees, commissions, reserves, net interest income, and intraday trading) with VaR-based measures during a sample period not used in model development.

The proposed rule expands upon the current market risk rule's stress-testing requirement. Specifically, the proposal requires a bank to stress test the market risk of its covered positions at a frequency appropriate to each portfolio, and in no case less frequently than quarterly. The stress tests must take into account concentration risk, illiquidity under stressed market conditions, and other risks arising from the bank's trading activities that may not be captured adequately in the bank's internal models. For example, it may be appropriate for a bank to include in its stress testing the gapping of prices, one-way markets, nonlinear or deep out-of-the-money products, jumps-to-default, and significant changes in correlation. Relevant types of concentration risk include concentration by name, industry, sector, country, and market. Market concentration occurs when a bank holds a position that represents a concentrated share of the market for a security, and thus requires a longer than usual liquidity horizon to liquidate the position without impacting the market. A bank's primary Federal supervisor would evaluate the robustness and appropriateness of a bank's stress tests through the supervisory review process.

The proposed rule requires a bank to have an internal audit function independent of business-line management that at least annually assesses the effectiveness of the controls

supporting the bank's market risk measurement systems, including the activities of the business trading units and independent risk control unit, compliance with policies and procedures, and the calculation of the bank's measure for market risk. The internal audit function should review the bank's validation processes, including validation procedures, responsibilities, results, timeliness, and responsiveness to findings. Further, the internal audit function should evaluate the depth, scope, and quality of the risk management system review process and conduct appropriate testing to ensure that the conclusions of these reviews are well-founded. At least annually, the internal audit function must report its findings to the bank's board of directors (or a committee thereof).

*Internal Assessment of Capital Adequacy.* The proposed rule requires that a bank have a rigorous process for assessing its overall capital adequacy in relation to its market risk. The assessment must take into account market concentration and liquidity risks under stressed market conditions, as well as other risks that may not be captured fully in the VaR-based measure.

*Documentation.* Under the proposal, a bank must document adequately all material aspects of its internal models, the management and valuation of covered positions, its control, oversight, validation and review processes and results, and its internal assessment of capital adequacy. This documentation would facilitate the supervisory review process as well as the bank's internal audit or other review procedures.

## 6. Capital Requirement for Market Risk

As under the current rule, the proposed rule requires a bank to calculate its risk-based capital ratio denominator as the sum of its adjusted risk-weighted assets and market risk equivalent assets. To calculate market risk equivalent assets, a bank must multiply its measure for market risk by 12.5. Under the proposed rule, a bank's measure for market risk equals the sum of its VaR-based capital requirement, its stressed VaR-based capital requirement, any specific risk add-ons, any incremental risk capital requirement, any comprehensive risk capital requirement, and any capital requirement for *de minimis* exposures, each calculated according to the requirements of the proposed rule as discussed further below. No adjustments are permitted to address potential double counting among any of these components of a bank's measure for market risk.

Also, consistent with the current rule, under the proposed rule a bank's VaR-based capital requirement equals the greater of (i) the previous day's VaR-based measure, or (ii) the average of the daily VaR-based measures for each of the preceding 60 business days multiplied by three, or such higher multiplication factor required based on backtesting results determined according to section 4 of the proposed rule and discussed further below. Similarly, under the proposed rule, a bank's stressed VaR-based capital requirement equals the greater of (i) the most recent stressed VaR-based measure; or (ii) the average of the weekly VaR-based measures for each of the preceding 12 weeks multiplied by three, or such higher multiplication factor as required based on backtesting results determined according to section 4 of the proposed rule. The multiplication factor applicable to the stressed-VaR based measure for purposes of this calculation is based on the backtesting results for its VaR-based measure; there is no separate backtesting requirement for the stressed VaR-based measure for purposes of calculating a bank's measure for market risk.

The proposed rule requires a bank to include in its measure for market risk any specific risk add-on as required under section 7(c) of the proposed rule, determined using the standardized measurement method described in section 10 of the proposed rule. The proposed rule also requires a bank to include in its measure for market risk any capital requirement for *de minimis* exposures. Specifically, a bank must add to its measure for market risk the absolute value of the market value of those *de minimis* exposures that are not captured in the bank's VaR-based measure unless the bank has obtained prior written approval from its primary Federal supervisor to calculate a capital requirement for the *de minimis* exposures using alternative techniques that appropriately measure the market risk associated with those exposures. With regard to a bank's total risk-based capital numerator, the proposed rule eliminates tier 3 capital and the associated allocation methodologies.

*Determination of the Multiplication Factor.* The proposed rule modifies the current rule's regulatory backtesting framework for determining the multiplication factor based on the number of backtesting exceptions. Under the current market risk capital rule, a bank must compare its daily VaR-based measure to its actual daily trading profit or loss, which typically includes realized and unrealized gains and losses

on portfolio positions as well as fee income and commissions associated with trading activities. Under the proposed rule, each quarter, a bank must compare each of its most recent 250 business days' trading losses (excluding fees, commissions, reserves, intra-day trading, and net interest income) with the corresponding daily VaR-based measure calibrated to a one-day holding period and at a one-tail, 99.0 percent confidence level. The excluded components of trading profit and loss are not modeled as part of the VaR-based measure. Therefore, excluding them from the regulatory backtesting framework will improve the accuracy of the backtesting and provide a better assessment of the bank's internal model. Some commenters on the 2006 proposal raised concerns with this requirement; however, the agencies continue to believe that banks' trading and reporting systems are sufficiently sophisticated to allow this type of backtesting.

*Question 5: The agencies request comment on any challenges banks may face in formulating the measure of trading loss as proposed, particularly for smaller portfolios. More specifically, which, if any, of the items to be excluded from a bank's measure of trading loss (fees, commissions, reserves, intra-day trading, or net interest income) present difficulties and what is the nature of such difficulties?*

#### 7. VaR-Based Capital Requirement

Consistent with the current rule, section 5 of the proposed rule requires a bank to use one or more internal models to calculate a daily VaR-based measure that reflects general market risk for all covered positions. The daily VaR-based measure also may reflect the bank's specific risk for one or more portfolios of debt or equity positions and must reflect the specific risk for any portfolios of correlation trading positions that are modeled under section 9 of the proposed rule.

The proposal adds credit spread risk to the list of risk categories required to be captured in a bank's VaR-based measure (that is, in addition to interest rate risk, equity price risk, foreign exchange rate risk, and commodity price risk). The VaR-based measure may incorporate empirical correlations within and across risk categories, provided the bank validates and justifies the reasonableness of its process for measuring correlations. If the VaR-based measure does not incorporate empirical correlations across risk categories, the bank must add the separate measures from its internal models used to calculate the VaR-based measure for the

appropriate market risk categories to determine the bank's aggregate VaR-based measure. The proposed rule continues to require models to include risks arising from the nonlinear price characteristics of option positions or positions with embedded optionality.

Consistent with the 2009 revisions, under the proposed rule, a bank must be able to justify to the satisfaction of its primary Federal supervisor the omission of any risk factors from the calculation of its VaR-based measure that the bank includes in its pricing models. In addition, a bank must demonstrate to the satisfaction of its primary Federal supervisor the appropriateness of any proxies it uses to capture the risks of the bank's actual positions for which such proxies are used.

*Quantitative Requirements for VaR-based Measure.* The proposed rule includes the same quantitative requirements for the daily VaR-based measure as the current market risk capital rule. These include the one-tail, 99.0 percent confidence level, a ten-business-day holding period, and a historical observation period of at least one year.

To calculate VaR-based measures using a 10-day holding period, the bank may calculate 10-business-day measures directly, or may convert VaR-based measures using holding periods other than 10 business days to the equivalent of a 10-business-day holding period. A bank that converts its VaR-based measure in this manner must be able to justify the reasonableness of its approach to the satisfaction of its primary Federal supervisor. For example, a bank that computes its VaR-based measure by multiplying a daily VaR amount by the square root of 10 (that is, using the square root of time) should demonstrate that daily changes in portfolio value do not exhibit significant mean reversion, autocorrelation, or volatility clustering.<sup>17</sup>

The proposed rule requires a bank's VaR-based measure to be based on data relevant to the bank's actual exposures and of sufficient quality to support the calculation of risk-based capital requirements. The bank must update data sets at least monthly, or more frequently as changes in market conditions or portfolio composition warrant. For banks that use a weighting scheme or other method for identifying the historical observation period, the bank must either: (i) Use an effective

<sup>17</sup> Using the square root of time assumes that daily portfolio returns are independent and identically distributed (IID). When the IID assumption is violated, the square root of time approximation is not appropriate.

observation period of at least one year in which the average time lag of the observations is at least six months; or (ii) demonstrate to its primary Federal supervisor that the method used is more effective than that described in (i) at representing the volatility of the bank's trading portfolio over a full business cycle. In the latter case, a bank must update its data more frequently than monthly and in a manner appropriate for the type of weighting scheme. In general, a bank using a weighting scheme should update its data daily. Because the most recent observations typically are the most heavily weighted it is important to include these observations in the bank's VaR-based measure.

The proposed rule requires a bank to retain and make available to its primary Federal supervisor model performance information on significant subportfolios. Taking into account the value and composition of a bank's covered positions, the subportfolios must be sufficiently granular to inform a bank and its supervisor about the ability of the bank's VaR model to reflect risk factors appropriately. A bank's primary Federal supervisor must approve the number of subportfolios it uses for subportfolio backtesting. While the proposed rule does not prescribe the basis for determining significant subportfolios, the primary Federal supervisor may consider the bank's evaluation of certain factors such as trading volume, product types and number of distinct traded products, business lines, and number of traders or trading desks.

The proposed rule requires a bank to retain and make available to its primary Federal supervisor, with no less than a 60 day lag, information for each subportfolio for each business day over the previous two years (500 business days) that includes (i) A daily VaR-based measure for the subportfolio calibrated to a one-tail, 99.0 percent confidence level; (ii) the daily profit or loss for the subportfolio (that is, the net change in price of the positions held in the portfolio at the end of the previous business day); and (iii) the p-value of the profit or loss on each day (that is, the probability of observing a loss greater than reported in (ii) above, based on the model used to calculate the VaR-based measure described in (i) above).

Daily information on the probability of observing a loss greater than that which occurred on any day is a useful metric for banks and supervisors to assess the quality of a bank's VaR model. For example, if a bank 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 over a given period provides information about the adequacy of the VaR model's ability to characterize the whole distribution of losses, including information on the size and number of backtesting exceptions. The requirement to create and retain this information at the subportfolio level may help identify particular products or business lines for which the model is not adequately measuring risk.

*Question 6: The agencies request comment on what, if any, challenges exist with the proposed subportfolio backtesting requirements described above. How might banks determine significant subportfolios of covered positions that would be subject to these requirements? What basis could be used to determine an appropriate number of subportfolios? Is the p-value a useful statistic for evaluating the efficacy of a bank's VaR model in gauging market risk? What, if any, other statistics should the agencies consider and why?*

The current market risk capital rule requires a bank to include in its VaR-based measure only covered positions. In contrast, the proposed rule allows a bank to include term repo-style transactions in its VaR-based measure even though these positions may not meet the definition of a covered position, provided the bank includes all such term repo-style transactions consistently over time. Under the proposed rule, a term repo-style transaction is a repurchase or reverse repurchase transaction, or a securities borrowing or securities lending transaction, including a transaction in which the bank acts as agent for a customer and indemnifies the customer against loss, that has an original maturity in excess of one business day, provided that it meets certain requirements, including being based solely on liquid and readily marketable securities or cash and subject to daily marking-to-market and daily margin maintenance requirements.<sup>18</sup> While repo-style transactions typically are close adjuncts to trading activities, GAAP traditionally has not permitted companies to report them as trading assets or trading liabilities. Repo-style transactions included in the VaR-based measure will continue to be subject to the requirements of the credit risk

capital rules for calculating capital for counterparty credit risk.

#### 8. Stressed VaR-based Capital Requirement

Under section 6 of the proposed rule, a bank must calculate at least weekly a stressed VaR-based measure using the same internal model(s) used to calculate its VaR-based measure. The stressed VaR-based measure supplements the VaR-based measure, which, due to inherent limitations, proved inadequate in producing capital requirements appropriate to the level of losses incurred at many banks during the financial market crisis that began in mid-2007. The stressed VaR-based measure mitigates the procyclicality of the minimum capital requirements for market risk and contributes to a more appropriate measure of the risks of a bank's covered positions.

*Quantitative Requirements for Stressed VaR-based Measure.* To determine the stressed VaR-based measure, a bank must use the same model(s) used to calculate its VaR-based measure, but with model inputs calibrated to reflect historical data from a continuous 12-month period that reflects a period of significant financial stress appropriate to the bank's current portfolio. The stressed VaR-based measure must be calculated at least weekly and be no less than the bank's VaR-based measure. The agencies generally expect that a bank's stressed VaR-based measure will be substantially greater than its VaR-based measure.

The proposed rule requires a bank to have policies and procedures that describe how it determines the period of significant financial stress used to calculate the bank's stressed VaR-based measure, and to be able to provide empirical support for the period used. These policies and procedures must address (i) how the bank links the period of significant financial stress used to calculate the stressed VaR-based measure to the composition and directional bias of the bank's current portfolio; and (ii) the bank's process for selecting, reviewing, and updating the period of significant financial stress used to calculate the stressed VaR-based measure and for monitoring the appropriateness of the 12-month period in light of the bank's current portfolio. The bank must obtain the prior approval of its primary Federal supervisor for, and notify its primary Federal supervisor if the bank makes any material changes to, these policies and procedures. A bank's primary Federal supervisor may require it to use a different period of significant financial

stress in the calculation of the bank's stressed VaR-based measure.

#### 9. Revised Modeling Standards for Specific Risk

The proposed rule more clearly specifies the modeling standards for specific risk and eliminates the current option for a bank to model some but not all material aspects of specific risk for an individual portfolio of debt or equity positions. As under the current market risk capital rule, a bank may use one or more internal models to measure the specific risk of a portfolio of debt or equity positions with specific risk. A bank must also use one or more internal models to measure the specific risk of a portfolio of correlation trading positions with specific risk that are modeled under section 9 of the proposed rule. A bank may not, however, model the specific risk of securitization positions that are not modeled under section 9 of the proposed rule. This treatment addresses regulatory arbitrage opportunities as well as deficiencies in the modeling of securitization positions that became more evident during the course of the financial market crisis that began in mid-2007.

Under the proposed rule, the internal models must explain the historical price variation in the portfolio, be responsive to changes in market conditions, be robust to an adverse environment, and capture all material aspects of specific risk for the debt and equity positions. Specifically, the proposed revisions require that a bank's internal models capture event risk and idiosyncratic risk; capture and demonstrate sensitivity to material differences between positions that are similar but not identical; and capture and demonstrate sensitivity to changes in portfolio composition and concentrations. If a bank calculates an incremental risk measure for a portfolio of debt or equity positions under section 8 of the proposed rule, the bank is not required to capture default and credit migration risks in its internal models used to measure the specific risk of those portfolios.

Under the current market risk capital rule, if a bank incorporates specific risk in its internal model but fails to demonstrate to its primary Federal supervisor that its internal model adequately measures all aspects of specific risk for a portfolio of debt and equity positions, the bank is subject to an internal models-based specific risk add-on for that portfolio. In contrast, the proposed rule requires a bank that does not have an approved internal model that captures all material aspects of specific risk for a particular portfolio of

<sup>18</sup> See Section 2, "Definitions," of the proposed rule for a full definition of a term repo-style transaction.

debt, equity, or correlation trading positions to use the standardized measurement method (described in section 10 of the proposed rule) to calculate a specific risk add-on for that portfolio. This proposed change reflects the agencies' interest in creating incentives for more robust specific risk modeling. Due to concerns about the ability of a bank to model the specific risk of certain securitization positions, the proposed rule requires a bank to calculate a specific risk add-on under the standardized measurement method for all of its securitization positions that are not correlation trading positions modeled under section 9 of the proposed rule. The agencies note that not all debt, equity, or securitization positions have specific risk (for example, certain interest rate swaps). Under the proposed rule, there is no specific risk capital requirement for positions without specific risk. A bank should have clear policies and procedures for determining whether a position has specific risk.

While the proposed rule continues to provide for flexibility and a combination of approaches to measure market risk, including the use of different models to measure the general market risk and the specific risk of one or more portfolios of debt and equity positions, the agencies strongly encourage banks to develop and implement models that integrate the measurement of VaR for general market risk and specific risk. A bank's use of a combination of approaches would be subject to supervisory review to ensure that the overall capital requirement for market risk is commensurate with the risks of the bank's covered positions.

