

Federal Reserve System

§ 208.101

§ 208.85 Where insurance activities may take place.

(a) *General rule.* A bank must, to the extent practicable, keep the area where the bank conducts transactions involving insurance products or annuities physically segregated from areas where retail deposits are routinely accepted from the general public, identify the areas where insurance product or annuity sales activities occur, and clearly delineate and distinguish those areas from the areas where the bank's retail deposit-taking activities occur.

(b) *Referrals.* Any person who accepts deposits from the public in an area where such transactions are routinely conducted in the bank may refer a consumer who seeks to purchase an insurance product or annuity to a qualified person who sells that product only if the person making the referral receives no more than a one-time, nominal fee of a fixed dollar amount for each referral that does not depend on whether the referral results in a transaction.

§ 208.86 Qualification and licensing requirements for insurance sales personnel.

A bank may not permit any person to sell or offer for sale any insurance product or annuity in any part of its office or on its behalf, unless the person is at all times appropriately qualified and licensed under applicable State insurance licensing standards with regard to the specific products being sold or recommended.

APPENDIX A TO SUBPART H OF PART 208—CONSUMER GRIEVANCE PROCESS

Any consumer who believes that any bank or any other person selling, soliciting, advertising, or offering insurance products or annuities to the consumer at an office of the bank or on behalf of the bank has violated the requirements of this subpart should contact the Consumer Complaints Section, Division of Consumer and Community Affairs, Board of Governors of the Federal Reserve System at the following address: 20th & C Streets, NW, Washington, D.C. 20551.

Subpart I—Interpretations

SOURCE: Reg. H, 63 FR 37658, July 13, 1998, unless otherwise noted. Redesignated at 65 FR 14814, Mar. 20, 2000. Redesignated further at 65 FR 75841, Dec. 4, 2000.

§ 208.100 Sale of bank's money orders off premises as establishment of branch office.

(a) The Board of Governors has been asked to consider whether the appointment by a member bank of an agent to sell the bank's money orders, at a location other than the premises of the bank, constitutes the establishment of a branch office.

(b) Section 5155 of the Revised Statutes (12 U.S.C. 36), which is also applicable to member banks, defines the term branch as including "any branch bank, branch office, branch agency, additional office, or any branch place of business * * * at which deposits are received, or checks paid, or money lent." The basic question is whether the sale of a bank's money orders by an agent amounts to the receipt of deposits at a branch place of business within the meaning of this statute.

(c) Money orders are classified as deposits for certain purposes. However, they bear a strong resemblance to traveler's checks that are issued by banks and sold off premises. In both cases, the purchaser does not intend to establish a deposit account in the bank, although a liability on the bank's part is created. Even though they result in a deposit liability, the Board is of the opinion that the issuance of a bank's money orders by an authorized agent does not involve the receipt of deposits at a "branch place of business" and accordingly does not require the Board's permission to establish a branch.

§ 208.101 Obligations concerning institutional customers.

(a) As a result of broadened authority provided by the Government Securities Act Amendments of 1993 (15 U.S.C. 780-3 and 780-5), the Board is adopting sales practice rules for the government securities market, a market with a particularly broad institutional component. Accordingly, the Board believes it is appropriate to provide further guidance to banks on their suitability obligations when making recommendations to institutional customers.

(b) The Board's Suitability Rule, § 208.37(d), is fundamental to fair dealing and is intended to promote ethical sales practices and high standards of

professional conduct. Banks' responsibilities include having a reasonable basis for recommending a particular security or strategy, as well as having reasonable grounds for believing the recommendation is suitable for the customer to whom it is made. Banks are expected to meet the same high standards of competence, professionalism, and good faith regardless of the financial circumstances of the customer.

(c) In recommending to a customer the purchase, sale, or exchange of any government security, the bank shall have reasonable grounds for believing that the recommendation is suitable for the customer upon the basis of the facts, if any, disclosed by the customer as to the customer's other security holdings and financial situation and needs.

(d) The interpretation in this section concerns only the manner in which a bank determines that a recommendation is suitable for a particular institutional customer. The manner in which a bank fulfills this suitability obligation will vary, depending on the nature of the customer and the specific transaction. Accordingly, the interpretation in this section deals only with guidance regarding how a bank may fulfill customer-specific suitability obligations under § 208.37(d).⁷

(e) While it is difficult to define in advance the scope of a bank's suitability obligation with respect to a specific institutional customer transaction recommended by a bank, the Board has identified certain factors that may be relevant when considering compliance with § 208.37(d). These factors are not intended to be requirements or the only factors to be considered but are offered merely as guidance in determining the scope of a bank's suitability obligations.

(f) The two most important considerations in determining the scope of a

bank's suitability obligations in making recommendations to an institutional customer are the customer's capability to evaluate investment risk independently and the extent to which the customer is exercising independent judgement in evaluating a bank's recommendation. A bank must determine, based on the information available to it, the customer's capability to evaluate investment risk. In some cases, the bank may conclude that the customer is not capable of making independent investment decisions in general. In other cases, the institutional customer may have general capability, but may not be able to understand a particular type of instrument or its risk. This is more likely to arise with relatively new types of instruments, or those with significantly different risk or volatility characteristics than other investments generally made by the institution. If a customer is either generally not capable of evaluating investment risk or lacks sufficient capability to evaluate the particular product, the scope of a bank's customer-specific obligations under § 208.37(d) would not be diminished by the fact that the bank was dealing with an institutional customer. On the other hand, the fact that a customer initially needed help understanding a potential investment need not necessarily imply that the customer did not ultimately develop an understanding and make an independent investment decision.

(g) A bank may conclude that a customer is exercising independent judgement if the customer's investment decision will be based on its own independent assessment of the opportunities and risks presented by a potential investment, market factors and other investment considerations. Where the bank has reasonable grounds for concluding that the institutional customer is making independent investment decisions and is capable of independently evaluating investment risk, then a bank's obligations under § 208.25(d) for a particular customer are fulfilled.⁸ Where a customer has delegated decision-making authority to an agent, such as an investment advisor or a

⁷The interpretation in this section does not address the obligation related to suitability that requires that a bank have "a reasonable basis" to believe that the recommendation could be suitable for at least some customers." In the Matter of the Application of F.J. Kaufman and Company of Virginia and Frederick J. Kaufman, Jr., 50 SEC 164 (1989).

⁸See footnote 7 in paragraph (d) of this section.

bank trust department, the interpretation in this section shall be applied to the agent.

(h) A determination of capability to evaluate investment risk independently will depend on an examination of the customer's capability to make its own investment decisions, including the resources available to the customer to make informed decisions. Relevant considerations could include:

(1) The use of one or more consultants, investment advisers, or bank trust departments;

(2) The general level of experience of the institutional customer in financial markets and specific experience with the type of instruments under consideration;

(3) The customer's ability to understand the economic features of the security involved;

(4) The customer's ability to independently evaluate how market developments would affect the security; and

(5) The complexity of the security or securities involved.