#### 10. Standardized Specific Risk Capital Requirement

The proposed rule requires a bank to calculate a total specific risk add-on for each portfolio of debt and equity positions for which the bank's VaR-based measure does not capture all material aspects of specific risk and for each of its securitization positions that is not modeled under section 9 of the proposed rule. A bank must calculate each specific risk add-on in accordance with the requirements of the proposed rule. The bank must add the total specific risk add-on for each portfolio of positions to the bank's measure for market risk. The specific risk add-on for an individual debt or securitization position that represents purchased credit protection is capped at the market value of the protection.

For debt, equity, and securitization positions that are derivatives with linear

payoffs (for example, futures, equity swaps), a bank must apply a risk weighting factor to the market value of the effective notional amount of the underlying instrument or index portfolio. For debt, equity, and securitization positions that are derivatives with nonlinear payoffs (for example, options, interest rate caps, tranching positions), a bank must apply a risk weighting factor to the market value of the effective notional amount of the underlying instrument or portfolio multiplied by the derivative's delta (that is, the change of the derivative's value relative to changes in the price of the reference exposure). For a standard interest rate derivative, the effective notional amount refers to the apparent or stated notional principal amount. If the contract contains a multiplier or other leverage enhancement, the apparent or stated notional principal amount must be adjusted to reflect the effect of the multiplier or leverage enhancement in order to determine the effective notional amount. A swap must be included as an effective notional position in the underlying debt, equity, or securitization instrument or portfolio, with the receiving side treated as a long position and the paying side treated as a short position. Consistent with the current rules, a bank may net long and short positions (including derivatives) in identical issues or identical indices. A bank may also net positions in depositary receipts against an opposite position in an identical equity in different markets, provided that the bank includes the costs of conversion.

The proposed rule also expands the recognition of hedging effects for debt and securitization positions. A set of transactions consisting of either a debt position and its credit derivative hedge or a securitization position and its credit derivative hedge has a specific risk add-on of zero if the debt or securitization position is fully hedged by a total return swap (or similar instrument where there is a matching of payments and changes in market value of the position) and there is an exact match between the reference obligation, the maturity, and the currency of the swap and the debt or securitization position.

If a set of transactions consisting of either a debt position and its credit derivative hedge or a securitization position and its credit derivative hedge does not meet the criteria for no specific risk add-on, the specific risk add-on for the set of transactions is equal to 20.0 percent of the specific risk add-on for the side of the transaction with the higher specific risk add-on, provided

that the credit risk of the position is fully hedged by a credit default swap (or similar instrument), and there is an exact match between the reference obligation of the credit derivative hedge and the debt or securitization position, the maturity of the credit derivative hedge and the debt or securitization position, and the currency of the credit derivative hedge and the debt or securitization position. For a set of transactions that consists of either a debt position and its credit derivative hedge or a securitization position and its credit derivative hedge that does not meet the criteria for full offset or the 80.0 percent offset described above (for example, there is mismatch in the maturity of the credit derivative hedge and that of the debt or securitization position), but in which all or substantially all of the price risk has been hedged, the specific risk add-on is equal to the specific risk add-on for the side of the transaction with the larger specific risk add-on.

#### *Debt and Securitization Positions.*

While most securitization positions are considered debt positions under the current market risk capital rule, the agencies distinguish between securitization positions and debt positions in the proposed rule because of new proposed requirements that are uniquely applicable to securitization positions. Under the proposed rule, the total specific risk add-on for a portfolio of debt or securitization positions is the sum of the specific risk add-ons for individual debt or securitization positions, which are determined by multiplying the absolute value of the current market value of each net long or net short debt or securitization position by an appropriate risk-weighting factor for the position.

The 2005 revisions to the market risk framework incorporated changes to the standardized measurement method used for calculating the specific risk add-ons for debt positions. For example, the "government" category was expanded to include all sovereign debt, and the specific risk-weighting factor for sovereign debt was changed from zero percent to a range from zero to 12.0 percent based on the external rating of the obligor and the remaining contractual maturity of the debt position. Table 1 below provides an illustrative representation of the specific risk-weighting factors applicable to debt positions in the "government," "qualifying," and "other" categories under the market risk framework.

TABLE 1—SPECIFIC RISK-WEIGHTING FACTORS FOR DEBT POSITIONS

| Category         | Illustrative external rating description   | Remaining contractual maturity  | Specific risk (%) weight factor |
|------------------|--|---|---------------------------------|
| Government ..... | Highest investment grade to second highest investment grade (for example, AAA to AA-).<br>Third highest investment grade to lowest investment grade (for example, A+ to BBB-).<br><br>One category below investment grade to two categories below investment grade (for example, BB+ to B-).<br>More than two categories below investment grade<br>Unrated ..... | .....   | 0.00                            |
|                  |  | Residual term to final maturity 6 months or less ...                              | 0.25                            |
|                  |  | Residual term to final maturity greater than 6 and up to and including 24 months. | 1.00                            |
|                  |  | Residual term to final maturity exceeding 24 months.                              | 1.60                            |
|                  |  | .....   | 8.00                            |
| Qualifying ..... | Not applicable .....   | Residual term to final maturity 6 months or less ...                              | 0.25                            |
|                  |  | Residual term to final maturity greater than 6 and up to and including 24 months. | 1.00                            |
|                  |  | Residual term to final maturity exceeding 24 months.                              | 1.60                            |
| Other .....      | One category below investment grade to two categories below investment grade (for example, BB+ to B-).<br>More than two categories below investment grade, or equivalent based on a bank's internal ratings.<br>Unrated .....  | .....   | 8.00                            |
|                  |  | .....   | 12.00                           |
|                  |  | .....   | 8.00                            |

The 2009 revisions to the market risk framework also incorporated changes to the specific risk-weighting factors under the standardized measurement method for rated securitization and re-securitization positions as well as other treatments for unrated securitization and re-securitization positions. For rated positions, the revisions apply risk weights according to whether the positions' external rating represents a

long-term credit rating or a short-term credit rating and generally apply higher risk weights to rated re-securitization positions than to other rated securitization positions. Tables 2 and 3 below provide illustrative representations of the specific risk-weighting factors applicable to rated securitization and re-securitization position under the market risk framework. This treatment was designed

to address regulatory arbitrage opportunities as well as deficiencies in the modeling of securitization positions that became more evident during the course of the financial market crisis that began in mid-2007. This revised treatment also assigns a more risk-sensitive capital requirement to securitization positions than applied previously.

TABLE 2—LONG-TERM CREDIT RATING SPECIFIC RISK-WEIGHTING FACTORS FOR SECURITIZATION AND RE-SECURITIZATION POSITIONS

| Illustrative external rating description              | Example   | Securitization exposure (that is not a resecuritization exposure) risk-weighting factor (%) | Resecuritization exposure risk-weighting factor (%) |
|---|-----------|---|---|
| Highest investment grade rating .....                 | AAA ..... | 1.60  | 3.20  |
| Second-highest investment grade rating .....          | AA .....  | 1.60  | 3.20  |
| Third-highest investment grade rating .....           | A .....   | 4.00  | 8.00  |
| Lowest investment grade rating .....                  | BBB ..... | 8.00  | 18.00   |
| One category below investment grade .....             | BB .....  | 28.00   | 52.00   |
| Two categories below investment grade .....           | B .....   | 100.00  | 100.00  |
| Three categories or more below investment grade ..... | CCC ..... | 100.00  | 100.00  |

TABLE 3—SHORT-TERM CREDIT RATING SPECIFIC RISK-WEIGHTING FACTORS FOR SECURITIZATION AND RE-SECURITIZATION POSITIONS

| Illustrative external rating description     | Example   | Securitization exposure (that is not a resc securitization exposure) risk-weighting factor (%) | Resecuritization exposure risk-weighting factor (%) |
|--|-----------|--|---|
| Highest investment grade rating .....        | A-1/P-1   | 1.60   | 3.20  |
| Second-highest investment grade rating ..... | A-2/P-2   | 4.00   | 8.00  |
| Third-highest investment grade rating .....  | A-3/P-3   | 8.00   | 18.00   |
| All other ratings .....                      | N/A ..... | 100.00   | 100.00  |

As a result of the recent enactment in the United States of the Dodd-Frank Wall Street Reform and Consumer Protection Act<sup>19</sup> (the Act), the agencies may not reference or require reliance on credit ratings in the assessment of the creditworthiness of a security or money market instrument. The Act provides that each Federal agency, after a required review of its regulations, must remove from each of its regulations any reference to or requirement of reliance on credit ratings and substitute a standard of creditworthiness the agency determines is appropriate for the regulation.<sup>20</sup>

The 2005 and 2009 BCBS revisions include provisions that rely on credit ratings for determining the specific risk-weighting factors for debt, securitization, and re-securitization positions. These provisions would need to be revised when implemented in the U.S. in order to conform to the Act. The agencies acknowledge that the specific risk treatment for debt, securitization and re-securitization positions outlined in Tables 1 through 3 would provide a more risk-sensitive treatment for these positions than exists under the current rule; however, pending the agencies' development of appropriate standards of creditworthiness to replace use of credit ratings as required by the Act, the proposed rule retains as a placeholder the current rule's method for determining specific risk add-ons applicable to debt and securitization positions. More specifically, the "government," "qualifying," and "other" categories as described in the current market risk capital rule and associated risk-weighting factors would continue to apply to a bank's debt and securitization positions until the agencies develop a substitute standard of creditworthiness to replace reliance on credit ratings. For completeness and to ensure uniformity of regulatory text across the agencies' rules, the proposed rule includes in section 10(b) the current standardized

measurement method for these positions. The agencies acknowledge the shortcomings of the current treatment and recognize that it will have to be amended in accordance with the requirements of the Act. To the extent possible, the amended treatment would seek to establish comparable capital requirements for the affected positions in order to ensure international consistency and competitive equity. At the same time, the agencies believe it is important to move forward with the revisions to the market risk rules contained in this proposal.<sup>21</sup>

When the agencies determine a substitute standard of creditworthiness for external ratings as required by the Act, they intend to incorporate the new standard into their capital rules, including the market risk rule. The agencies are currently reviewing alternative approaches to the use of credit ratings across all of the agencies' regulations and requirements with the goal of establishing a uniform alternative credit-worthiness standard. The agencies have asked for public input on this process through an advance notice of proposed rulemaking (ANPR).<sup>22</sup> The agencies noted in the ANPR that in evaluating any standard of creditworthiness for purpose of determining risk-based capital requirements, the agencies will, to the extent practicable and consistent with the other objectives, consider whether the standard would:

- Appropriately distinguish the credit risk associated with a particular exposure within an asset class;
- Be sufficiently transparent, unbiased, replicable, and defined to allow banking organizations of varying size and complexity to arrive at the same assessment of creditworthiness for

similar exposures and to allow for appropriate supervisory review;

- Provide for the timely and accurate measurement of negative and positive changes in creditworthiness;
- Minimize opportunities for regulatory capital arbitrage;
- Be reasonably simple to implement and not add undue burden on banking organizations; and
- Foster prudent risk management.

*Question 7: What specific standards of creditworthiness that meet the agencies' suggested criteria for a creditworthiness standard outlined above should the agencies consider for these positions?*

Under the proposed rule, the total specific risk add-on for a portfolio of nth-to-default credit derivatives is the sum of the specific risk add-ons for individual nth-to-default credit derivatives, as computed therein. A bank must calculate a specific risk add-on for each nth-to-default credit derivative position regardless of whether the bank is a net protection buyer or net protection seller.

For first-to-default credit derivatives, the specific risk add-on is the lesser of (i) the sum of the specific risk add-ons for the individual reference credit exposures in the group of reference exposures, and (ii) the maximum possible credit event payment under the credit derivative contract. Where a bank has a risk position in one of the reference credit exposures underlying a first-to-default credit derivative and this credit derivative hedges the bank's risk position, the bank is allowed to reduce both the specific risk add-on for the reference credit exposure and that part of the specific risk add-on for the credit derivative that relates to this particular reference credit exposure such that its specific risk add-on for the pair reflects the bank's net position in the reference credit exposure. Where a bank has multiple risk positions in reference credit exposures underlying a first-to-default credit derivative, this offset is allowed only for the underlying

<sup>19</sup> See Public Law 111-203 (July 21, 2010).

<sup>20</sup> See section 939A of the Act.

<sup>21</sup> The agencies also note that certain other provisions of the Act may affect the market risk capital rules. For example, the credit risk retention requirements of the Act may affect whether a securitization position retained by a bank pursuant to the requirements meets the definition of a trading position or a covered position.

<sup>22</sup> 75 FR 52283 (August 25, 2010).



reference credit exposure having the lowest specific risk add-on.

For second-or-subsequent-to-default credit derivatives, the specific risk add-on is the lesser of: (i) The sum of the specific risk add-ons for the individual reference credit exposures in the group of reference exposures, but disregarding the (n-1) obligations with the lowest specific risk add-ons; or (ii) the maximum possible credit event payment under the credit derivative contract. For second-or-subsequent-to-default credit derivatives, no offset of the specific risk add-on with an underlying reference credit exposure is allowed under the proposed rule.

*Equity Positions.* Under the proposed rule, the total specific risk add-on for a portfolio of equity positions is the sum of the specific risk add-ons of the individual equity positions, which are determined by multiplying the absolute value of the current market value of each net long or short equity position by an appropriate risk-weighting factor.

The proposed rule retains the specific risk add-ons applicable to equity positions under the current market risk capital rule, with one exception. Consistent with the 2009 revisions, the proposed rule eliminates the provision that allows a bank to apply a specific risk-weighting factor of 4.0 to an equity position held in a portfolio that is both liquid and well-diversified. Instead, a bank must multiply the absolute value of the current market value of each net long or short equity position by a risk-weighting factor of 8.0 percent. For equity positions that are index contracts comprising a well-diversified portfolio of equity instruments, the absolute value of the current market value of each net long or short position is multiplied by a risk-weighting factor of 2.0 percent. A portfolio is well-diversified if it contains a large number of individual equity positions, with no single position representing a substantial portion of the portfolio's total market value.

The proposed rule retains the specific risk treatment in the current market risk capital rule for equity positions arising from futures-related arbitrage strategies where long and short positions are in exactly the same index at different dates or in different market centers, or where long and short positions are in index contracts at the same date in different but similar indices. The proposed rule also retains the current treatment for futures contracts on main indices that are matched by offsetting positions in a basket of stocks comprising the index.

*Due Diligence Requirements for Securitization Positions.* The proposed rule incorporates requirements from the

2009 revisions that banks perform due diligence on securitization positions. The due diligence requirements apply to all securitization positions and emphasize the need for banks to conduct their own due diligence of borrower creditworthiness, in addition to any use of third-party assessments, and not place undue reliance on external credit ratings.

In order to meet the proposed due diligence requirements, a bank must be able to demonstrate, to the satisfaction of its primary Federal supervisor, a comprehensive understanding of the features of a securitization position that would materially affect the performance of the bank's securitization position. The bank's analysis must be commensurate with the complexity of the securitization position and the materiality of the position in relation to capital.

To support the demonstration of its comprehensive understanding, for each securitization position, the bank must conduct and document an analysis of the risk characteristics of a securitization position prior to acquiring the position, considering: (i) Structural features of the securitization that would materially impact the performance of the position, for example, the contractual cash flow waterfall, waterfall-related triggers, credit enhancements, liquidity enhancements, market value triggers, the performance of organizations that service the position, and deal-specific definitions of default; (ii) relevant information regarding the performance of 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); (iii) relevant market data of the securitization, for example, 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 (iii) for resecuritization positions, performance information on the underlying securitization exposures, for example, the issuer name and credit quality, and the characteristics and performance of the exposures underlying the securitization exposures. On an on-going basis, but no less frequently than quarterly, the bank must also evaluate, review, and update as appropriate the analysis required above for each securitization position.

*Question 8: What, if any, specific challenges are involved with meeting the proposed due diligence requirements and for what types of securitization positions? How might the agencies address these challenges while still ensuring that a bank conducts an appropriate level of due diligence commensurate with the risks of its covered positions? For example, would it be appropriate to scale the requirements according to a position's expected holding period? How would such scaling affect a bank's ability to demonstrate a comprehensive understanding of the risk characteristics of a securitization position? What are the benefits and drawbacks of requiring public disclosures regarding a bank's processes for performing due diligence on its securitization positions?*

The agencies are considering alternative methodologies to the standardized measurement method for determining the specific risk capital requirement for securitization positions to better recognize the risk reduction benefits of hedging. Conceptually, such a methodology could recognize some degree of offsetting between positions that reference the same pool of assets but have different levels of seniority, or between positions that reference similar but not identical assets. For example, it could use a formulaic approach to determine a degree of offset between securitization positions that are similar to an index. Inputs to the formula could include factors such as the attachment and detachment points of an individual securitization position, the aggregate capital requirement of its underlying exposures, and the percentage of underlying obligors common to the securitization exposure and the index.