(i) A determination that a customer is making independent investment decisions will depend on the nature of the relationship that exists between the bank and the customer. Relevant considerations could include:

(1) Any written or oral understanding that exists between the bank and the customer regarding the nature of the relationship between the bank and the customer and the services to be rendered by the bank;

(2) The presence or absence of a pattern of acceptance of the bank's recommendations;

(3) The use by the customer of ideas, suggestions, market views and information obtained from other government securities brokers or dealers or market professionals, particularly those relating to the same type of securities; and

(4) The extent to which the bank has received from the customer current comprehensive portfolio information in connection with discussing recommended transactions or has not been provided important information regarding its portfolio or investment objectives.

(j) Banks are reminded that these factors are merely guidelines that will

be utilized to determine whether a bank has fulfilled its suitability obligation with respect to a specific institutional customer transaction and that the inclusion or absence of any of these factors is not dispositive of the determination of suitability. Such a determination can only be made on a case-by-case basis taking into consideration all the facts and circumstances of a particular bank/customer relationship, assessed in the context of a particular transaction.

(k) For purposes of the interpretation in this section, an institutional customer shall be any entity other than a natural person. In determining the applicability of the interpretation in this section to an institutional customer, the Board will consider the dollar value of the securities that the institutional customer has in its portfolio and/or under management. While the interpretation in this section is potentially applicable to any institutional customer, the guidance contained in this section is more appropriately applied to an institutional customer with at least \$10 million invested in securities in the aggregate in its portfolio and/or under management.

APPENDIX A TO PART 208—CAPITAL ADEQUACY GUIDELINES FOR STATE MEMBER BANKS: RISK-BASED MEASURE

I. Overview

The Board of Governors of the Federal Reserve System has adopted a risk-based capital measure to assist in the assessment of the capital adequacy of state member banks.¹ The principal objectives of this measure are to: (i) Make regulatory capital requirements more sensitive to differences in risk profiles among banks; (ii) factor off-balance sheet exposures into the assessment of capital adequacy; (iii) minimize disincentives to holding liquid, low-risk assets; and (iv) achieve greater consistency in the evaluation of the capital adequacy of major banks throughout the world.²

¹Supervisory ratios that relate capital to total assets for state member banks are outlined in appendix B of this part and in appendix B to part 225 of the Federal Reserve's Regulation Y, 12 CFR part 225.

²The risk-based capital measure is based upon a framework developed jointly by supervisory authorities from the countries represented on the Basle Committee on Banking

Continued

The risk-based capital guidelines include both a definition of capital and a framework for calculating weighted risk assets by assigning assets and off-balance sheet items to broad risk categories. A bank's risk-based capital ratio is calculated by dividing its qualifying capital (the numerator of the ratio) by its weighted risk assets (the denominator).³ The definition of qualifying capital is outlined below in section II, and the procedures for calculating weighted risk assets are discussed in Section III. Attachment I illustrates a sample calculation of weighted risk assets and the risk-based capital ratio.

In addition, when certain banks that engage in trading activities calculate their risk-based capital ratio under this appendix A, they must also refer to appendix E of this part, which incorporates capital charges for certain market risks into the risk-based capital ratio. When calculating their risk-based capital ratio under this appendix A, such banks are required to refer to appendix E of this part for supplemental rules to determine qualifying and excess capital, calculate risk-weighted assets, calculate market risk equivalent assets, and calculate risk-based capital ratios adjusted for market risk.

The risk-based capital guidelines also establish a schedule for achieving a minimum supervisory standard for the ratio of qualifying capital to weighted risk assets and provide for transitional arrangements during a phase-in period to facilitate adoption and implementation of the measure at the end of 1992. These interim standards and transitional arrangements are set forth in section IV.

The risk-based guidelines apply to all state member banks on a consolidated basis. They are to be used in the examination and supervisory process as well as in the analysis of applications acted upon by the Federal Reserve. Thus, in considering an application filed by a state member bank, the Federal Reserve will take into account the bank's risk-based capital ratio, the reasonableness of its capital plans, and the degree of

progress it has demonstrated toward meeting the interim and final risk-based capital standards.

The risk-based capital ratio focuses principally on broad categories of credit risk, although the framework for assigning assets and off-balance-sheet items to risk categories does incorporate elements of transfer risk, as well as limited instances of interest rate and market risk. The framework incorporates risks arising from traditional banking activities as well as risks arising from nontraditional activities. The risk-based ratio does not, however, incorporate other factors that can affect an institution's financial condition. These factors include overall interest-rate exposure; liquidity, funding and market risks; the quality and level of earnings; investment, loan portfolio, and other concentrations of credit; certain risks arising from nontraditional activities; the quality of loans and investments; the effectiveness of loan and investment policies; and management's overall ability to monitor and control financial and operating risks, including the risks presented by concentrations of credit and nontraditional activities.

In addition to evaluating capital ratios, an overall assessment of capital adequacy must take account of those factors, including, in particular, the level and severity of problem and classified assets as well as a bank's exposure to declines in the economic value of its capital due to changes in interest rates. For this reason, the final supervisory judgment on a bank's capital adequacy may differ significantly from conclusions that might be drawn solely from the level of its risk-based capital ratio.

The risk-based capital guidelines establish *minimum* ratios of capital to weighted risk assets. In light of the considerations just discussed, banks generally are expected to operate well above the minimum risk-based ratios. In particular, banks contemplating significant expansion proposals are expected to maintain strong capital levels substantially above the minimum ratios and should not allow significant diminution of financial strength below these strong levels to fund their expansion plans. Institutions with high or inordinate levels of risk are also expected to operate well above minimum capital standards. In all cases, institutions should hold capital commensurate with the level and nature of the risks to which they are exposed. Banks that do not meet the minimum risk-based standard, or that are otherwise considered to be inadequately capitalized, are expected to develop and implement plans acceptable to the Federal Reserve for achieving adequate levels of capital within a reasonable period of time.

The Board will monitor the implementation and effect of these guidelines in relation to domestic and international developments in the banking industry. When necessary and

Regulations and Supervisory Practices (Basle Supervisors' Committee) and endorsed by the Group of Ten Central Bank Governors. The framework is described in a paper prepared by the BSC entitled "International Convergence of Capital Measurement," July 1988.

³Banks will initially be expected to utilize period-end amounts in calculating their risk-based capital ratios. When necessary and appropriate, ratios based on average balances may also be calculated on a case-by-case basis. Moreover, to the extent banks have data on average balances that can be used to calculate risk-based ratios, the Federal Reserve will take such data into account.

appropriate, the Board will consider the need to modify the guidelines in light of any significant changes in the economy, financial markets, banking practices, or other relevant factors.

II. Definition of Qualifying Capital for the Risk-Based Capital Ratio

A bank's qualifying total capital consists of two types of capital components: "core capital elements" (comprising tier 1 capital) and "supplementary capital elements" (comprising tier 2 capital). These capital elements and the various limits, restrictions, and deductions to which they are subject, are discussed below and are set forth in Attachment II.

The Federal Reserve will, on a case-by-case basis, determine whether and, if so, how much of any instrument that does not fit wholly within the terms of one of the capital categories set forth below or that does not have an ability to absorb losses commensurate with the capital treatment otherwise specified below will be counted as an element of tier 1 or tier 2 capital. In making such a determination, the Federal Reserve will consider the similarity of the instrument to instruments explicitly treated in the guidelines, the ability of the instrument to absorb losses while the bank operates as a going concern, the maturity and redemption features of the instrument, and other relevant terms and factors. To qualify as an element of tier 1 or tier 2 capital, a capital instrument may not contain or be covered by any covenants, terms, or restrictions that are inconsistent with safe and sound banking practices.

Redemptions of permanent equity or other capital instruments before stated maturity could have a significant impact on a bank's overall capital structure. Consequently, a bank considering such a step should consult with the Federal Reserve before redeeming any equity or debt capital instrument (prior to maturity) if such redemption could have a material effect on the level or composition of the institution's capital base.⁴

A. The Components of Qualifying Capital

1. *Core capital elements (tier 1 capital)*. The tier 1 component of a bank's qualifying capital must represent at least 50 percent of qualifying total capital and may consist of the following items that are defined as core capital elements:

- (i) Common stockholders' equity;

⁴ Consultation would not ordinarily be necessary if an instrument were redeemed with the proceeds of, or replaced by, a like amount of a similar or higher quality capital instrument and the organization's capital position is considered fully adequate by the Federal Reserve.

- (ii) Qualifying noncumulative perpetual preferred stock (including related surplus); and

- (iii) Minority interest in the equity accounts of consolidated subsidiaries.

Tier 1 capital is generally defined as the sum of core capital elements⁵ less any amounts of goodwill, other intangible assets, interest-only strips receivables and non-financial equity investments that are required to be deducted in accordance with section II.B. of this appendix A.

a. *Common stockholders' equity*. For purposes of calculating the risk-based capital ratio, common stockholders' equity is limited to common stock; related surplus; and retained earnings, including capital reserves and adjustments for the cumulative effect of foreign currency translation, net of any treasury stock; less net unrealized holding losses on available-for-sale equity securities with readily determinable fair values. For this purpose, net unrealized holding gains on such equity securities and net unrealized holding gains (losses) on available-for-sale debt securities are not included in common stockholders' equity.

b. *Perpetual preferred stock*. Perpetual preferred stock is defined as preferred stock that does not have a maturity date, that cannot be redeemed at the option of the holder of the instrument, and that has no other provisions that will require future redemption of the issue. Consistent with these provisions, any perpetual preferred stock with a feature permitting redemption at the option of the issuer may qualify as capital only if the redemption is subject to prior approval of the Federal Reserve. In general, preferred stock will qualify for inclusion in capital only if it can absorb losses while the issuer operates as a going concern (a fundamental characteristic of equity capital) and only if the issuer has the ability and legal right to defer or eliminate preferred dividends.

The only form of perpetual preferred stock that state member banks may consider as an element of Tier 1 capital is noncumulative perpetual preferred. While the guidelines allow for the inclusion of noncumulative perpetual preferred stock in Tier 1, it is desirable from a supervisory standpoint that voting common stockholders' equity remain the dominant form of Tier 1 capital. Thus, state member banks should avoid overreliance on preferred stock or non-voting equity elements within Tier 1.

Perpetual preferred stock in which the dividend is reset periodically based, in whole or in part, upon the bank's current credit

⁵ [Reserved]

⁶ [Reserved]

standing (that is, auction rate perpetual preferred stock, including so-called Dutch auction, money market, and remarketable preferred) will not qualify for inclusion in Tier 1 capital.⁷ Such instruments, however, qualify for inclusion in Tier 2 capital.

c. *Minority interest in equity accounts of consolidated subsidiaries.* This element is included in tier 1 capital because, as a general rule, it represents equity that is freely available to absorb losses in operating subsidiaries whose assets are included in a bank's risk-weighted asset base. While not subject to an explicit sublimit within tier 1, banks are expected to avoid using minority interest in the equity accounts of consolidated subsidiaries as an avenue for introducing into their capital structures elements that might not otherwise qualify as tier 1 capital or that would, in effect, result in an excessive reliance on preferred stock within tier 1. Minority interests in small business investment companies, investment funds that hold non-financial equity investments (as defined in section II.B.5.b. of this appendix A), and subsidiaries engaged in nonfinancial activities, are not included in the bank's tier 1 or total capital base if the bank's interest in the company or fund is held under one of the legal authorities listed in section II.B.5.b. In addition, minority interests in consolidated asset-backed commercial paper programs (ABCP) (as defined in section III.B.6. of this appendix A) that are sponsored by a bank are not to be included in the bank's tier 1 or total capital base if the bank excludes the consolidated assets of such programs from risk-weighted assets pursuant to section III.B.6. of this appendix.

2. *Supplementary capital elements (tier 2 capital).* The tier 2 component of a bank's qualifying capital may consist of the following items that are defined as supplementary capital elements:

- (i) Allowance for loan and lease losses (subject to limitations discussed below);
- (ii) Perpetual preferred stock and related surplus (subject to conditions discussed below);
- (iii) Hybrid capital instruments (as defined below), and mandatory convertible debt securities;
- (iv) Term subordinated debt and intermediate-term preferred stock, including related surplus (subject to limitations discussed below);

⁷Adjustable rate noncumulative perpetual preferred stock (that is, perpetual preferred stock in which the dividend rate is not affected by the issuer's credit standing or financial condition but is adjusted periodically according to a formula based solely on general market interest rates) may be included in Tier 1.

(v) Unrealized holding gains on equity securities (subject to limitations discussed in section II.A.2.e. of this appendix).

The maximum amount of tier 2 capital that may be included in a bank's qualifying total capital is limited to 100 percent of tier 1 capital (net of goodwill, other intangible assets, interest-only strips receivables and nonfinancial equity investments that are required to be deducted in accordance with section II.B. of this appendix A).

The elements of supplementary capital are discussed in greater detail below.

a. *Allowance for loan and lease losses.* Allowances for loan and lease losses are reserves that have been established through a charge against earnings to absorb future losses on loans or lease financing receivables. Allowances for loan and lease losses exclude "allocated transfer risk reserves,"⁹ and reserves created against identified losses.