*Question 9: What alternative non-models-based methodologies could the agencies use to determine the specific risk add-ons for securitization positions? Please provide specific details on the mechanics of and rationale for any suggested methodology. Please also describe how the methodology conservatively recognizes some degree of hedging benefits, yet captures the basis risk between non-identical positions. To what types of securitization positions would such a methodology apply and why?*

#### 11. Incremental Risk Capital Requirement

Under section 8 of the proposed rule, a bank that measures the specific risk of a portfolio of debt positions using internal models must calculate an incremental risk measure for that portfolio using an internal model

(incremental risk model). Incremental risk consists of the default risk of a position (that is, the risk of loss on the position upon an event of default (for example, the failure of the obligor to make timely payments of principal or interest), including bankruptcy, insolvency, or similar proceeding) and the credit migration risk of a position (that is, price risk that arises from significant changes in the underlying credit quality of the position).

With the prior approval of its primary Federal supervisor, a bank may also include portfolios of equity positions in its incremental risk model, provided that it consistently includes such equity positions in a manner that is consistent with how the bank internally measures and manages the incremental risk for such positions at the portfolio level. Default is deemed to occur with respect to any equity position that is included in the bank's incremental risk model upon the default of any debt of the issuer of the equity position. A bank may not include correlation trading positions or securitization positions in its incremental risk model.

Under the proposed rule, a bank's model to measure the incremental risk of a portfolio of debt positions (and equity positions, if applicable) must meet certain requirements and be approved by the bank's primary Federal supervisor before the bank may use it to calculate its risk-based capital requirement. The model must measure incremental risk over a one-year time horizon and at a one-tail, 99.9 percent confidence level, either under the assumption of a constant level of risk, or under the assumption of constant positions.

The liquidity horizon of a position is the time that would be required for a bank to reduce its exposure to, or hedge all of the material risks of, the position(s) in a stressed market. The liquidity horizon for a position may not be less than the lower of three months or the contractual maturity of the position.

A position's liquidity horizon is a key risk attribute for purposes of calculating the incremental risk measure because it puts a bank's overall risk exposure to an actively managed portfolio into context. Positions with longer (that is, less liquid) liquidity horizons are more difficult to hedge and result in more exposure to both default and credit migration risk over any fixed time horizon. In particular, two positions with differing liquidity horizons but exactly the same amount of default risk if held in a static portfolio over a one-year horizon may exhibit significantly different amounts of default risk if held

in a dynamic portfolio in which hedging can occur in response to observable changes in credit quality. The position with the shorter liquidity horizon can be hedged more rapidly and with less cost in the event of a change in credit quality, which leads to a different exposure to default risk over a one-year horizon than the position with the longer liquidity horizon.

A constant level of risk assumption assumes that the bank rebalances, or rolls over, its trading positions at the beginning of each liquidity horizon over a one-year horizon in a manner that maintains the bank's initial risk level. The bank must determine the frequency of rebalancing in a manner consistent with the liquidity horizons of the positions in the portfolio. A constant position assumption assumes that a bank maintains the same set of positions throughout the one-year horizon. If a bank uses this assumption, it must do so consistently across all portfolios for which it models incremental risk. A bank has flexibility in whether it chooses to use a constant risk or constant position assumption in its incremental risk model; however, the agencies expect that the assumption will remain fairly constant once selected. As with any material change to modeling assumptions, the proposed rule requires a bank must promptly notify its primary Federal supervisor if the bank changes from a constant risk to a constant position assumption or vice versa. Further, to the extent a bank estimates a comprehensive risk measure under section 9 of the proposed rule, the bank's selection of a constant position or a constant risk assumption must be consistent between the bank's incremental risk model and comprehensive risk model. Similarly, the bank's treatment of liquidity horizons must be consistent between a bank's incremental risk model and comprehensive risk model.

The proposed rule requires a bank's incremental risk model to meet the conditions described below. The model must recognize the impact of correlations between default and credit migration events among obligors. In particular, the existence of an aggregate, economy-wide credit cycle implies some degree of correlation between the default and credit migration events across different issuers. The degree of correlation between default and credit migration events of different issuers may also depend on other issuer attributes such as industry sector or region of domicile. The model must also reflect the effect of issuer and market concentrations, as well as concentrations that can arise within and

across product classes during stressed conditions.

The bank's incremental risk model must reflect netting only of long and short positions that reference the same financial instrument and must also reflect any material mismatch between a position and its hedge. Examples of such mismatches include maturity mismatches as well as mismatches between an underlying position and its hedge, (for example, the use of an index position to hedge a single name security).

The bank's incremental risk model must also recognize the effect that liquidity horizons have on hedging strategies. When a bank's hedging strategy requires continual rebalancing of the hedge position, the constraints on rebalancing imposed by the liquidity horizon of the hedge must be recognized. As an example, if a position is being hedged with an instrument with a liquidity horizon of three months, no rebalancing of the hedge can occur within a three month period. Accordingly, any divergence in the value of the position and its hedge that occurs because the hedge cannot be rebalanced within the three month liquidity horizon must be recognized. Moreover, in order to reflect the effect of hedging in the incremental risk measure, the bank must (i) Choose to model the rebalancing of the hedge consistently over the relevant set of trading positions; (ii) demonstrate that the inclusion of rebalancing results in a more appropriate risk measurement; (iii) demonstrate that the market for the hedge is sufficiently liquid to permit rebalancing during periods of stress; and (iv) capture in the incremental risk model any residual risks arising from such hedging strategies.

The incremental risk model must reflect the nonlinear impact of options and other positions with material nonlinear behavior with respect to default and credit migration changes. In light of the one-year horizon of the incremental risk measure and the extremely high confidence level required, it is important that nonlinearities be explicitly recognized. Price changes resulting from defaults or credit migrations can be large and the resulting nonlinear behavior of the position can be material. The bank's incremental risk model must also maintain consistency with the bank's internal risk management methodologies for identifying, measuring, and managing risk.

A bank that calculates an incremental risk measure under section 8 of the proposed rule must calculate its incremental risk capital requirement at

least weekly. This capital requirement is the greater of: (i) The average of the incremental risk measures over the previous 12 weeks; or (ii) the most recent incremental risk measure.

## 12. Comprehensive Risk Capital Requirement

Under section 9 of the proposed rule, with its primary Federal supervisor's prior approval, a bank may measure all material price risks of one or more portfolios of correlation trading positions (comprehensive risk measure) using a model (comprehensive risk model). If the bank uses a comprehensive risk model for a portfolio of correlation trading positions, the bank must also measure the specific risk of that portfolio using internal models that meet the requirements in section 7(b) of the proposed rule. If the bank does not use a comprehensive risk model to calculate the price risk of a portfolio of correlation trading positions, it must calculate a specific risk add-on for the portfolio under section 7(c) of the proposed rule, determined using the standardized measurement method for specific risk described in section 10 of the proposed rule.

A bank's comprehensive risk model must meet several requirements under the proposed rule. The model must measure comprehensive risk (that is, all price risk) consistent with a one-year time horizon and at a one-tail, 99.9 percent confidence level, under the assumption of either a constant level of risk or constant positions. As mentioned under the incremental risk measure discussion, while a bank has flexibility in whether it chooses to use a constant risk or constant position assumption, the agencies expect that the assumption will remain fairly constant once selected. The bank's selection of a constant position assumption or a constant risk assumption must be consistent between the bank's comprehensive risk model and its incremental risk model. Similarly, the bank's treatment of liquidity horizons must be consistent between the bank's comprehensive risk model and its incremental risk model.

The proposed rule requires that a bank's comprehensive risk model capture all material price risk of included positions, including, but not limited to: (i) The risk associated with the contractual structure of cash flows of the position, its issuer, and its underlying exposures (for example, the risk arising from multiple defaults, including the ordering of defaults, in tranching products); (ii) credit spread risk, including nonlinear price risks;

(iii) volatility of implied correlations, including nonlinear price risks such as the cross-effect between spreads and correlations; (iv) basis risks (for example, the basis between the spread of an index and the spread on its constituents and the basis between implied correlation of an index tranche and that of a bespoke tranche); (v) recovery rate volatility as it relates to the propensity for recovery rates to affect tranche prices; and (vi) to the extent the comprehensive risk measure incorporates benefits from dynamic hedging, the static nature of the hedge over the liquidity horizon.

The risks above have been identified as risks that are particularly important for correlation trading positions; however, the comprehensive risk model is intended to capture all material price risks related to those correlation trading positions that are included in the comprehensive risk model. Accordingly, additional risks that are not explicitly discussed above but are a material source of price risk must be included in the comprehensive risk model.

The proposed rule also requires that a bank have sufficient market data to ensure that it fully captures the material price risks of the correlation trading positions in its comprehensive risk measure. Moreover, the bank must be able to demonstrate that its model is an appropriate representation of comprehensive risk in light of the historical price variation of its correlation trading positions. The agencies will scrutinize the positions a bank identifies as correlation trading positions and will also review whether the correlation trading positions have sufficient market data available to support reliable modeling of material risks. If there is insufficient market data to support reliable modeling for certain positions (such as new products), the agencies may require the bank to exclude these positions from the comprehensive risk model and, instead, require the bank to calculate specific risk add-ons for these positions under the standardized measurement method for specific risk. Again, the proposed rule requires a bank to promptly notify its primary Federal supervisor if the bank plans to extend the use of a model that has been approved by the supervisor to an additional business line or product type.

In addition to these requirements, a bank must at least weekly apply to its portfolio of correlation trading positions a set of specific, supervisory stress scenarios that capture changes in default rates, recovery rates, and credit spreads; correlations of underlying exposures; and correlations of a

correlation trading position and its hedge. A bank must retain and make available to its primary supervisor the results of the supervisory stress testing, including comparisons with the capital requirements generated by the bank's comprehensive risk model. A bank also must promptly report to its primary Federal supervisor any instances where the stress tests indicate any material deficiencies in the comprehensive risk model.

The agencies are evaluating the appropriate bases for supervisory stress scenarios to be applied to a bank's portfolio of correlation trading positions. There are inherent difficulties in prescribing stress scenarios that would be universally applicable and relevant across all banks and across all products contained in banks' correlation trading portfolios. The agencies believe a level of comparability is important for assessing the sufficiency and appropriateness of banks' comprehensive risk models, but also recognize that specific scenarios may not be relevant for certain products or for certain modeling approaches. The agencies are considering various options for stress scenarios, including an approach that would involve specifying stress scenarios based on credit spread shocks to certain correlation trading positions (for example, single-name CDSs, CDS indexes, index tranches), which may replicate historically observed spreads. Another approach would require a bank to calibrate its existing valuation model to certain specified stress periods by adjusting credit-related risk factors to reflect a given stress period. The credit-related risk factors, as adjusted, would then be used to revalue the bank's correlation trading portfolio under one or more stress scenarios.

*Question 10: What are the benefits and drawbacks of the supervisory stress scenario requirements described above and what other specific stress scenario approaches for the correlation trading portfolio should the agencies consider? For which products and model types are widely applicable stress scenarios most appropriate, and for which product and model types is a more tailored stress scenario most appropriate? What other stress scenario approaches could consistently reflect the risks of the entire portfolio of correlation trading positions?*

The agencies have identified prudential challenges associated with relying solely on banks' comprehensive risk models for determining risk-based capital requirements for correlation trading positions. For example, a bank's ability to perform robust validation of

its comprehensive risk model using standard backtesting methods is limited in light of the proposed requirements for the model to measure potential losses on correlation trading positions due to all price risk at a one-year time horizon and high-percentile confidence level. As a result, banks will need to use indirect model validation methods, such as stress tests, scenario analysis or other methods to assess their models. The agencies anticipate that banks' comprehensive risk model validation approaches will evolve over time; however, to address near-term modeling challenges while still giving consideration to sound risk management practices, the agencies are proposing a floor on the modeled correlation trading position capital requirements in the form of a capital surcharge as described below.

A bank approved to measure comprehensive risk for one or more portfolios of correlation trading positions must calculate at least weekly a comprehensive risk measure. The comprehensive risk measure equals the sum of the output from the bank's approved comprehensive risk model plus a surcharge on the bank's modeled correlation trading positions. The agencies propose setting the surcharge equal to 15.0 percent of the total specific risk add-on that would apply to the bank's modeled correlation trading positions under the standardized measurement method for specific risk in section 10 of the proposed rule.

The agencies propose that banks initially be required to calculate the comprehensive risk measure under the surcharge approach while banks and supervisors gain experience with the banks' comprehensive risk models. Over time, with approval from its primary Federal supervisor, a bank may be permitted to use a floor approach to calculate its comprehensive risk measure as the greater of: (1) The output from the bank's approved comprehensive risk model; or (2) 8.0 percent of the total specific risk add-on that would apply to the bank's modeled correlation trading positions under the standardized measurement method for specific risk, provided the bank has met the comprehensive risk modeling requirements in the proposed rule for a period of at least one year and can demonstrate the effectiveness of its comprehensive risk model through the results of ongoing validation efforts, including robust benchmarking. Such results may incorporate a comparison of the banks' internal model results to those from an alternative model for certain portfolios and other relevant data. The agencies may also consider a

benchmarking approach that uses banks' internal models to determine capital requirements for a portfolio specified by the supervisors to allow for a relative assessment of models across banks. A bank's primary Federal supervisor will monitor the appropriateness of the floor approach on an ongoing basis and may rescind its approval of this approach if it determines that the bank's comprehensive risk model may not sufficiently reflect the risks of the bank's modeled correlation trading positions.

The agencies believe the proposed approach provides a prudential backstop on modeled capital requirements as well as appropriate incentives for ongoing model improvement. Another potential approach would be a stress-test based floor that would, for instance, require a bank to value its correlation trading positions using prescribed instantaneous price and correlation shocks in the models it uses to price its correlation trading positions. For example, such a floor could require a bank's comprehensive risk capital requirement to be at least as great as the largest loss the bank would experience for its correlation trading positions under a scenario of instantaneous price changes for the underlying positions within a range of plus and minus 15.0 percent combined with instantaneous correlation changes within a range of plus or minus 5.0 percent.

*Question 11: What, if any, specific challenges exist with respect to the proposed modeling requirements for correlation trading positions? What additional criteria and benchmarking methods should the agencies consider that would provide an objective basis for evaluating whether to allow a bank to apply a lower surcharge percentage in calculating its comprehensive risk measure? What are the advantages and disadvantages of the proposed floor approach and the other potential floor approaches described above? What other alternatives should the agencies consider to address the uncertainties identified above while ensuring safe and sound risk-based capital requirements for correlation trading positions?*

A bank that calculates a comprehensive risk measure under section 9 of the proposed rule must calculate its comprehensive risk capital requirement at least weekly. This capital requirement is the greater of (i) the average of the comprehensive risk measures over the previous 12 weeks; or (ii) the most recent comprehensive risk measure. Separate from the proposed requirements for calculating a comprehensive risk measure, as discussed previously, the proposed rule

contains an explicit reservation of authority providing that a bank's primary Federal supervisor may require a bank to assign a different risk-based capital requirement than would otherwise apply to a covered position or portfolio of covered positions that better reflects the risk of the position or portfolio. For example, regardless of a modeled capital requirement, a primary Federal supervisor may require a bank to increase its risk-weighted asset amount for correlation trading positions to ensure that it reflects the risk to which the bank is exposed. Because banks' comprehensive risk models use many different methodologies, there is no uniform appropriate supervisory adjustment to risk-weighted assets. An adjustment may take the form of a multiplier, a floor, a fixed add-on, or another adjustment consistent with the risk of the portfolio and the bank's modeling practices.

### 13. Disclosure Requirements

The proposed rule imposes disclosure requirements designed to increase transparency and improve market discipline on the top-tier consolidated legal entity that is subject to the market risk capital rule. The disclosure requirements, discussed further below, include a breakdown of certain components of a bank's market risk capital requirement, information on a bank's modeling approaches, and qualitative and quantitative disclosures relating to a bank's securitization activities.

The agencies recognize the importance of market discipline in encouraging sound risk management practices and fostering financial stability. With enhanced information, market participants can better evaluate a bank's risk management performance, earnings potential, and financial strength. Many of the proposed disclosure requirements reflect information already disclosed publicly by the banking industry. A bank is encouraged, but not required, to make these disclosures in a central location on its web site.