During the transition period, the risk-based capital guidelines provide for reducing the amount of this allowance that may be included in an institution's total capital. Initially, it is unlimited. However, by year-end 1990, the amount of the allowance for loan and lease losses that will qualify as capital will be limited to 1.5 percent of an institution's weighted risk assets. By the end of the transition period, the amount of the allowance qualifying for inclusion in Tier 2 capital may not exceed 1.25 percent of weighted risk assets.¹⁰

b. *Perpetual preferred stock.* Perpetual preferred stock, as noted above, is defined as preferred stock that has no maturity date, that cannot be redeemed at the option of the holder, and that has no other provisions that will require future redemption of the issue. Such instruments are eligible for inclusion in Tier 2 capital without limit.¹¹

⁸[Reserved]

⁹Allocated transfer risk reserves are reserves that have been established in accordance with Section 905(a) of the International Lending Supervision Act of 1983, 12 U.S.C. 3904(a), against certain assets whose value U.S. supervisory authorities have found to be significantly impaired by protracted transfer risk problems.

¹⁰The amount of the allowance for loan and lease losses that may be included in Tier 2 capital is based on a percentage of gross weighted risk assets. A bank may deduct reserves for loan and lease losses in excess of the amount permitted to be included in Tier 2 capital, as well as allocated transfer risk reserves, from the sum of gross weighted risk assets and use the resulting net sum of weighted risk assets in computing the denominator of the risk-based capital ratio.

¹¹Long-term preferred stock with an original maturity of 20 years or more (including

c. *Hybrid capital instruments and mandatory convertible debt securities.* Hybrid capital instruments include instruments that are essentially permanent in nature and that have certain characteristics of both equity and debt. Such instruments may be included in Tier 2 without limit. The general criteria hybrid capital instruments must meet in order to qualify for inclusion in Tier 2 capital are listed below:

(1) The instrument must be unsecured; fully paid-up; and subordinated to general creditors and must also be subordinated to claims of depositors.

(2) The instrument must not be redeemable at the option of the holder prior to maturity, except with the prior approval of the Federal Reserve. (Consistent with the Board's criteria for perpetual debt and mandatory convertible securities, this requirement implies that holders of such instruments may not accelerate the payment of principal except in the event of bankruptcy, insolvency, or reorganization.)

(3) The instrument must be available to participate in losses while the issuer is operating as a going concern. (Term subordinated debt would not meet this requirement.) To satisfy this requirement, the instrument must convert to common or perpetual preferred stock in the event that the accumulated losses exceed the sum of the retained earnings and capital surplus accounts of the issuer.

(4) The instrument must provide the option for the issuer to defer interest payments if: (a) The issuer does not report a profit in the preceding annual period (defined as combined profits for the most recent four quarters), and (b) the issuer eliminates cash dividends on common and preferred stock.

Mandatory convertible debt securities in the form of equity contract notes that meet the criteria set forth in 12 CFR part 225, appendix B, also qualify as unlimited elements of Tier 2 capital. In accordance with that appendix, equity commitment notes issued prior to May 15, 1985 also qualify for inclusion in Tier 2.

d. *Subordinated debt and intermediate term preferred stock.* (i) The aggregate amount of term subordinated debt (excluding mandatory convertible debt) and intermediate-term preferred stock that may be treated as supplementary capital is limited to 50 percent of Tier 1 capital (net of goodwill and

related surplus) will also qualify in this category as an element of Tier 2. If the holder of such an instrument has a right to require the issuer to redeem, repay, or repurchase the instrument prior to the original stated maturity, maturity would be defined, for risk-based capital purposes, as the earliest possible date on which the holder can put the instrument back to the issuing bank.

other intangible assets required to be deducted in accordance with section II.B.1.b. of this appendix). Amounts in excess of these limits may be issued and, while not included in the ratio calculation, will be taken into account in the overall assessment of a bank's funding and financial condition.

(ii) Subordinated debt and intermediate-term preferred stock must have an original weighted average maturity of at least five years to qualify as supplementary capital. (If the holder has the option to require the issuer to redeem, repay, or repurchase the instrument prior to the original stated maturity, maturity would be defined, for risk-based capital purposes, as the earliest possible date on which the holder can put the instrument back to the issuing bank.)¹² In the case of subordinated debt, the instrument must be unsecured and must clearly state on its face that it is not a deposit and is not insured by a Federal agency. To qualify as capital in banks, debt must be subordinated to general creditors and claims of depositors. Consistent with current regulatory requirements, if a state member bank wishes to redeem subordinated debt before the stated maturity, it must receive prior approval of the Federal Reserve.

e. *Unrealized gains on equity securities and unrealized gains (losses) on other assets.* Up to 45 percent of pretax net unrealized holding gains (that is, the excess, if any, of the fair value over historical cost) on available-for-sale equity securities with readily determinable fair values may be included in supplementary capital. However, the Federal Reserve may exclude all or a portion of these unrealized gains from Tier 2 capital if the Federal Reserve determines that the equity securities are not prudently valued. Unrealized gains (losses) on other types of assets, such as bank premises and available-for-sale debt securities, are not included in supplementary capital, but the Federal Reserve may take these unrealized gains (losses) into account as additional factors when assessing a bank's overall capital adequacy.

f. *Revaluation reserves.* i. Such reserves reflect the formal balance sheet restatement or revaluation for capital purposes of asset carrying values to reflect current market

¹²As a limited-life capital instrument approaches maturity it begins to take on characteristics of a short-term obligation. For this reason, the outstanding amount of term subordinated debt and limited-life preferred stock eligible for inclusion in Tier 2 is reduced, or discounted, as these instruments approach maturity: one-fifth of the original amount (less redemptions) is excluded each year during the instrument's last five years before maturity. When the remaining maturity is less than one year, the instrument is excluded from Tier 2 capital.

values. The federal banking agencies generally have not included unrealized asset appreciation in capital ratio calculations, although they have long taken such values into account as a separate factor in assessing the overall financial strength of a bank.

ii. Consistent with long-standing supervisory practice, the excess of market values over book values for assets held by state member banks will generally not be recognized in supplementary capital or in the calculation of the risk-based capital ratio. However, all banks are encouraged to disclose their equivalent of premises (building) and security revaluation reserves. The Federal Reserve will consider any appreciation, as well as any depreciation, in specific asset values as additional considerations in assessing overall capital strength and financial condition.

B. Deductions from Capital and Other Adjustments

Certain assets are deducted from a bank's capital for the purpose of calculating the risk-based capital ratio.¹³ These assets include:

(1)(a) Goodwill—deducted from the sum of core capital elements.

(b) Certain identifiable intangible assets, that is, intangible assets other than goodwill—deducted from the sum of core capital elements in accordance with section II.B.1.b. of this appendix.

(c) Certain credit-enhancing interest-only strips receivables—deducted from the sum of core capital elements in accordance with sections II.B.1.c. through e. of this appendix.