Consistent with the advanced approaches rules, the proposed rule requires a bank to comply with the disclosure requirements of section 11 of the proposed rule unless it is a consolidated subsidiary of another depository institution or bank holding company that is subject to the disclosure requirements. A bank subject to section 11 is required to adopt a formal disclosure policy approved by its board of directors that addresses the bank's 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 must ensure that appropriate verification of the bank's disclosures takes place and that effective internal controls and disclosure controls and procedures are maintained. One or more senior officers is required to attest that the disclosures meet the requirements of the proposed rule, and the board of directors and senior management are responsible for establishing and maintaining an effective internal control structure over financial reporting, including the information required under section 11 of the proposed rule.

The proposed rule requires a bank, at least quarterly, to disclose publicly for each portfolio of covered positions (i) The high, low, median, and mean VaR-based measures over the reporting period and the VaR-based measure at period-end; (ii) the high, low, median, and mean stressed VaR-based measures over the reporting period and the stressed VaR-based measure at period-end; (iii) the high, low, median, and mean incremental risk capital requirements over the reporting period and the incremental risk capital requirement at period-end; (iv) the high, low, median, and mean comprehensive risk capital requirements over the reporting period and the comprehensive risk capital requirement at period-end; (v) separate measures for interest rate risk, credit spread risk, equity price risk, foreign exchange rate risk, and commodity price risk used to calculate the VaR-based measure; and (vi) a comparison of VaR-based measures with actual results and an analysis of important outliers. In addition, the bank must publicly disclose the following information at least quarterly: (i) The aggregate amount of on-balance sheet and off-balance sheet securitization positions by exposure type; and (ii) the aggregate amount of correlation trading positions.

A bank is required to make qualitative disclosures at least annually, or more frequently in the event of material changes, of the following information for each portfolio of covered positions: (i) The composition of material portfolios of covered positions; (ii) the bank's valuation policies, procedures, and methodologies for covered positions including, for securitization positions, the methods and key assumptions used for valuing such positions, any significant changes since the last reporting period, and the impact of such change; (iii) the characteristics of its internal models, including, for the bank's incremental risk capital

requirement and the comprehensive risk capital requirement, the approach used by the bank to determine liquidity horizons; the methodologies used to achieve a capital assessment that is consistent with the required soundness standard; and the specific approaches used in the validation of these models; (iv) a description of its approaches for validating the accuracy of its internal models and modeling processes; (v) a description of the stress tests applied to each market risk category; (vi) the results of a comparison of the bank's internal estimates with actual outcomes during a sample period not used in model development; (vii) the soundness standard on which its internal capital adequacy assessment is based, including a description of the methodologies used to achieve a capital adequacy assessment that is consistent with the soundness standard and the requirements of the market risk capital rule; and (viii) a description of the bank's processes for monitoring changes in the credit and market risk of securitization positions, including how those processes differ for resecuritization positions; and (ix) a description of the bank's policy governing the use of credit risk mitigation to mitigate the risks of securitization and resecuritization positions.

*Question 12: The agencies seek comment on the effectiveness of the proposed disclosure requirements. What, if any, changes to these requirements would make the proposed disclosures more effective in promoting market discipline?*

### III. Regulatory Flexibility Act Analysis

The Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.* (RFA), generally requires that, in connection with a notice of proposed rulemaking, an agency prepare and make available for public comment an initial regulatory flexibility analysis that describes the impact of a proposed rule on small entities.<sup>23</sup> Under regulations issued by the Small Business Administration,<sup>24</sup> a small entity includes a commercial bank or bank holding company with assets of \$175 million or less (a small banking organization). As of June 30, 2010, there were approximately 2,561 small bank holding companies, 690 small national banks, 400 small state member banks, and 2,706 small state nonmember banks.

The proposed rule would apply only if the bank holding company or bank has aggregated trading assets and trading liabilities equal to 10 percent or

more of quarter-end total assets, or \$1 billion or more. No small banking organizations satisfy these criteria. Therefore, no small entities would be subject to this rule.

### IV. OCC Unfunded Mandates Reform Act of 1995 Determination

The Unfunded Mandates Reform Act of 1995 (UMRA) requires Federal agencies to prepare a budgetary impact statement before promulgating a rule that 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 (adjusted annually for inflation) in any one year. The current inflation-adjusted expenditure threshold is \$126.4 million. If a budgetary impact statement is required, section 205 of the UMRA also requires an agency to identify and consider a reasonable number of regulatory alternatives before promulgating a rule.

In conducting the regulatory analysis, UMRA requires each Federal agency to provide:

- The text of the draft regulatory action, together with a reasonably detailed description of the need for the regulatory action and an explanation of how the regulatory action will meet that need;
- An assessment of the potential costs and benefits of the regulatory action, including an explanation of the manner in which the regulatory action is consistent with a statutory mandate and, to the extent permitted by law, promotes the President's priorities and avoids undue interference with State, local, and tribal governments in the exercise of their governmental functions;
- An assessment, including the underlying analysis, of benefits anticipated from the regulatory action (such as, but not limited to, the promotion of the efficient functioning of the economy and private markets, the enhancement of health and safety, the protection of the natural environment, and the elimination or reduction of discrimination or bias) together with, to the extent feasible, a quantification of those benefits;
- An assessment, including the underlying analysis, of costs anticipated from the regulatory action (such as, but not limited to, the direct cost both to the government in administering the regulation and to businesses and others in complying with the regulation, and any adverse effects on the efficient functioning of the economy, private markets (including productivity, employment, and competitiveness), health, safety, and the natural environment), together with, to the

<sup>23</sup> See 5 U.S.C. 603(a).

<sup>24</sup> See 13 CFR 121.201.

extent feasible, a quantification of those costs; and

- An assessment, including the underlying analysis, of costs and benefits of potentially effective and reasonably feasible alternatives to the planned regulation, identified by the agencies or the public (including improving the current regulation and reasonably viable nonregulatory actions), and an explanation why the planned regulatory action is preferable to the identified potential alternatives.

- An estimate of any disproportionate budgetary effects of the Federal mandate upon any particular regions of the nation or particular State, local, or tribal governments, urban or rural or other types of communities, or particular segments of the private sector.

- An estimate of the effect the rulemaking action may have on the national economy, if the OCC determines that such estimates are reasonably feasible and that such effect is relevant and material.

#### A. The Need for the Regulatory Action

The proposed rule would modify the current market risk capital rule by adjusting the minimum risk-based capital calculation and adding public disclosure requirements. The proposed rule would also (1) modify the definition of covered positions to include assets that are in the trading book and held with the intent to trade; (2) introduce new requirements for the identification of trading positions and the management of covered positions; and (3) require banks to have clearly defined policies and procedures for actively managing all covered positions, for the prudent valuation of covered positions and for specific internal model validation standards. The proposed rule will generally apply to any bank with aggregate trading assets and liabilities that are at least 10 percent of total assets or at least \$1 billion. These thresholds are the same as those currently used to determine applicability of the market risk rule.

Under current rules, the measure for market risk is as follows:<sup>25</sup>

$$\text{Market Risk Measure} = (\text{Value-at-Risk based capital requirement}) + (\text{Specific risk capital requirement}) +$$

(Capital requirement for *de minimis* exposures)

Under the proposed rule, the new market risk measure would be as follows (new risk measure components are underlined):

$$\text{New Market Risk Measure} = (\text{Value-at-Risk based capital requirement}) + (\text{Stressed Value-at-Risk based capital requirement}) + (\text{Specific risk capital charge}) + (\text{Incremental risk capital requirement}) + (\text{Comprehensive risk capital requirement}) + (\text{Capital charge for } de\ minimis \text{ exposures})$$

The Basel Committee and the Federal banking agencies designed the new components of the market risk measure to capture key risks overlooked by the current market risk measure.

#### B. Cost-Benefit Analysis of the Proposed Rule

##### 1. Organizations Affected by the Proposed Rule<sup>26</sup>

According to September 30, 2010, Call Report data, 16 national banking organizations<sup>27</sup> had trading assets and liabilities that are at least 10 percent of total assets or at least \$1 billion.

##### 2. Impact of the Proposed Rule

The key benefits of the proposed rule are the following qualitative benefits:

- Enhances sensitivity to market risk,
- Enhances modeling requirements consistent with advances in risk management,
- Better captures trading positions for which market risk capital treatment is appropriate,
- Increases transparency through enhanced market disclosures.
- Increased market risk capital should lower the probability of catastrophic losses to the bank occurring because of market risk.
- Modified requirements should reduce the procyclicality of market risk capital.

We derive our estimates of the proposed rule's effect on the market risk measure from the third trading book impact study conducted by the Basel Committee on Banking Supervision in 2009 and additional estimates of the capital requirement for standardized securitization exposures and correlation trading positions.<sup>28</sup> Based on these two

assessments, we estimate that the market risk measure will increase 300 percent on average. The market risk measure itself acts as an estimate of the minimum regulatory capital requirement for an adequately capitalized bank. Thus, quadrupling the market risk measure suggests that minimum required capital will increase by approximately \$50.7 billion under the proposed rule. These new capital requirements would lead banks to deleverage and lose the tax advantage of debt. We estimate that the loss of these tax benefits would be approximately \$334 million per year.

We estimate that new disclosure requirements and the implementation of calculations for the new market risk measures may involve some additional system costs, but because the proposed rule will only affect institutions already subject to the current market risk rule we expect these additional system costs to be *de minimis*. We do not anticipate that the proposed rule will create significant additional administrative costs for the OCC. Based on our assessment of the capital costs of the proposed rule; we estimate that the total cost of the proposed rule will be approximately \$334 million in 2010 dollars over one year.

#### C. Comparison Between Proposed Rule and Baseline

Under the baseline scenario, the current market risk rule would continue to apply. Thus, in the baseline scenario, required market risk capital would remain at current levels and there would be no additional cost associated with adding capital. However, the benefits of increased sensitivity to market risk, increased transparency, the improved targeting of trading positions, reduced procyclicality of market risk capital, and the protective advantages of additional capital would be lost under the baseline scenario.

#### D. Comparison Between Proposed Rule and Alternatives

The Unfunded Mandates Reform Act of 1995 (UMRA) requires a comparison between the proposed rule and reasonable alternatives. In this regulatory impact analysis, we compare the proposed rule with two alternatives that modify the size thresholds for the rule.

##### Assessment of Alternative A

Under Alternative A, we consider a rule that has the same provisions as the

*publ/bcbs163.htm*. The study gathered data from 43 banks in 10 countries, including six banks from the United States.

<sup>25</sup> The following are the components of the current Market Risk Measure. *Value-at-Risk (VaR)* is an estimate of the maximum amount that the value of one or more positions could decline due to market price or rate movements during a fixed holding period within a stated confidence interval. Specific risk is the risk of loss on a position that could result from factors other than broad market movements and includes event risk, default risk, and idiosyncratic risk. There may also be a capital requirement for *de minimis* exposures, if any, that are not included in the bank's VaR models.

<sup>26</sup> Unless otherwise noted, the population of banks used in this analysis consists of all FDIC-insured national banks and uninsured national bank and trust companies. Banking organizations are aggregated to the top holding company level.

<sup>27</sup> A national banking organization is any bank holding company with a subsidiary national bank.

<sup>28</sup> The report, "Analysis of the third trading book impact study", is available at <http://www.bis.org/>

proposed rule, but we alter the rule's trading book size threshold. Because trading assets and liabilities are concentrated in six or seven institutions, modest changes in the size thresholds have little impact on the dollar volume of trading assets affected by the market risk rule and thus little impact on the estimated cost of the rule. Changing the size threshold does affect the number of institutions affected by the rule, which suggests that the banking agencies' systemic concerns could play a role in determining the appropriate size threshold for applicability of the market risk rule.

#### Assessment of Alternative B

Under Alternative B, we consider a rule that has the same provisions as the proposed rule, but we change the condition of the size thresholds from "or" to "and". With this change, the proposed rule would apply to institutions that have \$1 billion or more in trading assets and liabilities *and* a trading book to asset ratio of at least 10 percent. Making the applicability of the market risk rule contingent on meeting both size thresholds would reduce the number of banks affected by the rule to four using the current thresholds of \$1 billion and 10 percent. In order for the alternative B rule to apply to the same number of institutions as the current rule, the alternative's joint condition would have to be comparable to thresholds of between \$500 million and \$1 billion in the trading book and a 1 percent trading-book-to-assets ratio. However, under this alternative the list of the 16 institutions subject to the rule would change slightly. Not surprisingly, as this joint threshold alternative could excuse some institutions with larger trading books, the estimated cost of the alternative rule does decrease with the number of institutions affected by the rule.

#### E. Overall Impact of Proposed Rule, Baseline and Alternatives

Under our baseline scenario, which reflects the current application of the market risk rule, a market risk capital charge of approximately \$16.9 billion applies to 16 national banks. Under the proposed rule, this capital charge would continue to apply to the same 16 banks but the capital charge would likely quadruple. We estimate that the cost of this additional capital would be approximately \$334 million per year in 2010 dollars.

Our alternatives examine the impact of a market risk rule that uses different size thresholds in order to determine which institutions are subject to the rule. With alternative A we consider

altering the \$1 billion trading book threshold used currently and maintained under the proposed rule. Although varying the size threshold changed the number of institutions affected by the rule, the overall capital cost of the rule did not significantly change. This reflects the high concentration of trading assets and liabilities in seven banks with over \$15 billion in their trading books as of September 30, 2010. As long as the proposed rule applies to these seven institutions, the additional required capital and its corresponding cost will not change considerably.

Alternative B did affect both the number of institutions subject to the proposed rule and the cost of the proposed rule by limiting the market risk rule to institutions that meet both size criteria, *i.e.*, a \$1 billion trading book and a trading-book-to-assets ratio of at least 10 percent. Only four national banks currently meet both of these criteria, and applying the proposed rule to these institutions would require an additional \$36.0 billion in market risk capital at a cost of approximately \$237 million. Clearly, the estimated cost of the proposed rule would fall if the size thresholds determining applicability of the market risk rule were to increase. However, the current size thresholds, which continue to apply under the proposed rule, capture those institutions that the regulatory agencies believe should be subject to market risk capital rules. The proposed rule changes covered positions, disclosure requirements, and methods relating to calculating the market risk measure. These changes achieve the important objectives of enhancing the banking system's sensitivity to market risk, increases transparency of the trading book and market risk, and better captures trading positions for which market risk capital treatment is appropriate. The proposed rule carries over the current thresholds used to determine the applicability of the market risk rule. The banking agencies have determined that these size thresholds capture the appropriate institutions; those most exposed to market risk.

The large increase in required market risk capital, which we estimate to be approximately \$51 billion under the proposed rule, will provide a considerable buttress to the capital position of institutions subject to the market risk rule. This additional capital should dramatically lower the likelihood of catastrophic losses from market risk occurring at these institutions, which will enhance the safety and soundness of these

institutions, the banking system, and world financial markets. Although there is some concern regarding the burden of the proposed increase in market risk capital and the effect this could have on bank lending, in the OCC's opinion, the proposed rule offers a better balance between costs and benefits than either the baseline or the alternatives.

The OCC does not expect the revised risk-based capital guidelines to have any disproportionate budgetary effect on any particular regions of the nation or particular State, local, or tribal governments, urban or rural or other types of communities, or particular segments of the private sector.

#### V. Paperwork Reduction Act

##### A. Request for Comment on Proposed Information Collection

In accordance with the requirements of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3521), the agencies may not conduct or sponsor, and the 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 notice of proposed rulemaking have been submitted by the OCC and FDIC to OMB for review and approval under section 3506 of the PRA and section 1320.11 of OMB's implementing regulations (5 CFR part 1320). The Board reviewed the proposed rule under the authority delegated to the Board by OMB.

Comments are invited on:

- (a) Whether the collection of information is necessary for the proper performance of the agencies' functions, including whether the information has practical utility;
- (b) The accuracy of the estimates of the burden of the information collection, including the validity of the methodology and assumptions used;
- (c) Ways to enhance the quality, utility, and clarity of the information to be collected;
- (d) Ways to minimize the burden of the information collection on respondents, including through the use of automated collection techniques or other forms of information technology; and
- (e) Estimates of capital or start up costs and costs of operation, maintenance, and purchase of services to provide information.