(i) Investments in banking and finance subsidiaries that are not consolidated for accounting or supervisory purposes and, on a case-by-case basis, investments in other designated subsidiaries or associated companies at the discretion of the Federal Reserve—deducted from total capital components.

(iii) Reciprocal holdings of capital instruments of banking organizations—deducted from total capital components.

(iv) Deferred tax assets—portions are deducted from the sum of core capital elements in accordance with section II.B.4. of this Appendix A.

(v) Nonfinancial equity investments—portions are deducted from the sum of core capital elements in accordance with section II.B.5 of this appendix.

1. *Goodwill and other intangible assets.*—a. *Goodwill.* Goodwill in an intangible asset that represents the excess of the purchase price over the fair market value of identifiable assets acquired less liabilities assumed

in acquisitions accounted for under the purchase method of accounting. State member banks generally have not been allowed to include goodwill in regulatory capital under current supervisory policies. Consistent with this policy, all goodwill in state member banks will be deducted from Tier 1 capital.

b. *Other intangible assets.* i. All servicing assets, including servicing assets on assets other than mortgages (i.e., nonmortgage servicing assets), are included in this appendix as identifiable intangible assets. The only types of identifiable intangible assets that may be included in, that is, not deducted from, a bank's capital are readily marketable mortgage servicing assets, nonmortgage servicing assets, and purchased credit card relationships. The total amount of these assets that may be included in capital is subject to the limitations described below in sections II.B.1.d. and e. of this appendix.

ii. The treatment of identifiable intangible assets set forth in this section generally will be used in the calculation of a bank's capital ratios for supervisory and applications purposes. However, in making an overall assessment of a bank's capital adequacy for applications purposes, the Board may, if it deems appropriate, take into account the quality and composition of a bank's capital, together with the quality and value of its tangible and intangible assets.

c. *Credit-enhancing interest-only strips receivables (I/Os).* i. Credit-enhancing I/Os are on-balance sheet assets that, in form or in substance, represent the contractual right to receive some or all of the interest due on transferred assets and expose the bank to credit risk directly or indirectly associated with transferred assets that exceeds a *pro rata* share of the bank's claim on the assets, whether through subordination provisions or other credit enhancement techniques. Such I/Os, whether purchased or retained, including other similar "spread" assets, may be included in, that is, not deducted from, a bank's capital subject to the limitations described below in sections II.B.1.d. and e. of this appendix.

ii. Both purchased and retained credit-enhancing I/Os, on a non-tax adjusted basis, are included in the total amount that is used for purposes of determining whether a bank exceeds the tier 1 limitation described below in this section. In determining whether an I/O or other types of spread assets serve as a credit enhancement, the Federal Reserve will look to the economic substance of the transaction.

d. *Fair value limitation.* The amount of mortgage servicing assets, nonmortgage servicing assets, and purchased credit card relationships that a bank may include in capital shall be the lesser of 90 percent of their fair value, as determined in accordance with section II.B.1.f. of this appendix, or 100

¹³ Any assets deducted from capital in computing the numerator of the ratio are not included in weighted risk assets in computing the denominator of the ratio.

percent of their book value, as adjusted for capital purposes in accordance with the instructions in the commercial bank Consolidated Reports of Condition and Income (Call Reports). The amount of I/Os that a bank may include in capital shall be its fair value. If both the application of the limits on mortgage servicing assets, nonmortgage servicing assets, and purchased credit card relationships and the adjustment of the balance sheet amount for these assets would result in an amount being deducted from capital, the bank would deduct only the greater of the two amounts from its core capital elements in determining tier 1 capital.

e. *Tier 1 capital limitation.* i. The total amount of mortgage servicing assets, nonmortgage servicing assets, and purchased credit card relationships that may be included in capital, in the aggregate, cannot exceed 100 percent of tier 1 capital. The aggregate of nonmortgage servicing assets and purchased credit card relationships are subject to a separate sublimit of 25 percent of tier 1 capital. In addition, the total amount of credit-enhancing I/Os (both purchased and retained) that may be included in capital cannot exceed 25 percent of tier 1 capital.¹⁴

ii. For purposes of calculating these limitations on mortgage servicing assets, nonmortgage servicing assets, purchased credit card relationships, and credit-enhancing I/Os, tier 1 capital is defined as the sum of core capital elements, net of goodwill, and net of all identifiable intangible assets other than mortgage servicing assets, nonmortgage servicing assets, and purchased credit card relationships, but prior to the deduction of any disallowed mortgage servicing assets, any disallowed nonmortgage servicing assets, any disallowed purchased credit card relationships, any disallowed credit-enhancing I/Os (both purchased and retained), any disallowed deferred tax assets, and any non-financial equity investments.

iii. Banks may elect to deduct disallowed mortgage servicing assets, disallowed nonmortgage servicing assets, and disallowed credit-enhancing I/Os (both purchased and retained) on a basis that is net of any associ-

¹⁴Amounts of servicing assets, purchased credit card relationships, and credit-enhancing I/Os (both retained and purchased) in excess of these limitations, as well as all other identifiable intangible assets, including core deposit intangibles and favorable leaseholds, are to be deducted from a bank's core capital elements in determining tier 1 capital. However, identifiable intangible assets (other than mortgage servicing assets and purchased credit card relationships) acquired on or before February 19, 1992, generally will not be deducted from capital for supervisory purposes, although they will continue to be deducted for applications purposes.

ated deferred tax liability. Deferred tax liabilities netted in this manner cannot also be netted against deferred-tax assets when determining the amount of deferred-tax assets that are dependent upon future taxable income.

f. *Valuation.* Banks must review the book value of all intangible assets at least quarterly and make adjustments to these values as necessary. The fair value of mortgage servicing assets, nonmortgage servicing assets, purchased credit card relationships, and credit-enhancing I/Os also must be determined at least quarterly. This determination shall include adjustments for any significant changes in original valuation assumptions, including changes in prepayment estimates or account attrition rates. Examiners will review both the book value and the fair value assigned to these assets, together with supporting documentation, during the examination process. In addition, the Federal Reserve may require, on a case-by-case basis, an independent valuation of a bank's intangible assets or credit-enhancing I/Os.

g. *Growing organizations.* Consistent with long-standing Board policy, banks experiencing substantial growth, whether internally or by acquisition, are expected to maintain strong capital positions substantially above minimum supervisory levels, without significant reliance on intangible assets or credit-enhancing I/Os.

2. *Investments in certain subsidiaries.* The aggregate amount of investments in banking or finance subsidiaries¹⁵ whose financial statements are not consolidated for accounting or bank regulatory reporting purposes will be deducted from a bank's total capital components.¹⁶ Generally, investments for this purpose are defined as equity and debt capital investments and any other instruments that are deemed to be capital in the particular subsidiary.