Comments should be addressed to:

OCC: Communications Division,  
Office of the Comptroller of the  
Currency, Public Information Room,  
Mail stop 1–5, Attention: 1557–NEW,



250 E Street, SW., Washington, DC 20219. In addition, comments may be sent by fax to 202-874-5274, or by electronic mail to [regs.comments@occ.treas.gov](mailto:regs.comments@occ.treas.gov). You can inspect and photocopy the comments at the OCC's Public Information Room, 250 E Street, SW., Washington, DC 20219. For security reasons, OCC requires that visitors make an appointment to inspect the comments. You may do so by calling 202-874-4700. Upon arrival, visitors will be required to present valid government-issued photo identification and submit to security screening in order to inspect and photocopy comments.

**Board:** You may submit comments, identified by the Docket number, by any of the following methods:

- **Agency Web Site:** <http://www.federalreserve.gov>. Follow the instructions for submitting comments on the <http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm>.
- **Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the instructions for submitting comments.
- **E-mail:** [regs.comments@federalreserve.gov](mailto:regs.comments@federalreserve.gov). Include docket number in the subject line of the message.
- **FAX:** 202-452-3819 or 202-452-3102.
- **Mail:** Jennifer J. Johnson, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, NW., Washington, DC 20551.

All public comments are available from the Board's Web site at <http://www.federalreserve.gov/generalinfo/foia/ProposedRegs.cfm> as submitted, unless modified for technical reasons. Accordingly, your comments will not be edited to remove any identifying or contact information. Public comments may also be viewed electronically or in paper form in Room MP-500 of the Board's Martin Building (20th and C Streets, NW) between 9 a.m. and 5 p.m. on weekdays.

**FDIC:** You may submit written comments, which should refer to 3064-\_\_\_\_\_, by any of the following methods:

- **Agency Web Site:** <http://www.fdic.gov/regulations/laws/federal/propose.html>. Follow the instructions for submitting comments on the FDIC Web site.
- **Federal eRulemaking Portal:** <http://www.regulations.gov>. Follow the instructions for submitting comments.
- **E-mail:** [Comments@FDIC.gov](mailto:Comments@FDIC.gov). Include RIN on the subject line of the message.
- **Mail:** Robert E. Feldman, Executive Secretary, Attention: Comments, FDIC,

550 17th Street, NW., Washington, DC 20429.

• **Hand Delivery/Courier:** Guard station at the rear of the 550 17th Street Building (located on F Street) on business days between 7 a.m. and 5 p.m.

**Public Inspection:** All comments received will be posted without change to <http://www.fdic.gov/regulations/laws/federal/propose/html> including any personal information provided. Comments may be inspected at the FDIC Public Information Center, Room 100, 801 17th Street, NW., Washington, DC, between 9 a.m. and 4:30 p.m. on business days.

A copy of the comments may also be submitted to the OMB desk officer for the agencies: By mail to U.S. Office of Management and Budget, 725 17th Street, NW., #10235, Washington, DC 20503 or by facsimile to 202-395-6974, Attention: Federal Banking Agency Desk Officer.

#### B. Proposed Information Collection

**Title of Information Collection:** Risk-Based Capital Standards: Market Risk  
**Frequency of Response:** Varied—some requirements are done at least quarterly and some at least annually.

**Affected Public:**

**OCC:** National banks and Federal branches and agencies of foreign banks.  
**Board:** State member banks and bank holding companies.

**FDIC:** Insured non-member banks, insured state branches of foreign banks, and certain subsidiaries of these entities.

**Abstract:** The information collection requirements are found in sections 3, 4, 5, 6, 7, 8, 9, 10, and 11 of the proposed rule. They will enhance risk sensitivity and introduce requirements for public disclosure of certain qualitative and quantitative information about a bank's or bank holding companies' market risk. The collection of information is necessary to ensure capital adequacy according to the level of market risk.

#### Section-by-Section Analysis

Section 3 sets forth the requirements for applying the market risk framework. Section 3(a)(1) requires clearly defined policies and procedures for determining which trading assets and trading liabilities are trading positions, which of its trading positions are correlation trading positions, and specifies what must be taken into account. Section 3(a)(2) requires a clearly defined trading and hedging strategy for trading positions approved by senior management and specifies what each strategy must articulate. Section 3(b)(1) requires clearly defined policies and procedures for actively managing all

covered positions and specifies the minimum that they must require. Sections 3(c)(4) through 3(c)(10) require the annual review of internal models and include certain requirements that the models must meet. Section 3(d)(4) requires an annual report to the board of directors on the effectiveness of controls supporting market risk measurement systems.

Section 4(b) requires quarterly backtesting. Section 5(a)(5) requires institutions to demonstrate to the agencies the appropriateness of proxies used to capture risks within value-at-risk models. Section 5(c) requires institutions to retain value-at-risk and profit and loss information on subportfolios for two years. Section 6(b)(3) requires policies and procedures for stressed value-at-risk models and prior approvals on determining periods of significant financial stress.

Section 7(b)(1) specifies what internal models for specific risk must include and address. Section 8(a) requires prior written approval for incremental risk. Section 9(a) requires prior approval for comprehensive risk models. Section 9(c)(2) requires retaining and making available the results of supervisory stress testing on a quarterly basis. Section 10(d) requires documentation quarterly for analysis of risk characteristics of each securitization position it holds. Section 11 requires quarterly quantitative disclosures, annual qualitative disclosures, and a formal disclosure policy approved by the board of directors that addresses the bank's approach for determining the market risk disclosures it makes.

#### Estimated Burden

The burden associated with this collection of information may be summarized as follows:

##### OCC

**Number of Respondents:** 15.  
**Estimated Burden Per Respondent:** 1,964 hours.  
**Total Estimated Annual Burden:** 29,460 hours.

##### Board

**Number of Respondents:** 26.  
**Estimated Burden Per Respondent:** 2,204 hours.  
**Total Estimated Annual Burden:** 51,064 hours.

##### FDIC

**Number of Respondents:** 2.  
**Estimated Burden Per Respondent:** 1,964.  
**Total Estimated Annual Burden:** 3,928.



## VI. Plain Language

Section 722 of the GLBA required the agencies to use plain language in all proposed and final rules published after January 1, 2000. The agencies invite comment on how to make this proposed rule easier to understand. For example:

- Have the agencies organized the material to suit your needs? If not, how could they present the rule more clearly?
- Are the requirements in the rule clearly stated? If not, how could the rule be more clearly stated?
- Do the regulations contain technical language or jargon 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 regulation easier to understand? If so, what changes would achieve that?
- Is this section format adequate? If not, which of the sections should be changed and how?
- What other changes can the agencies incorporate to make the regulation easier to understand?

### Text of the Proposed Common Rules (All Agencies)

The text of the proposed common rules appears below:

#### Appendix \_\_ to Part \_\_—Risk-Based Capital Guidelines; Market Risk Adjustment

|            |  |
|------------|--|
| Section 1  | Purpose, Applicability, and Reservation of Authority         |
| Section 2  | Definitions  |
| Section 3  | Requirements for Application of the Market Risk Capital Rule |
| Section 4  | Adjustments to the Risk-Based Capital Ratio Calculations     |
| Section 5  | VaR-based Measure  |
| Section 6  | Stressed VaR-Based Measure                                   |
| Section 7  | Specific Risk  |
| Section 8  | Incremental Risk   |
| Section 9  | Comprehensive Risk   |
| Section 10 | Standardized Measurement Method for Specific Risk            |
| Section 11 | Market Risk Disclosures                                      |

#### Section 1. Purpose, Applicability, and Reservation of Authority

(a) *Purpose.* This appendix establishes risk-based capital requirements for [banking organizations] with significant exposure to market risk and provides methods for these [banking organizations] to calculate their risk-based capital requirements for market risk. This appendix supplements and adjusts the risk-based capital calculations under [the general risk-based capital rules] and [the advanced capital adequacy framework] and establishes public disclosure requirements.

(b) *Applicability.*—(1) This appendix applies to any [banking organization] with aggregate trading assets and trading liabilities (as reported in the [banking organization]'s most recent quarterly [regulatory report]), equal to:

- (i) 10 percent or more of quarter-end total assets as reported on the most recent quarterly [Call Report or FR Y–9C]; or
- (ii) \$1 billion or more.

(2) The [Agency] may apply this appendix to any [banking organization] if the [Agency] deems it necessary or appropriate because of the level of market risk of the [banking organization] or to ensure safe and sound banking practices.

(3) The [Agency] may exclude a [banking organization] that meets the criteria of paragraph (b)(1) of this appendix from application of this appendix if the [Agency] determines that the exclusion is appropriate based on the level of market risk of the [banking organization] and is consistent with safe and sound banking practices.

(c) *Reservation of authority.*—(1) The [Agency] may require a [banking organization] to hold an amount of capital greater than otherwise required under this appendix if the [Agency] determines that the [banking organization]'s capital requirement for market risk as calculated under this appendix is not commensurate with the market risk of the [banking organization]'s covered positions. In making determinations under this paragraph, the [Agency] will apply notice and response procedures generally in the same manner as the notice and response procedures described in [12 CFR 3.12, 12 CFR 263.202, 12 CFR 325.6(c), 12 CFR 567.3(d)].

(2) If the [Agency] determines that the risk-based capital requirement calculated under this appendix by the [banking organization] for one or more covered positions or portfolios of covered positions is not commensurate with the risks associated with those positions or portfolios, the [Agency] may require the [banking organization] to assign a different risk-based capital requirement to the positions or portfolios that more accurately reflects the risk of the positions or portfolios.

(3) The [Agency] may also require a [banking organization] to calculate risk-based capital requirements for specific positions or portfolios under this appendix, or under [the advanced capital adequacy framework] or [the general risk-based capital rules], as appropriate, to more accurately reflect the risks of the positions.

(4) Nothing in this appendix 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.

#### Section 2. Definitions

For purposes of this appendix, the following definitions apply:

*Backtesting* means the comparison of a [banking organization]'s internal estimates with actual outcomes during a sample period not used in model development. For purposes of this appendix, backtesting is one form of out-of-sample testing.

*Bank holding company* is defined in section 2(a) of the Bank Holding Company Act of 1956 (12 U.S.C. 1841(a)).

*Commodity position* means a position for which price risk arises from changes in the price of a commodity.

*Company* means a corporation, partnership, limited liability company, depository institution, business trust, special purpose entity, association, or similar organization.

*Correlation trading position* means:

(1) A securitization position for which all or substantially all of the value of the underlying exposures is based on the credit quality of a single company for which a two-way market exists, or on commonly traded indices based on such exposures for which a two-way market exists on the indices; or

(2) A position that is not a securitization position and that hedges a position described in paragraph (1) of this definition; and

(3) A correlation trading position does not include:

- (i) A securitization 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.

*Covered position* means the following positions:

(1) A trading asset or trading liability (whether on- or off-balance sheet),<sup>1</sup> as reported on Schedule RC–D of the Call Report or Schedule HC–D of the FR Y–9C, that meets the following conditions:

- (i) The position is a trading position or hedges another covered position<sup>2</sup> and
- (ii) The position is free of any restrictive covenants on its tradability or the [banking organization] is able to hedge the material risk elements of the position in a two-way market.

(2) A foreign exchange or commodity position, regardless of whether the position is a trading asset or trading liability (excluding any structural foreign currency positions that the [banking organization] chooses to exclude with prior supervisory approval).

(3) Notwithstanding paragraphs (1) and (2) of this definition, a covered position does not include:

- (i) An intangible asset, including any servicing asset;
- (ii) Any hedge of a trading position that the [Agency] determines to be outside the scope of the [banking organization]'s hedging strategy required in paragraph (a)(2) of section 3 of this appendix;
- (iii) Any position that, in form or substance, acts as a liquidity facility that provides support to asset-backed commercial paper;
- (iv) A credit derivative the [banking organization] recognizes as a guarantee for risk-weighted asset amount calculation purposes under [the advanced capital adequacy framework] or [the general risk-based capital rules];

<sup>1</sup> Securities subject to repurchase and lending agreements are included as if they are still owned by the lender.

<sup>2</sup> A position that hedges a trading position must be within the scope of the bank's hedging strategy as described in paragraph (a)(2) of section (3) of this appendix.

(v) Any equity position that is not publicly traded other than a derivative that references a publicly traded equity;

(vi) Any position a [banking organization] holds with the intent to securitize; or

(vii) Any direct real estate holding.

*Credit derivative* means a financial contract executed under standard industry documentation that allows one party (the protection purchaser) to transfer the credit risk of one or more exposures (reference exposure(s)) to another party (the protection provider).

*Debt position* means a 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.

*Depository institution* is defined in section 3 of the Federal Deposit Insurance Act (12 U.S.C. 1813).

*Equity position* means a 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.

*Event risk* means the risk of loss on a position that could result from sudden and unexpected large changes in market prices or specific events other than default and credit migration of the issuer.

*Financial firm* means a depository institution, a bank holding company, a savings and loan holding company (as defined in section 10(a)(1)(D) of the Home Owners' Loan Act (12 U.S.C. 1467a(a)(1)(D))), a securities broker or dealer registered with the SEC, or a banking or securities firm that the [banking organization] has determined is subject to consolidated supervision and regulation comparable to that imposed on U.S. [banking organizations] or securities broker-dealers.

*Foreign exchange position* means a position for which price risk arises from changes in foreign exchange rates.

*General market risk* means the risk of loss that could result from broad market movements, such as changes in the general level of interest rates, credit spreads, equity prices, foreign exchange rates, or commodity prices.

*Hedge* means a position or positions that offset all, or substantially all, of one or more material risk factors of another position.

*Idiosyncratic risk* means the risk of loss in the value of a position that arises from changes in risk factors unique to that position.

*Incremental risk* means the default risk and credit migration risk of a position. Default risk means the risk of loss on a position that could result from the failure of an obligor to make timely payments of principal or interest on its debt obligation, and the risk of loss that could result from bankruptcy, insolvency, or similar proceeding. Credit migration risk means the price risk that arises from significant changes in the underlying credit quality of the position.

*Investing bank* means, with respect to a securitization, a [banking organization] that assumes the credit risk of a securitization exposure (other than an originating bank of the securitization).

*Market risk* means the risk of loss on a position that could result from movements in market prices.

*Nth-to-default credit derivative* means a credit derivative that provides credit protection only for the nth-defaulting reference exposure in a group of reference exposures.

*Originating bank*, 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 asset-backed commercial paper (ABCP) program sponsor to the securitization.

*Over-the-counter (OTC) derivative* means a derivative contract that is not traded on an exchange that requires the daily receipt and payment of cash-variation margin.

*Publicly traded* means 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:

(i) Is registered with, or approved by, a national securities regulatory authority; and

(ii) Provides a liquid, two-way market for the instrument in question.

*Qualifying securities borrowing transaction* means a cash-collateralized securities borrowing transaction that meets the following conditions:

(1) The transaction is based on liquid and readily marketable securities;

(2) The transaction is marked-to-market daily;

(3) The transaction is subject to daily margin maintenance requirements; and

(4)(i) The transaction is a securities contract for the purposes of section 555 of the Bankruptcy Code (11 U.S.C. 555), a qualified financial contract for the purposes of section 11(e)(8) of the Federal Deposit Insurance Act (12 U.S.C. 1821(e)(8)), or a netting contract between or among financial institutions for the purposes of sections 401–407 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (12 U.S.C. 4401–4407), or the Board's Regulation EE (12 CFR part 231); or

(ii) If the transaction does not meet the criteria in paragraph (4)(i) of this definition, either:

(A) The [banking organization] has conducted sufficient legal review to reach a well-founded conclusion that:

(1) The securities borrowing agreement executed in connection with the transaction provides the [banking organization] the right to accelerate, terminate, and close-out on a net basis all transactions under the agreement and to liquidate or set off collateral promptly upon an event of counterparty default, including in a bankruptcy, insolvency, or other similar proceeding of the counterparty; and

(2) Under applicable law of the relevant jurisdiction, its rights under the agreement are legal, valid, binding, and enforceable and any exercise of rights under the agreement will not be stayed or avoided; or

(B) The transaction is either overnight or unconditionally cancelable at any time by the

[banking organization], and the [banking organization] has conducted sufficient legal review to reach a well-founded conclusion that:

(1) The securities borrowing agreement executed in connection with the transaction provides the [banking organization] the right to accelerate, terminate, and close-out on a net basis all transactions under the agreement and to liquidate or set off collateral promptly upon an event of counterparty default; and

(2) Under the law governing the agreement, its rights under the agreement are legal, valid, binding, and enforceable.

*Resecuritization* means a securitization in which one or more of the underlying exposures is a securitization position.

*Resecuritization position* means:

(1) An on- or off-balance sheet exposure to a resecuritization; or

(2) An exposure that directly or indirectly references a resecuritization exposure in paragraph (1) of this definition.