Advances (that is, loans, extensions of credit, guarantees, commitments, or any other forms of credit exposure) to the subsidiary that are not deemed to be capital will generally not be deducted from a bank's capital. Rather, such advances generally will be included in the bank's consolidated assets

¹⁵For this purpose, a banking and finance subsidiary generally is defined as any company engaged in banking or finance in which the parent institution holds directly or indirectly more than 50 percent of the outstanding voting stock, or which is otherwise controlled or capable of being controlled by the parent institution.

¹⁶An exception to this deduction would be made in the case of shares acquired in the regular course of securing or collecting a debt previously contracted in good faith. The requirements for consolidation are spelled out in the instructions to the Call Report.

and be assigned to the 100 percent risk category, unless such obligations are backed by recognized collateral or guarantees, in which case they will be assigned to the risk category appropriate to such collateral or guarantees. These advances may, however, also be deducted from the bank's capital if, in the judgment of the Federal Reserve, the risks stemming from such advances are comparable to the risks associated with capital investments or if the advances involve other risk factors that warrant such an adjustment to capital for supervisory purposes. These other factors could include, for example, the absence of collateral support.

Inasmuch as the assets of unconsolidated banking and finance subsidiaries are not fully reflected in a bank's consolidated total assets, such assets may be viewed as the equivalent of off-balance sheet exposures since the operations of an unconsolidated subsidiary could expose the bank to considerable risk. For this reason, it is generally appropriate to view the capital resources invested in these unconsolidated entities as primarily supporting the risks inherent in these off-balance sheet assets, and not generally available to support risks or absorb losses elsewhere in the bank.

The Federal Reserve may, on a case-by-case basis, also deduct from a bank's capital, investments in certain other subsidiaries in order to determine if the consolidated bank meets minimum supervisory capital requirements without reliance on the resources invested in such subsidiaries.

The Federal Reserve will not automatically deduct investments in other consolidated subsidiaries or investments in joint ventures and associated companies.¹⁷ Nonetheless, the resources invested in these entities, like investments in unconsolidated banking and finance subsidiaries, support assets not consolidated with the rest of the bank's activities and, therefore, may not be generally available to support additional leverage or absorb losses elsewhere in the bank. Moreover, experience has shown that banks stand behind the losses of affiliated institutions, such as joint ventures and associated companies, in order to protect the reputation of the organization as a whole. In some cases, this has led to losses that have exceeded the investments in such organizations.

For this reason, the Federal Reserve will monitor the level and nature of such investments for individual banks and, on a case-by-

¹⁷The definition of such entities is contained in the instructions to the commercial bank Call Report. Under regulatory reporting procedures, associated companies and joint ventures generally are defined as companies in which the bank owns 20 to 50 percent of the voting stock.

case basis may, for risk-based capital purposes, deduct such investments from total capital components, apply an appropriate risk-weighted capital charge against the bank's proportionate share of the assets of its associated companies, require a line-by-line consolidation of the entity (in the event that the bank's control over the entity makes it the functional equivalent of a subsidiary), or otherwise require the bank to operate with a risk-based capital ratio above the minimum.

In considering the appropriateness of such adjustments or actions, the Federal Reserve will generally take into account whether:

(1) The bank has significant influence over the financial or managerial policies or operations of the subsidiary, joint venture, or associated company;

(2) The bank is the largest investor in the affiliated company; or

(3) Other circumstances prevail that appear to closely tie the activities of the affiliated company to the bank.

3. *Reciprocal holdings of banking organizations' capital instruments.* Reciprocal holdings of banking organizations' capital instruments (that is, instruments that qualify as Tier 1 or Tier 2 capital)¹⁸ will be deducted from a bank's total capital components for the purpose of determining the numerator of the risk-based capital ratio.

Reciprocal holdings are cross-holdings resulting from formal or informal arrangements in which two or more banking organizations swap, exchange, or otherwise agree to hold each other's capital instruments. Generally, deductions will be limited to intentional cross-holdings. At present, the Board does not intend to require banks to deduct non-reciprocal holdings of such capital instruments.¹⁹

¹⁸See 12 CFR part 225, appendix A for instruments that qualify as Tier 1 and Tier 2 capital for bank holding companies.

¹⁹Deductions of holdings of capital securities also would not be made in the case of interstate "stake out" investments that comply with the Board's Policy Statement on Nonvoting Equity Investments, 12 CFR 225.143 (Federal Reserve Regulatory Service 4-172.1; 68 Federal Reserve Bulletin 413 (1982)). In addition, holdings of capital instruments issued by other banking organizations but taken in satisfaction of debts previously contracted would be exempt from any deduction from capital. The Board intends to monitor nonreciprocal holdings of other banking organizations' capital instruments and to provide information on such holdings to the Basle Supervisors' Committee as called for under the Basle capital framework.

4. *Deferred-tax assets.* a. The amount of deferred-tax assets that is dependent upon future taxable income, net of the valuation allowance for deferred-tax assets, that may be included in, that is, not deducted from, a bank's capital may not exceed the lesser of:

i. The amount of these deferred-tax assets that the bank is expected to realize within one year of the calendar quarter-end date, based on its projections of future taxable income for that year,²⁰ or

ii. 10 percent of tier 1 capital.

b. The reported amount of deferred-tax assets, net of any valuation allowance for deferred-tax assets, in excess of the lesser of these two amounts is to be deducted from a bank's core capital elements in determining tier 1 capital. For purposes of calculating the 10 percent limitation, tier 1 capital is defined as the sum of core capital elements, net of goodwill and net of all identifiable intangible assets other than mortgage servicing assets, nonmortgage servicing assets, and purchased credit card relationships, but prior to the deduction of any disallowed mortgage servicing assets, any disallowed nonmortgage servicing assets, any disallowed purchased credit card relationships, any disallowed credit-enhancing I/Os, any disallowed deferred-tax assets, and any non-financial equity investments. There generally is no limit in tier 1 capital on the amount of deferred-tax assets that can be realized from taxes paid in prior carry-back years or from future reversals of existing taxable temporary differences.

5. *Nonfinancial equity investments*—a. *General.* A bank must deduct from its core capital elements the sum of the appropriate percentages (as determined below) of the adjusted carrying value of all nonfinancial equity investments held by the bank or by its direct or indirect subsidiaries. For purposes of this section II.B.5, investments held by a bank include all investments held directly or indirectly by the bank or any of its subsidiaries.

b. *Scope of nonfinancial equity investments.* A nonfinancial equity investment means any equity investment held by the bank in a non-financial company: through a small business investment company (SBIC) under section 302(b) of the Small Business Investment Act of 1958 (15 U.S.C. 682(b));²¹ or under the portfolio investment provisions of the Board's Regulation K (12 CFR 211.8(c)(3)). A non-financial company is an entity that engages in any activity that has not been determined to be permissible for the bank to conduct directly, or to be financial in nature or incidental to financial activities under section 4(k) of the Bank Holding Company Act (12 U.S.C. 1843(k)).

c. *Amount of deduction from core capital.* i. The bank must deduct from its core capital elements the sum of the appropriate percentages, as set forth in Table 1, of the adjusted carrying value of all nonfinancial equity investments held by the bank. The amount of the percentage deduction increases as the aggregate amount of nonfinancial equity investments held by the bank increases as a percentage of the bank's Tier 1 capital.