*SEC* means the U.S. Securities and Exchange Commission.

*Securitization* means a transaction in which:

(1) All or a portion of the credit risk of one or more underlying exposures is transferred to one or more third parties;

(2) The credit risk associated with the underlying exposures has been separated into at least two tranches that reflect different levels of seniority;

(3) Performance of the securitization exposures depends 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) For non-synthetic securitizations, the underlying exposures are not owned by an operating company;

(6) The underlying exposures are not owned by a small business investment company described in section 302 of the Small Business Investment Act of 1958 (15 U.S.C. 682); and

(7) The underlying exposures are not owned by a firm an investment in which qualifies as a community development investment under 12 U.S.C. 24(Eleventh).

(8) The [Agency] 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 securitization based on the transaction's leverage, risk profile, or economic substance.

(9) The [Agency] may deem an exposure to a transaction that meets the definition of a securitization, notwithstanding paragraph (5), (6), or (7) of this definition, to be a securitization based on the transaction's leverage, risk profile, or economic substance.

*Securitization position* means a covered position that is:

(1) An on-balance sheet or off-balance sheet credit exposure (including credit-enhancing representations and warranties) that arises from a securitization (including a resecuritization); or

(2) An exposure that directly or indirectly references a securitization exposure described in paragraph (1) of this definition.

*Sovereign entity* means a central government (including the U.S. government) or an agency, department, ministry, or central bank of a central government.

*Specific risk* means the risk of loss on a position that could result from factors other than broad market movements and includes event risk, default risk, and idiosyncratic risk.

*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 and tier 2 capital, or

(4) A position designed to hedge a [banking organization]'s capital ratios or earnings against the effect on paragraphs (1), (2), or (3) of this definition of adverse exchange rate movements.

*Term repo-style transaction* means a repurchase or reverse repurchase transaction, or a securities borrowing or securities lending transaction, including a transaction in which the [banking organization] acts as agent for a customer and indemnifies the customer against loss, that has an original maturity in excess of one business day, provided that:

(1) The transaction is based solely on liquid and readily marketable securities or cash;

(2) The transaction is marked-to-market daily and subject to daily margin maintenance requirements;

(3) The transaction is executed under an agreement that provides the [banking organization] the right to accelerate, terminate, and close-out the transaction on a net basis and to liquidate or set off collateral promptly upon an event of default (including bankruptcy, insolvency, or similar proceeding) of the counterparty, provided that, in any such case, any exercise of rights under the agreement will not be stayed or avoided under applicable law in the relevant jurisdictions;<sup>3</sup> and

(4) The [banking organization] has conducted and documented sufficient legal review to conclude with a well-founded basis that the agreement meets the requirements of paragraph (3) of this definition and is legal, valid, binding, and enforceable under applicable law in the relevant jurisdictions.

<sup>3</sup> This requirement is met where all transactions under the agreement are (i) executed under U.S. law and (ii) constitute "securities contracts" or "repurchase agreements" under section 555 or 559, respectively, of the Bankruptcy Code (11 U.S.C. 555 or 559), qualified financial contracts under section 11(e)(8) of the Federal Deposit Insurance Act (12 U.S.C. 1821(e)(8)), or netting contracts between or among financial institutions under sections 401–407 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (12 U.S.C. 4407), or the Federal Reserve Board's Regulation EE (12 CFR part 231).

*Tier 1 capital* is defined in [the general risk-based capital rules] or [the advanced capital adequacy framework], as applicable.

*Tier 2 capital* is defined in [the general risk-based capital rules] or [the advanced capital adequacy framework], as applicable.

*Trading position* means a position that is held by the [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 five business days.

*Value-at-Risk (VaR)* means the estimate of the maximum amount that the value of one or more positions could decline due to market price or rate movements during a fixed holding period within a stated confidence interval.

### Section 3. Requirements for Application of the Market Risk Capital Rule

(a) *Trading positions*—(1) *Identification of trading positions.* A [banking organization] must have clearly defined policies and procedures for determining which of its trading assets and trading liabilities are trading positions and which of its trading positions are correlation trading positions. These policies and procedures must take into account:

(i) 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; and

(ii) Possible impairments to the liquidity of a position or its hedge.

(2) *Trading and hedging strategies.* A [banking organization] must have clearly defined trading and hedging strategies for its trading 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 trading positions.

(ii) The hedging strategy must articulate for each portfolio of trading positions the level of market risk the [banking organization] is willing to accept and must detail the instruments, techniques, and strategies the [banking organization] will use to hedge the risk of the portfolio.

(b) *Management of covered positions*—

(1) *Active management.* A [banking organization] must have clearly defined policies and procedures for actively managing all covered positions. At a minimum, these policies and procedures must require:

(i) Marking positions to market or to model on a daily basis;

(ii) Daily assessment of the [banking organization]'s ability to hedge position and portfolio risks, and of the extent of market liquidity;

(iii) Establishment and daily monitoring of limits on positions by a risk control unit independent of the trading business unit;

(iv) Daily monitoring by senior management of information described in

paragraphs (b)(1)(i) through (b)(1)(iii) of this section;

(v) At least annual reassessment of established limits on positions by senior management; and

(vi) At least annual assessments by qualified personnel 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.

(2) *Valuation of covered positions.* The [banking organization] must have a process for prudent valuation of its covered positions that includes policies and procedures on the valuation of positions, marking positions to market or to model, independent price verification, and valuation adjustments or reserves. The valuation process must consider, as appropriate, unearned credit spreads, close-out costs, early termination costs, investing and funding costs, future administrative costs, liquidity, and model risk.

(c) *Requirements for internal models.* (1) A [banking organization] must obtain the prior written approval of the [Agency] before using any internal model to calculate its risk-based capital requirement under this appendix.

(2) A [banking organization] must meet all of the requirements of this section on an ongoing basis. The [banking organization] must promptly notify the [Agency] when:

(i) The [banking organization] plans to extend the use of a model that the [Agency] has approved under this appendix to an additional business line or product type;

(ii) The [banking organization] makes any change to any internal model approved by the [Agency] under this appendix that would result in a material change in the [banking organization]'s risk-weighted asset amount for a portfolio of covered positions; or

(iii) The [banking organization] makes any material change to its modeling assumptions.

(3) The [Agency] may rescind its approval of the use of any internal model (in whole or in part) or of the surcharge applicable to a [banking organization]'s modeled correlation trading positions as determined under section 9(d)(2) of this appendix, and determine an appropriate capital requirement for the covered positions to which the model would apply, if the [Agency] determines that the model no longer complies with this appendix or fails to reflect accurately the risks of the [banking organization]'s covered positions.

(4) The [banking organization] must periodically, but no less frequently than annually, review its internal models in light of developments in financial markets and modeling technologies, and enhance those models as appropriate to ensure that they continue to meet the [Agency]'s standards for model approval and employ risk measurement methodologies that are most appropriate for the [banking organization]'s covered positions.

(5) The [banking organization] must incorporate its internal models into its risk management process and integrate the internal models used for calculating its VaR-based measure into its daily risk management process.

(6) The level of sophistication of a [banking organization]'s internal models must be commensurate with the complexity and amount of its covered positions. A [banking organization]'s internal models may use any of the generally accepted approaches, including but not limited to variance-covariance models, historical simulations, or Monte Carlo simulations, to measure market risk.

(7) The [banking organization]'s internal models must properly measure all of the material risks in the covered positions to which they are applied.

(8) The [banking organization]'s internal models must conservatively assess the risks arising from less liquid positions and positions with limited price transparency under realistic market scenarios.

(9) The [banking organization] must have a rigorous and well-defined process for reestimating, reevaluating, and updating its internal models to ensure continued applicability and relevance.

(10) If a [banking organization] uses internal models to measure specific risk, the internal models must also satisfy the requirements in paragraph (b)(1) of section 7 of this appendix.

(d) *Control, oversight, and validation mechanisms.* (1) The [banking organization] must have a risk control unit that reports directly to senior management and is independent from the business trading units.

(2) The [banking organization] must validate its internal models initially and on an ongoing basis. 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 (including developmental evidence supporting) the internal models;

(ii) 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; and

(iii) An outcomes analysis process that includes backtesting. For internal models used to calculate the VaR-based measure, this process must include a comparison of the changes in the [banking organization]'s portfolio value that would have occurred were end-of-day positions to remain unchanged (therefore, excluding fees, commissions, reserves, net interest income, and intraday trading) with VaR-based measures during a sample period not used in model development.

(3) The [banking organization] must stress-test the market risk of its covered positions at a frequency appropriate to each portfolio, and 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 its internal models.

(4) The [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, compliance with policies and procedures, and calculation of the [banking organization]'s measure for market risk under this appendix. At least annually, the internal audit function must report its findings to the [banking organization]'s board of directors (or a committee thereof).

(e) *Internal assessment of capital adequacy.* The [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 in the VaR-based measure, including concentration and liquidity risk under stressed market conditions.

(f) *Documentation.* The [banking organization] must adequately document all material aspects of its internal models, management and valuation of covered positions, control, oversight, validation and review processes and results, and internal assessment of capital adequacy.

#### Section 4. Adjustments to the Risk-Based Capital Ratio Calculations

(a) *Risk-based capital ratio denominator.* The [banking organization] must calculate its risk-based capital ratio denominator as follows:

(1) *Adjusted risk-weighted assets.* The [banking organization] must calculate adjusted risk-weighted assets, which equal risk-weighted assets (as determined in accordance with [the advanced capital adequacy framework] or [the general risk-based capital rules], as applicable), with the following adjustments:

(i) The [banking organization] must exclude the risk-weighted asset amounts of all covered positions (except foreign exchange positions that are not trading positions and over-the-counter derivative positions).

(ii) A [banking organization] subject to [the general risk-based capital rules] may exclude receivables that arise from the posting of cash collateral and are associated with qualifying securities borrowing transactions to the extent the receivable is collateralized by the market value of the borrowed securities;

(2) *Measure for market risk.* The [banking organization] must calculate the measure for market risk, which equals the sum of the VaR-based capital requirement, stressed VaR-based capital requirement, any specific risk add-ons, any incremental risk capital requirement, any comprehensive risk capital requirement, and any capital requirement for *de minimis* exposures as defined under this paragraph.

(i) *VaR-based capital requirement.* The VaR-based capital requirement equals the greater of:

(A) The previous day's VaR-based measure as calculated under section 5 of this appendix; or

(B) The average of the daily VaR-based measures as calculated under section 5 of

this appendix for each of the preceding 60 business days multiplied by three, except as provided in paragraph (b) of this section.

(ii) *Stressed VaR-based capital requirement.* The stressed VaR-based capital requirement equals the greater of:

(A) The most recent stressed VaR-based measure as calculated under section 6 of this appendix; or

(B) The average of the stressed VaR-based measures as calculated under section 6 of this rule for each of the preceding 60 business days multiplied by three, except as provided in paragraph (b) of this section.

(iii) *Any specific risk add-ons.* Any specific risk add-ons that are required under section 7 and are calculated in accordance with section 10 of this appendix.

(iv) *Any incremental risk capital requirement.* Any incremental risk capital requirement as calculated under section 8 of this appendix.

(v) *Any comprehensive risk capital requirement.* Any comprehensive risk capital requirement as calculated under section 9 of this appendix.

(vi) *Any capital requirement for de minimis exposures.* The [banking organization] must add to its measure for market risk the absolute value of the market value of those *de minimis* exposures that are not captured in the [banking organization]'s VaR-based measure unless the [banking organization] has obtained prior written approval from the [Agency] to calculate a capital requirement for *de minimis* exposures using alternative techniques that appropriately measure the market risk associated with those exposures.

(3) *Market risk equivalent assets.* The [banking organization] must calculate market risk equivalent assets as the measure for market risk (as calculated in paragraph (a)(2) of this section) multiplied by 12.5.

(4) *Denominator calculation.* The [banking organization] must add market risk equivalent assets (as calculated in paragraph (a)(3) of this section) to adjusted risk-weighted assets (as calculated in paragraph (a)(1) of this section). The resulting sum is the [banking organization]'s risk-based capital ratio denominator.

(b) *Backtesting.* A [banking organization] must compare each of its most recent 250 business days' trading losses (excluding fees, commissions, reserves, intra-day trading, and net interest income) with the corresponding daily VaR-based measures calibrated to a one-day holding period and at a one-tail, 99.0 percent confidence level.

(1) Once each quarter, the [banking organization] must identify the number of exceptions (that is, the number of business days for which the actual daily net trading loss, if any, exceeds the corresponding daily VaR-based measure) that have occurred over the preceding 250 business days.

(2) A [banking organization] must use the multiplication factor in Table 1 of this appendix that corresponds to the number of exceptions identified in paragraph (b)(1) of this section to determine its VaR-based capital requirement for market risk under paragraph (a)(2)(i) of this section and to determine its stressed VaR-based capital requirement for market risk under paragraph

(a)(2)(ii) of this section until it obtains the next quarter's backtesting results, unless the [Agency] notifies the [banking organization] in writing that a different adjustment or other action is appropriate.

**TABLE 1—MULTIPLICATION FACTORS BASED ON RESULTS OF BACKTESTING**

| Number of exceptions | Multiplication factor |
|----------------------|-----------------------|
| 4 or fewer .....     | 3.00                  |
| 5 .....              | 3.40                  |
| 6 .....              | 3.50                  |
| 7 .....              | 3.65                  |
| 8 .....              | 3.75                  |
| 9 .....              | 3.85                  |
| 10 or more .....     | 4.00                  |

### Section 5. VaR-Based Measure

(a) *General requirement.* A [banking organization] must use one or more internal models to calculate daily a VaR-based measure of the general market risk of all covered positions. The daily VaR-based measure also may reflect the [banking organization]'s specific risk for one or more portfolios of debt and equity positions, if the internal models meet the requirements of paragraph (b)(1) of section 7. The daily VaR-based measure must also reflect the [banking organization]'s specific risk for any portfolio of correlation trading positions that is modeled under section 9 of this appendix. A [banking organization] may elect to include term repo-style transactions in its VaR-based measure, provided that the [banking organization] includes all such term repo-style transactions consistently over time.

(1) The [banking organization]'s internal models for calculating its VaR-based measure must use risk factors sufficient to measure the market risk inherent in all covered positions. The market risk categories must include, as appropriate, interest rate risk, credit spread risk, equity price risk, foreign exchange risk, and commodity price risk. For material positions in the major currencies and markets, modeling techniques must incorporate enough segments of the yield curve—in no case less than six—to capture differences in volatility and less than perfect correlation of rates along the yield curve.

(2) The VaR-based measure may incorporate empirical correlations within and across risk categories, provided the [banking organization] validates and demonstrates the reasonableness of its process for measuring correlations. If the VaR-based measure does not incorporate empirical correlations across risk categories, the [banking organization] must add the separate measures from its internal models used to calculate the VaR-based measure for the appropriate market risk categories (interest rate risk, credit spread risk, equity price risk, foreign exchange rate risk, and/or commodity price risk) to determine its aggregate VaR-based measure.

(3) The VaR-based measure must include the risks arising from the nonlinear price characteristics of options positions or positions with embedded optionality and the sensitivity of the market value of the

positions to changes in the volatility of the underlying rates, prices, or other material risk factors. A [banking organization] with a large or complex options portfolio must measure the volatility of options positions or positions with embedded optionality by different maturities and/or strike prices, where material.

(4) The [banking organization] must be able to justify to the satisfaction of the [Agency] the omission of any risk factors from the calculation of its VaR-based measure that the [banking organization] uses in its pricing models.

(5) The [banking organization] must demonstrate to the satisfaction of the [Agency] the appropriateness of any proxies used to capture the risks of the [banking organization]'s actual positions for which such proxies are used.

(b) *Quantitative requirements for VaR-based measure.* (1) The VaR-based measure must be calculated on a daily basis using a one-tail, 99.0 percent confidence level, and a holding period equivalent to a 10-business-day movement in underlying risk factors, such as rates, spreads, and prices. To calculate VaR-based measures using a 10-business-day holding period, the [banking organization] may calculate 10-business-day measures directly or may convert VaR-based measures using holding periods other than 10 business days to the equivalent of a 10-business-day holding period. A [banking organization] that converts its VaR-based measure in such a manner must be able to justify the reasonableness of its approach to the satisfaction of the [Agency].

(2) The VaR-based measure must be based on a historical observation period of at least one year. Data used to determine the VaR-based measure must be relevant to the [banking organization]'s actual exposures and of sufficient quality to support the calculation of risk-based capital requirements. The [banking organization] must update data sets at least monthly or more frequently as changes in market conditions or portfolio composition warrant. For a [banking organization] that uses a weighting scheme or other method for the historical observation period, the [banking organization] must either:

(i) Use an effective observation period of at least one year in which the average time lag of the observations is at least six months; or

(ii) Demonstrate to the [Agency] that its weighting scheme is more effective than a weighting scheme with an average time lag of at least six months at representing the volatility of the [banking organization]'s trading portfolio over a full business cycle. A [banking organization] using this option must update its data more frequently than monthly and in a manner appropriate for the type of weighting scheme.

(c) A [banking organization] must divide its portfolio into a number of significant subportfolios approved by the [Agency] for subportfolio backtesting purposes. These subportfolios must be sufficient to allow the [banking organization] and the [Agency] to assess the adequacy of the VaR model at the risk factor level; the [Agency] will evaluate the appropriateness of these subportfolios relative to the value and composition of the

[banking organization]'s covered positions. The [banking organization] must retain and make available to the [Agency] the following information for each subportfolio for each business day over the previous two years (500 business days), with no more than a 60 day lag:

(1) A daily VaR-based measure for the subportfolio calibrated to a one-tail, 99.0 percent confidence level;

(2) The daily profit or loss for the subportfolio (that is, the net change in price of the positions held in the portfolio at the end of the previous business day); and

(3) The p-value 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 (c)(2) of this section based on the model used to calculate the VaR-based measure described in paragraph (c)(1) of this section).

### Section 6. Stressed VaR-Based Measure

(a) *General requirement.* At least weekly, a [banking organization] must use the same internal model(s) used to calculate its VaR-based measure to calculate a stressed VaR-based measure.

(b) *Quantitative requirements for stressed VaR-based measure.* (1) A [banking organization] must calculate a stressed VaR-based measure for its covered positions using the same model(s) used to calculate the VaR-based measure, subject to the same confidence level and holding period applicable to the VaR-based measure under section 5, but with model inputs calibrated to historical data from a continuous 12-month period that reflects a period of significant financial stress appropriate to the [banking organization]'s current portfolio.

(2) The stressed VaR-based measure must be calculated at least weekly and be no less than the [banking organization]'s VaR-based measure.

(3) A [banking organization] must have policies and procedures that describe how it determines the period of significant financial stress used to calculate the [banking organization]'s stressed VaR-based measure under this section and must be able to provide empirical support for the period used. The [banking organization] must obtain the prior approval of the [Agency] for, and notify the [Agency] if the [banking organization] makes any material changes to, these policies and procedures. The policies and procedures must address:

(i) How the [banking organization] links the period of significant financial stress used to calculate the stressed VaR-based measure to the composition and directional bias of its current portfolio; and

(ii) The [banking organization]'s process for selecting, reviewing, and updating the period of significant financial stress used to calculate the stressed VaR-based measure and for monitoring the appropriateness of the period to the [banking organization]'s current portfolio.

(4) Nothing in this section prevents the [Agency] from requiring a [banking organization] to use a different period of significant financial stress in the calculation of the stressed VaR-based measure.

### Section 7. Specific Risk

(a) *General requirement.* A [banking organization] must use one of the methods in this section to measure the specific risk for each of its debt, equity, and securitization positions with specific risk.

(b) *Modeled specific risk.* A [banking organization] may use models to measure the specific risk of covered positions as provided in paragraph (a) of section 5 (therefore, excluding securitization positions that are not modeled under section 9 of this appendix). A [banking organization] must use models to measure the specific risk of correlation trading positions that are modeled under section 9 of this appendix.

(1) *Requirements for specific risk modeling.*

(i) If a [banking organization] uses internal models to measure the specific risk of a portfolio, the internal models must:

(A) Explain the historical price variation in the portfolio;

(B) Be responsive to changes in market conditions;

(C) Be robust to an adverse environment, including signaling rising risk in an adverse environment; and

(D) Capture all material components of specific risk for the debt and equity positions in the portfolio. Specifically, the internal models must:

(1) Capture event risk and idiosyncratic risk;

(2) Capture and demonstrate sensitivity to material differences between positions that are similar but not identical; and

(3) Capture and demonstrate sensitivity to changes in portfolio composition and concentrations.

(ii) If a [banking organization] calculates an incremental risk measure for a portfolio of debt or equity positions under section 8 of this appendix, the [banking organization] is not required to capture default and credit migration risks in its internal models used to measure the specific risk of those portfolios.

(2) *Specific risk fully modeled for one or more portfolios.* If the [banking organization]'s VaR-based measure captures all material aspects of specific risk for one or more of its portfolios of debt, equity, or correlation trading positions, the [banking organization] has no specific risk add-on for those portfolios for purposes of paragraph (a)(2)(iii) of section 4 of this appendix.

(c) *Specific risk not modeled.* (1) If the [banking organization]'s VaR-based measure does not capture all material aspects of specific risk for a portfolio of debt, equity, or correlation trading positions, the [banking organization] must calculate a specific-risk add-on for the portfolio under the standardized measurement method as described in section 10 of this appendix.

(2) A [banking organization] must calculate a specific risk add-on under the standardized measurement method as described in section 10 of this appendix for all of its securitization positions that are not modeled under section 9 of this appendix.

### Section 8. Incremental Risk

(a) *General requirement.* A [banking organization] that measures the specific risk of a portfolio of debt positions under section 7(b) using internal models must calculate at

least weekly an incremental risk measure for that portfolio according to the requirements in this section. The incremental risk measure is the [banking organization]'s measure of potential losses due to incremental risk over a one-year time horizon at a one-tail, 99.9 percent confidence level, either under the assumption of a constant level of risk, or under the assumption of constant positions. With the prior approval of the [Agency], a [banking organization] may choose to include portfolios of equity positions in its incremental risk model, provided that it consistently includes such equity positions in a manner that is consistent with how the [banking organization] internally measures and manages the incremental risk of such positions at the portfolio level. If equity positions are included in the model, for modeling purposes default is considered to have occurred upon the default of any debt of the issuer of the equity position. A [banking organization] may not include correlation trading positions or securitization positions in its incremental risk measure.

(b) *Requirements for incremental risk modeling.* For purposes of calculating the incremental risk measure, the incremental risk model must:

(1) Measure incremental risk over a one-year time horizon and at a one-tail, 99.9 percent confidence level, either under the assumption of a constant level of risk, or under the assumption of constant positions.

(i) A constant level of risk assumption means that the [banking organization] rebalances, or rolls over, its trading positions at the beginning of each liquidity horizon over the one-year horizon in a manner that maintains the [banking organization]'s initial risk level. The [banking organization] must determine the frequency of rebalancing in a manner consistent with the liquidity horizons of the positions in the portfolio. The liquidity horizon of a position or set of positions is the time required for a [banking organization] to reduce its exposure to, or hedge all of its material risks of, the position(s) in a stressed market. The liquidity horizon for a position or set of positions may not be less than the lower of three months or the contractual maturity of the position.

(ii) A constant position assumption means that the [banking organization] maintains the same set of positions throughout the one-year horizon. If a [banking organization] uses this assumption, it must do so consistently across all portfolios.

(iii) A [banking organization]'s selection of a constant position or a constant risk assumption must be consistent between the [banking organization]'s incremental risk model and its comprehensive risk model described in section 9, if applicable.

(iv) A [banking organization]'s treatment of liquidity horizons must be consistent between the [banking organization]'s incremental risk model and its comprehensive risk model described in section 9, if applicable.

(2) Recognize the impact of correlations between default and migration events among obligors.

(3) Reflect the effect of issuer and market concentrations, as well as concentrations that can arise within and across product classes during stressed conditions.

(4) Reflect netting only of long and short positions that reference the same financial instrument.

(5) Reflect any material mismatch between a position and its hedge.

(6) Recognize the effect that liquidity horizons have on dynamic hedging strategies. In such cases, a [banking organization] must:

(i) Choose to model the rebalancing of the hedge consistently over the relevant set of trading positions;

(ii) Demonstrate that the inclusion of rebalancing results in a more appropriate risk measurement;

(iii) Demonstrate that the market for the hedge is sufficiently liquid to permit rebalancing during periods of stress; and

(iv) Capture in the incremental risk model any residual risks arising from such hedging strategies.

(7) Reflect the nonlinear impact of options and other positions with material nonlinear behavior with respect to default and migration changes.

(8) Maintain consistency with the [banking organization]'s internal risk management methodologies for identifying, measuring, and managing risk.

(c) *Calculation of incremental risk capital requirement.* The incremental risk capital requirement is the greater of:

(1) The average of the incremental risk measures over the previous 12 weeks; or

(2) The most recent incremental risk measure.

### Section 9. Comprehensive Risk

(a) *General requirement.* (1) Subject to the prior approval of the [Agency], a [banking organization] may use the method in this section to measure comprehensive risk, that is, all price risk, for one or more portfolios of correlation trading positions.

(2) A [banking organization] that measures the price risk of a portfolio of correlation trading positions using internal models must calculate at least weekly a comprehensive risk measure that captures all price risk according to the requirements of this section. The comprehensive risk measure is either:

(i) The sum of:

(A) The [banking organization]'s modeled measure of all price risk determined according to the requirements in paragraph (b) of this section; and

(B) A surcharge for the [banking organization]'s modeled correlation trading positions equal to the total specific risk add-on for such positions as calculated under section 10 of this appendix multiplied by 15.0 percent; or

(ii) With approval of the [Agency] and provided the [banking organization] has met the requirements of this section for a period of at least one year and can demonstrate the effectiveness of the model through the results of ongoing model validation efforts including robust benchmarking, the greater of:

(A) The [banking organization]'s modeled measure of all price risk determined according to the requirements in paragraph (b) of this section; or

(B) The total specific risk add-on that would apply to the bank's modeled correlation trading positions as calculated under section 10 of this appendix multiplied by 8.0 percent.

(b) *Requirements for modeling all price risk.* If a [banking organization] uses an internal model to measure the price risk of a portfolio of correlation trading positions:

(1) The internal model must measure comprehensive risk over a one-year time horizon at a one-tail, 99.9 percent confidence level, either under the assumption of a constant level of risk, or under the assumption of constant positions.

(2) The model must capture all material price risk, including but not limited to the following:

(i) The risks associated with the contractual structure of cash flows of the position, its issuer, and its underlying exposures;

(ii) Credit spread risk, including nonlinear price risks;

(iii) The volatility of implied correlations, including nonlinear price risks such as the cross-effect between spreads and correlations;

(iv) Basis risk;

(v) Recovery rate volatility as it relates to the propensity for recovery rates to affect tranche prices; and

(vi) To the extent the comprehensive risk measure incorporates the benefits of dynamic hedging, the static nature of the hedge over the liquidity horizon must be recognized. In such cases, a [banking organization] must:

(A) Choose to model the rebalancing of the hedge consistently over the relevant set of trading positions;

(B) Demonstrate that the inclusion of rebalancing results in a more appropriate risk measurement;

(C) Demonstrate that the market for the hedge is sufficiently liquid to permit rebalancing during periods of stress; and

(D) Capture in the comprehensive risk model any residual risks arising from such hedging strategies;

(3) The [banking organization] must use market data that are relevant in representing the risk profile of the [banking organization]'s correlation trading positions in order to ensure that the [banking organization] fully captures the material risks of the correlation trading positions in its comprehensive risk measure in accordance with this section; and

(4) The [banking organization] must be able to demonstrate that its model is an appropriate representation of comprehensive risk in light of the historical price variation of its correlation trading positions.

(c) *Requirements for stress testing.*

(1) A [banking organization] must at least weekly apply specific, supervisory stress scenarios to its portfolio of correlation trading positions that capture changes in:

(i) Default rates;

(ii) Recovery rates;

(iii) Credit spreads;

(iv) Correlations of underlying exposures; and

(v) Correlations of a correlation trading position and its hedge.

(2) Other requirements. (i) A [banking organization] must retain and make available to the [Agency] the results of the supervisory stress testing, including comparisons with the capital requirements generated by the [banking organization]'s comprehensive risk model.

(ii) A [banking organization] must report to the [Agency] promptly any instances where the stress tests indicate any material deficiencies in the comprehensive risk model.

(d) *Calculation of comprehensive risk capital requirement.* The comprehensive risk capital requirement is the greater of:

(1) The average of the comprehensive risk measures over the previous 12 weeks; or

(2) The most recent comprehensive risk measure.

**Section 10. Standardized Measurement Method for Specific Risk**

(a) *General requirement.* A [banking organization] must calculate a total specific risk add-on for each portfolio of debt and equity positions for which the [banking organization]'s VaR-based measure does not capture all material aspects of specific risk and for all securitization positions that are not modeled under section 9 of this appendix. A [banking organization] must calculate each specific risk add-on in accordance with the requirements of this section.

(1) The specific risk add-on for an individual debt or securitization position that represents purchased credit protection is capped at the market value of the protection.

(2) For debt, equity, or securitization positions that are derivatives with linear payoffs, a [banking organization] must risk weight the market value of the effective notional amount of the underlying instrument or index portfolio. A swap must be included as an effective notional position in the underlying instrument or portfolio, with the receiving side treated as a long position and the paying side treated as a short position. For debt, equity, or securitization positions that are derivatives with nonlinear payoffs, a [banking organization] must risk weight the market value of the effective notional amount of the underlying instrument or portfolio multiplied by the derivative's delta.

(3) For debt, equity, or securitization positions, a [banking organization] may net long and short positions (including derivatives) in identical issues or identical indices. A [banking organization] may also net positions in depositary receipts against

an opposite position in an identical equity in different markets, provided that the [banking organization] includes the costs of conversion.

(4) A set of transactions consisting of either a debt position and its credit derivative hedge or a securitization position and its credit derivative hedge has a specific risk add-on of zero if the debt or securitization position is fully hedged by a total return swap (or similar instrument where there is a matching of payments and changes in market value of the position) and there is an exact match between the reference obligation of the swap and the debt or securitization position, the maturity of the swap and the debt or securitization position, and the currency of the swap and the debt or securitization position.

(5) The specific risk add-on for a set of transactions consisting of either a debt position and its credit derivative hedge or a securitization position and its credit derivative hedge that does not meet the criteria of paragraph (a)(4) of this section is equal to 20.0 percent of the capital requirement for the side of the transaction with the higher capital requirement when the credit risk of the position is fully hedged by a credit default swap or similar instrument and there is an exact match between the reference obligation of the credit derivative hedge and the debt or securitization position, the maturity of the credit derivative hedge and the debt or securitization position, and the currency of the credit derivative hedge and the debt or securitization position.

(6) The specific risk add-on for a set of transactions consisting of either a debt position and its credit derivative hedge or a securitization position and its credit derivative hedge that does not meet the criteria of either paragraph (a)(4) or (a)(5) of this section, but in which all or substantially all of the price risk has been hedged, is equal to the specific risk add-on for the side of the transaction with the higher specific risk add-on.

(b) *Debt and securitization positions.* (1) Unless otherwise provided in paragraph (b)(2) of this section, the total specific risk add-on for a portfolio of debt or securitization positions is the sum of the specific risk add-ons for individual debt or securitization positions, as computed under this section. To determine the specific risk add-on for individual debt or securitization positions, a [banking organization] must multiply the absolute value of the current market value of each net long or net short debt or securitization position in the portfolio by the appropriate risk-weighting factor in Table 2. The following definitions apply to this paragraph, including Table 2:

TABLE 2—SPECIFIC RISK WEIGHTING FACTORS FOR DEBT AND SECURITIZATION POSITIONS

| Category   | Remaining maturity (contractual) | Risk-weighting factor (in percent) |
|------------|----------------------------------|------------------------------------|
| Government | N/A                              | 0.00                               |
| Qualifying | 6 months or less                 | 0.25                               |
|            | Over 6 months to 24 months       | 1.00                               |
|            | Over 24 months                   | 1.60                               |



TABLE 2—SPECIFIC RISK WEIGHTING FACTORS FOR DEBT AND SECURITIZATION POSITIONS—Continued

| Category    | Remaining maturity (contractual) | Risk-weighting factor (in percent) |
|-------------|----------------------------------|------------------------------------|
| Other ..... | N/A .....                        | 8.00                               |

(i) The *government* category includes all debt instruments of central governments of OECD-based countries<sup>4</sup> including bonds, Treasury bills, and other short-term instruments, as well as local currency instruments of non-OECD central governments to the extent the bank has liabilities booked in that currency.