TABLE 1—DEDUCTION FOR NONFINANCIAL EQUITY INVESTMENTS

Aggregate adjusted carrying value of all nonfinancial equity investments held directly or indirectly by the bank (as a percentage of the Tier 1 capital of the bank) †	Deduction from Core Capital Elements (as a percentage of the adjusted carrying value of the investment)
Less than 15 percent	8 percent.
15 percent to 24.99 percent	12 percent.

²⁰To determine the amount of expected deferred-tax assets realizable in the next 12 months, an institution should assume that all existing temporary differences fully reverse as of the report date. Projected future taxable income should not include net operating loss carry-forwards to be used during that year or the amount of existing temporary differences a bank expects to reverse within the year. Such projections should include the estimated effect of tax-planning strategies that the organization expects to implement to realize net operating losses or tax-credit carry-forwards that would other-

wise expire during the year. Institutions do not have to prepare a new 12-month projection each quarter. Rather, on interim report dates, institutions may use the future-taxable income projections for their current fiscal year, adjusted for any significant changes that have occurred or are expected to occur.

²¹An equity investment made under section 302(b) of the Small Business Investment Act of 1958 in an SBIC that is not consolidated with the bank is treated as a non-financial equity investment.

TABLE 1—DEDUCTION FOR NONFINANCIAL EQUITY INVESTMENTS—Continued

Aggregate adjusted carrying value of all nonfinancial equity investments held directly or indirectly by the bank (as a percentage of the Tier 1 capital of the bank) ¹	Deduction from Core Capital Elements (as a percentage of the adjusted carrying value of the investment)
25 percent and above	25 percent.

¹For purposes of calculating the adjusted carrying value of nonfinancial equity investments as a percentage of Tier 1 capital, Tier 1 capital is defined as the sum of core capital elements net of goodwill and net of all identifiable intangible assets other than mortgage servicing assets, nonmortgage servicing assets and purchased credit card relationships, but prior to the deduction for any disallowed mortgage servicing assets, any disallowed nonmortgage servicing assets, any disallowed purchased credit card relationships, any disallowed credit enhancing I/Os (both purchased and retained), any disallowed deferred tax assets, and any nonfinancial equity investments.

ii. These deductions are applied on a marginal basis to the portions of the adjusted carrying value of nonfinancial equity investments that fall within the specified ranges of the parent bank's Tier 1 capital. For example, if the adjusted carrying value of all nonfinancial equity investments held by a bank equals 20 percent of the Tier 1 capital of the bank, then the amount of the deduction would be 8 percent of the adjusted carrying value of all investments up to 15 percent of the bank's Tier 1 capital, and 12 percent of the adjusted carrying value of all investments in excess of 15 percent of the bank's Tier 1 capital.

iii. The total adjusted carrying value of any nonfinancial equity investment that is subject to deduction under this paragraph is excluded from the bank's risk-weighted assets for purposes of computing the denominator of the bank's risk-based capital ratio.²²

iv. As noted in section I, this appendix establishes *minimum* risk-based capital ratios and banks are at all times expected to maintain capital commensurate with the level and nature of the risks to which they are exposed. The risk to a bank from nonfinancial equity investments increases with its concentration in such investments and strong capital levels above the minimum requirements are particularly important when a bank has a high degree of concentration in nonfinancial equity investments (*e.g.*, in excess of 50 percent of Tier 1 capital). The Federal Reserve intends to monitor banks and apply heightened supervision to equity investment activities as appropriate, including where the bank has a high degree of concentration in nonfinancial equity investments, to ensure that each bank maintains capital levels that are appropriate in light of its equity investment activities. The Federal Reserve also reserves authority to impose a higher capital charge in any case where the

²²For example, if 8 percent of the adjusted carrying value of a nonfinancial equity investment is deducted from Tier 1 capital, the entire adjusted carrying value of the investment will be excluded from risk-weighted assets in calculating the denominator for the risk-based capital ratio.

circumstances, such as the level of risk of the particular investment or portfolio of investments, the risk management systems of the bank, or other information, indicate that a higher minimum capital requirement is appropriate.

d. *SBIC investments.* i. No deduction is required for nonfinancial equity investments that are held by a bank through one or more SBICs that are consolidated with the bank or in one or more SBICs that are not consolidated with the bank to the extent that all such investments, in the aggregate, do not exceed 15 percent of the bank's Tier 1 capital. Any nonfinancial equity investment that is held through or in an SBIC and that is not required to be deducted from Tier 1 capital under this section II.B.5.d. will be assigned a 100 percent risk-weight and included in the bank's consolidated risk-weighted assets.²³

²³If a bank has an investment in an SBIC that is consolidated for accounting purposes but that is not wholly owned by the bank, the adjusted carrying value of the bank's nonfinancial equity investments through the SBIC is equal to the bank's proportionate share of the adjusted carrying value of the SBIC's equity investments in nonfinancial companies. The remainder of the SBIC's adjusted carrying value (*i.e.*, the minority interest holders' proportionate share) is excluded from the risk-weighted assets of the bank. If a bank has an investment in an SBIC that is not consolidated for accounting purposes and has current information that identifies the percentage of the SBIC's assets that are equity investments in nonfinancial companies, the bank may reduce the adjusted carrying value of its investment in the SBIC proportionately to reflect the percentage of the adjusted carrying value of the SBIC's assets that are not equity investments in nonfinancial companies. If a bank reduces the adjusted carrying value of its investment in a non-consolidated SBIC to reflect financial investments of the SBIC, the amount of the adjustment will be risk weighted at 100 percent and included in the bank's risk-weighted assets.

ii. To the extent the adjusted carrying value of all nonfinancial equity investments that a bank holds through one or more SBICs that are consolidated with the bank or in one or more SBICs that are not consolidated with the bank exceeds, in the aggregate, 15 percent of the bank's Tier 1 capital, the appropriate percentage of such amounts (as set forth in Table 1) must be deducted from the bank's core capital elements. In addition, the aggregate adjusted carrying value of all nonfinancial equity investments held through a consolidated SBIC and in a non-consolidated SBIC (including any investments for which no deduction is required) must be included in determining, for purposes of Table 1, the total amount of nonfinancial equity investments held by the bank in relation to its Tier 1 capital.

e. *Transition provisions.* No deduction under this section II.B.5 is required to be made with respect to the adjusted carrying value of any nonfinancial equity investment (or portion of such an investment) that was made by the bank prior to March 13, 2000, or that was made by the bank after such date pursuant to a binding written commitment²⁴ entered into prior to March 13, 2000, provided that in either case the bank has continuously held the investment since the relevant investment date.²⁵ For purposes of this sec-

²⁴ A "binding written commitment" means a legally binding written agreement that requires the bank to acquire shares or other equity of the company, or make a capital contribution to the company, under terms and conditions set forth in the agreement. Options, warrants, and other agreements that give a bank the right to acquire equity or make an investment, but do not require the bank to take such actions, are not considered a binding written commitment for purposes of this section II.B.5.