(ii) The *qualifying* category includes debt instruments of U.S. government-sponsored agencies, general obligation debt instruments issued by states and other political subdivisions of OECD-based countries, multilateral development banks, and debt instruments issued by U.S. depository institutions or OECD-banks that do not qualify as capital of the issuing institution.<sup>5</sup> This category also includes other debt instruments, including corporate debt and revenue instruments issued by states and other political subdivisions of OECD countries, that are:

(A) Rated investment-grade by at least two nationally recognized credit rating services;

(B) Rated investment-grade by one nationally recognized credit rating agency and not rated less than investment-grade by any other credit rating agency; or

(C) Unrated, but deemed to be of comparable investment quality by the reporting bank and the issuer has instruments listed on a recognized stock exchange, subject to review by the [Agency].

(iii) The *other* category includes debt instruments that are not included in the government or qualifying categories.

(2) *N<sup>th</sup>-to-default credit derivatives*. The total specific risk add-on for a portfolio of n<sup>th</sup>-to-default credit derivatives is the sum of the specific risk add-ons for individual n<sup>th</sup>-to-default credit derivatives, as computed under this paragraph. The specific risk add-on for each n<sup>th</sup>-to-default credit derivative position applies irrespective of whether a [banking organization] is a net protection buyer or net protection seller. A [banking organization] must calculate the specific risk add-on for each n<sup>th</sup>-to-default credit derivative as follows:

(i) First-to-default credit derivatives.

(A) The specific risk add-on for a first-to-default credit derivative is the lesser of:

(1) The sum of the specific risk add-ons for the individual reference credit exposures in the group of reference exposures; or

(2) The maximum possible credit event payment under the credit derivative contract.

(B) Where a [banking organization] has a risk position in one of the reference credit exposures underlying a first-to-default credit

derivative and this credit derivative hedges the [banking organization]'s risk position, the [banking organization] is allowed to reduce both the specific risk add-on for the reference credit exposure and that part of the specific risk add-on for the credit derivative that relates to this particular reference credit exposure such that its specific risk add-on for the pair reflects the bank's net position in the reference credit exposure. Where a [banking organization] has multiple risk positions in reference credit exposures underlying a first-to-default credit derivative, this offset is allowed only for the underlying reference credit exposure having the lowest specific risk add-on.

(ii) Second-or-subsequent-to-default credit derivatives.

(A) The specific risk add-on for a second-or-subsequent-to-default credit derivative is the lesser of:

(1) The sum of the specific risk add-ons for the individual reference credit exposures in the group of reference exposures, but disregarding the (n-1) obligations with the lowest specific risk add-ons; or

(2) The maximum possible credit event payment under the credit derivative contract.

(B) For second-or-subsequent-to-default credit derivatives, no offset of the specific risk add-on with an underlying reference credit exposure is allowed.

(c) *Equity positions*. The total specific risk add-on for a portfolio of equity positions is the sum of the specific risk add-ons of the individual equity positions, as computed under this section. To determine the specific risk add-on of individual equity positions, a [banking organization] must multiply the absolute value of the current market value of each net long or net short equity position by the appropriate risk-weighting factor as determined under this paragraph.

(1) The [banking organization] must multiply the absolute value of the current market value of each net long or net short equity position by a risk-weighting factor of 8.0 percent. For equity positions that are index contracts comprising a well-diversified portfolio of equity instruments, the absolute value of the current market value of each net long or net short position is multiplied by a risk-weighting factor of 2.0 percent.<sup>6</sup>

(2) For equity positions arising from the following futures-related arbitrage strategies, a [banking organization] may apply a 2.0 percent risk-weighting factor to one side (long or short) of each position with the opposite side exempt from an additional capital requirement:

(i) Long and short positions in exactly the same index at different dates or in different market centers; or

(ii) Long and short positions in index contracts at the same date in different, but similar indices.

(3) For futures contracts on main indices that are matched by offsetting positions in a basket of stocks comprising the index, a [banking organization] may apply a 2.0 percent risk-weighting factor to the futures and stock basket positions (long and short), provided that such trades are deliberately entered into and separately controlled, and that the basket of stocks is comprised of stocks representing at least 90.0 percent of the capitalization of the index. A main index refers to the Standard & Poor's 500 Index, the FTSE All-World Index, and any other index for which the [banking organization] can demonstrate to the satisfaction of the [AGENCY] that the equities represented in the index have liquidity, depth of market, and size of bid-ask spreads comparable to equities in the Standard & Poor's 500 Index and FTSE All-World Index.

(d)(1) A [banking organization] must be able to 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 capital.

(2) To support the demonstration of its comprehensive understanding, for each securitization position a [banking organization] must:

(i) Conduct and document an analysis of the risk characteristics of a securitization position prior to acquiring the position, considering:

(A) Structural features of the securitization that would materially impact the performance of the position, for example, the contractual cash flow waterfall, waterfall-related triggers, credit enhancements, liquidity enhancements, market value triggers, the performance of organizations that service the position, and deal-specific definitions of default;

(B) Relevant information regarding the performance of 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);

(C) Relevant market data of the securitization, for example, bid-ask spreads, most recent sales price and historical price volatility, trading volume, implied market

<sup>4</sup> Organization for Economic Cooperation and Development (OECD)-based countries is defined in [the general risk-based capital rules].

<sup>5</sup> U.S. government-sponsored agencies, multilateral development banks, and OECD banks are defined in [the general risk-based capital rules].

<sup>6</sup> A portfolio is well-diversified if it contains a large number of individual equity positions, with no single position representing a substantial portion of the portfolio's total market value.



rating, and size, depth and concentration level of the market for the securitization; and

(D) For resecuritization positions, performance information on the underlying securitization exposures, for example, the issuer name and credit quality, and the characteristics and performance of the exposures underlying the securitization exposures; and

(ii) On an on-going basis (no less frequently than quarterly), evaluate, review, and update as appropriate the analysis required under paragraph (d)(1) of this section for each securitization position.

#### Section 11. Market Risk Disclosures

(a) *Scope.* A [banking organization] must comply with this section unless it is a consolidated subsidiary of a bank holding company 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. Quantitative disclosures must be made publicly 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 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. If a [banking organization] believes that disclosure of specific commercial or financial information would prejudice seriously its position by making public certain information that is either proprietary or confidential in nature, the [banking organization] need not disclose these specific items, but 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.

(b) *Disclosure policy.* The [banking organization] must have a formal disclosure policy approved by the board of directors that addresses the [banking organization]'s approach for determining the market risk disclosures it makes. The policy must address the associated internal controls and disclosure controls and procedures. The board of directors and senior management must ensure that appropriate verification of the disclosures takes place and that effective internal controls and disclosure controls and procedures are maintained. One or more senior officers of the [banking organization] must attest that the disclosures meet the requirements of this appendix, and 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 section.

##### (c) *Quantitative disclosures.*

(1) For each portfolio of covered positions, the [banking organization] must publicly disclose the following information at least quarterly:

(i) The high, low, median, and mean VaR-based measures over the reporting period and the VaR-based measure at period-end;

(ii) The high, low, median, and mean stressed VaR-based measures over the reporting period and the stressed VaR-based measure at period-end;

(iii) The high, low, median, and mean incremental risk capital requirements over the reporting period and the incremental risk capital requirement at period-end;

(iv) The high, low, median, and mean comprehensive risk capital requirements over the reporting period and the comprehensive risk capital requirement at period-end, with the period-end requirement broken down into appropriate risk classifications (for example, default risk, migration risk, correlation risk);

(v) Separate measures for interest rate risk, credit spread risk, equity price risk, foreign exchange risk, and commodity price risk used to calculate the VaR-based measure; and

(vi) A comparison of VaR-based estimates with actual gains or losses experienced by the [banking organization], with an analysis of important outliers.

(2) In addition, the [banking organization] must publicly disclose the following information at least quarterly:

(i) The aggregate amount of on-balance sheet and off-balance sheet securitization positions by exposure type; and

(ii) The aggregate amount of correlation trading positions.

##### (d) *Qualitative disclosures.*

(1) For each portfolio of covered positions, the [banking organization] must publicly disclose the following information at least annually, or more frequently in the event of material changes for each portfolio:

(i) The composition of material portfolios of covered positions;

(ii) The [banking organization]'s valuation policies, procedures, and methodologies for covered positions including, for securitization positions, the methods and key assumptions used for valuing such positions, any significant changes since the last reporting period, and the impact of such change;

(iii) The characteristics of the internal models used for purposes of this appendix. For the incremental risk capital requirement and the comprehensive risk capital requirement, this must include:

(A) The approach used by the [banking organization] to determine liquidity horizons;

(B) The methodologies used to achieve a capital assessment that is consistent with the required soundness standard; and

(C) The specific approaches used in the validation of these models;

(iv) A description of the approaches used for validating and evaluating the accuracy of internal models and modeling processes for purposes of this appendix;

(v) For each market risk category (that is, interest rate risk, credit spread risk, equity price risk, foreign exchange risk, and commodity price risk), a description of the stress tests applied to the positions subject to the factor;

(vi) The results of the comparison of the [banking organization]'s internal estimates for purposes of this appendix with actual outcomes during a sample period not used in model development;

(vii) The soundness standard on which the [banking organization]'s internal capital

adequacy assessment under this appendix is based, including a description of the methodologies used to achieve a capital adequacy assessment that is consistent with the soundness standard;

(2) 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

(3) A description of the [banking organization]'s policy governing the use of credit risk mitigation to mitigate the risks of securitization and resecuritization positions.

[End of Common Text]

#### List of Subjects

##### 12 CFR Part 3

Administrative practices and procedure, Capital, National banks, Reporting and recordkeeping requirements, Risk.

##### 12 CFR Part 208

Confidential business information, Crime, Currency, Federal Reserve System, Mortgages, reporting and recordkeeping requirements, Securities.

##### 12 CFR Part 225

Administrative practice and procedure, Banks, banking, Federal Reserve System, Holding companies, Reporting and recordkeeping requirements, Securities.

##### 12 CFR Part 325

Administrative practice and procedure, Banks, banking, Capital Adequacy, Reporting and recordkeeping requirements, Savings associations, State non-member banks.

#### Adoption of Proposed Common Rule

The adoption of the proposed common rules by the agencies, as modified by agency-specific text, is set forth below:

#### Department of the Treasury

*Office of the Comptroller of the Currency*

##### 12 CFR Chapter I

#### Authority and Issuance

For the reasons set forth in the common preamble, part 3 of chapter I of title 12 of the Code of Federal Regulations is proposed to be amended as follows:

#### PART 3—MINIMUM CAPITAL RATIOS; ISSUANCE OF DIRECTIVES

1. The authority citation for part 3 continues to read as follows:

**Authority:** 12 U.S.C. 93a, 161, 1818, 3907 and 3909.

2. Appendix B to part 3 is revised to read as set forth at the end of the common preamble.

**Appendix B to Part 3—Risk-Based Capital Guidelines; Market Risk Adjustment**

3. Appendix B to part 3 is further amended by:

a. Removing “[the advanced capital adequacy framework]” wherever it appears and adding in its place “Appendix C to this part”;

b. Removing “[Agency]” wherever it appears and adding in its place “OCC”;

c. Removing “[Agency’s]” wherever it appears and adding in its place “OCC’s”;

d. Removing “[banking organization]” wherever it appears and adding in its place “bank”;

e. Removing “[banking organizations]” wherever it appears and adding in its place “banks”;

f. Removing “[Call Report or FR Y–9C]” wherever it appears and adding in its place “Call Report”;

g. Removing “[regulatory report]” wherever it appears and adding in its place “Consolidated Reports of Condition and Income (Call Report)”;

h. Removing “[the general risk-based capital rules]” wherever it appears and adding in its place “Appendix A to this part”.

**Board of Governors of the Federal Reserve System**

**12 CFR Chapter II**

**Authority and Issuance**

For the reasons set forth in the common preamble, parts 208 and 225 of chapter II of title 12 of the Code of Federal Regulations are proposed to be amended as follows:

**PART 208—MEMBERSHIP OF STATE BANKING INSTITUTIONS IN THE FEDERAL RESERVE SYSTEM (REGULATION H)**

4. 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, 1818, 1820(d)(9), 1833(j), 1828(o), 1831, 1831o, 1831p–1, 1831r–1, 1831w, 1831x, 1835a, 1882, 2901–2907, 3105, 3310, 3331–3351, and 3905–3909; 15 U.S.C. 78b, 781(b), 781(i), 780–4(c)(5), 78q, 78q–1, and 78w, 1681s, 1681w, 6801, and 6805; 31 U.S.C. 5318; 42 U.S.C. 4012a, 4104a, 4104b, 4106 and 4128.

5. Appendix E to part 208 is revised to read as set forth at the end of the common preamble.

**Appendix E to Part 208—Capital Adequacy Guidelines for State Member Banks: Market Risk Measure**

6. Appendix E to part 208 is amended by:

a. Removing “[the advanced capital adequacy framework]” wherever it appears and adding in its place “Appendix F to this part”;

b. Removing “[Agency]” wherever it appears and adding in its place “Board”;

c. Removing “[Agency’s]” wherever it appears and adding in its place “Board’s”;

d. Removing “[banking organization]” wherever it appears and adding in its place “bank”;

e. Removing “[banking organizations]” wherever it appears and adding in its place “banks”;

f. Removing “[Call Report or FR Y–9C]” wherever it appears and adding in its place “Call Report”;

g. Removing “[regulatory report]” wherever it appears and adding in its place “Consolidated Reports of Condition and Income (Call Report)”;

h. Removing “[the general risk-based capital rules]” wherever it appears and adding in its place “Appendix A to this part”.

**PART 225—BANK HOLDING COMPANIES AND CHANGE IN BANK CONTROL (REGULATION Y)**

7. 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, 3907, and 3909; 15 U.S.C. 1681s, 1681w, 6801 and 6805.

8. Appendix E to part 225 is revised to read as set forth at the end of the common preamble.

**Appendix E to Part 225—Capital Adequacy Guidelines for Bank Holding Companies: Market Risk Measure**

9. Appendix E is amended by:

a. Removing “[the advanced capital adequacy framework]” wherever it appears and adding in its place “Appendix G to this part”;

b. Removing “[Agency]” wherever it appears and adding in its place “Board”;

c. Removing “[Agency’s]” wherever it appears and adding in its place “Board’s”;

d. Removing “[banking organization]” wherever it appears and adding in its place “bank holding company”;

e. Removing “[banking organizations]” wherever it appears and adding in its place “bank holding companies”;

f. Removing “[Call Report or FR Y–9C]” wherever it appears and adding in its place “FR Y–9C”;

g. Removing “[regulatory report]” wherever it appears and adding in its place “Consolidated Financial Statements for Bank Holding Companies (FR Y–9C)”; and

h. Removing “[the general risk-based capital rules]” wherever it appears and adding in its place “Appendix A to this part”.

**Federal Deposit Insurance Corporation  
12 CFR Chapter III**

**Authority and Issuance**

For the reasons set forth in the common preamble, part 325 of chapter III of title 12 of the Code of Federal Regulations is proposed to be amended as follows:

**PART 325—CAPITAL MAINTENANCE**

10. The authority citation for part 325 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; 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. 102–550, 106 Stat. 3672, 4089 (12 U.S.C. 1828 note).

11. Appendix C to part 325 is revised to read as set forth at the end of the common preamble.

**Appendix C to Part 325—Risk-Based Capital for State Nonmember Banks: Market Risk**

12. Appendix C is further amended by:

a. Removing “[Agency]” wherever it appears and adding in its place “FDIC”;

b. Removing “[Agency’s]” wherever it appears and adding in its place “FDIC’s”;

c. Removing “[banking organization]” wherever it appears and adding in its place “bank”;

d. Removing “[banking organizations]” wherever it appears and adding in its place “banks”;

e. Removing “[Call Report or FR Y–9C]” wherever it appears and adding in its place “Call Report”;

f. Removing “[the advanced capital adequacy framework]” wherever it appears and adding in its place “Appendix D to this part”;

g. Removing “[regulatory report]” wherever it appears and adding in its place “Consolidated Reports of Condition and Income (Call Report)”;

h. Removing “[the general risk-based capital rules]” wherever it appears and adding in its place “Appendix A to this part”.

Dated: December 15, 2010.

**John Walsh,**

*Acting Comptroller of the Currency.*

By order of the Board of Governors of the  
Federal Reserve System, December 14, 2010.

**Robert deV. Frierson,**

*Deputy Secretary of the Board.*

Dated at Washington, DC, this 14th of  
December 2010. By order of the Board of

Directors. Federal Deposit Insurance  
Corporation.

**Robert E. Feldman,**

*Executive Secretary.*

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6720-01-P**