²⁵ For example, if a bank made an equity investment in 100 shares of a nonfinancial company prior to March 13, 2000, the adjusted carrying value of that investment would not be subject to a deduction under this section II.B.5. However, if the bank made any additional equity investment in the company after March 13, 2000, such as by purchasing additional shares of the company (including through the exercise of options or warrants acquired before or after March 13, 2000) or by making a capital contribution to the company and such investment was not made pursuant to a binding written commitment entered into before March 13, 2000, the adjusted carrying value of the additional investment would be subject to a deduction under this section II.B.5. In addition, if the bank sold and repurchased, after March 13, 2000, 40 shares of the company, the adjusted carrying value of those 40 shares would be

tion II.B.5.e., a nonfinancial equity investment made prior to March 13, 2000, includes any shares or other interests received by the bank through a stock split or stock dividend on an investment made prior to March 13, 2000, provided the bank provides no consideration for the shares or interests received and the transaction does not materially increase the bank's proportional interest in the company. The exercise on or after March 13, 2000, of options or warrants acquired prior to March 13, 2000, is *not* considered to be an investment made prior to March 13, 2000, if the bank provides any consideration for the shares or interests received upon exercise of the options or warrants. Any nonfinancial equity investment (or portion thereof) that is not required to be deducted from Tier 1 capital under this section II.B.5.e. must be included in determining the total amount of nonfinancial equity investments held by the bank in relation to its Tier 1 capital for purposes of Table 1. In addition, any nonfinancial equity investment (or portion thereof) that is not required to be deducted from Tier 1 capital under this section II.B.5.e. will be assigned a 100-percent risk weight and included in the bank's consolidated risk-weighted assets.

f. *Adjusted carrying value.* i. For purposes of this section II.B.5., the "adjusted carrying value" of investments is the aggregate value at which the investments are carried on the balance sheet of the bank reduced by any unrealized gains on those investments that are reflected in such carrying value but excluded from the bank's Tier 1 capital and associated deferred tax liabilities. For example, for investments held as available-for-sale (AFS), the adjusted carrying value of the investments would be the aggregate carrying value of the investments (as reflected on the consolidated balance sheet of the bank) *less* any unrealized gains on those investments that are included in other comprehensive income and not reflected in Tier 1 capital, and associated deferred tax liabilities.²⁶

ii. As discussed above with respect to consolidated SBICs, some equity investments may be in companies that are consolidated for accounting purposes. For investments in a nonfinancial company that is consolidated for accounting purposes under generally accepted accounting principles, the bank's adjusted carrying value of the investment is

subject to a deduction under this section II.B.5.

²⁶ Unrealized gains on AFS equity investments may be included in supplementary capital to the extent permitted under section II.A.2.e. of this appendix A. In addition, the unrealized losses on AFS equity investments are deducted from Tier 1 capital in accordance with section II.A.1.a. of this appendix A.

determined under the equity method of accounting (net of any intangibles associated with the investment that are deducted from the bank's core capital in accordance with section II.B.1. of this appendix A). Even though the assets of the nonfinancial company are consolidated for accounting purposes, these assets (as well as the credit equivalent amounts of the company's off-balance sheet items) should be excluded from the bank's risk-weighted assets for regulatory capital purposes.

g. Equity investments. For purposes of this section II.B.5., an equity investment means any equity instrument (including common stock, preferred stock, partnership interests, interests in limited liability companies, trust certificates and warrants and call options that give the holder the right to purchase an equity instrument), any equity feature of a debt instrument (such as a warrant or call option), and any debt instrument that is convertible into equity where the instrument or feature is held under one of the legal authorities listed in section II.B.5.b. of this appendix A. An investment in any other instrument (including subordinated debt) may be treated as an equity investment if, in the judgment of the Federal Reserve, the instrument is the functional equivalent of equity or exposes the state member bank to essentially the same risks as an equity instrument.

III. Procedures for Computing Weighted Risk Assets and Off-Balance Sheet Items

A. Procedures

Assets and credit equivalent amounts of off-balance sheet items of state member banks are assigned to one of several broad risk categories, according to the obligor, or, if relevant, the guarantor or the nature of the collateral. The aggregate dollar value of the amount in each category is then multiplied by the risk weight associated with that category. The resulting weighted values from each of the risk categories are added together, and this sum is the bank's total weighted risk assets that comprise the denominator of the risk-based capital ratio. Attachment I provides a sample calculation.

Risk weights for all off-balance sheet items are determined by a two-step process. First, the "credit equivalent amount" of off-balance sheet items is determined, in most cases by multiplying the off-balance sheet item by a credit conversion factor. Second, the credit equivalent amount is treated like any balance sheet asset and generally is assigned to the appropriate risk category according to the obligor, or, if relevant, the guarantor or the nature of the collateral.

In general, if a particular item qualifies for placement in more than one risk category, it is assigned to the category that has the lowest risk weight. A holding of a U.S. municipal

revenue bond that is fully guaranteed by a U.S. bank, for example, would be assigned the 20 percent risk weight appropriate to claims guaranteed by U.S. banks, rather than the 50 percent risk weight appropriate to U.S. municipal revenue bonds.²⁷

The terms *claims* and *securities* used in the context of the discussion of risk weights, unless otherwise specified, refer to loans or debt obligations of the entity on whom the claim is held. Assets in the form of stock or equity holdings in commercial or financial firms are assigned to the 100 percent risk category, unless some other treatment is explicitly permitted.

The Federal Reserve will, on a case-by-case basis, determine the appropriate risk weight for any asset or credit equivalent amount of an off-balance sheet item that does not fit wholly within one of the risk weight categories set forth below or that imposes risks

²⁷ An investment in shares of a fund whose portfolio consists primarily of various securities or money market instruments that, if held separately, would be assigned to different risk categories, generally is assigned to the risk category appropriate to the highest risk-weighted asset that the fund is permitted to hold in accordance with the stated investment objectives set forth in its prospectus. A bank may, at its option, assign a fund investment on a pro rata basis to different risk categories according to the investment limits in the fund's prospectus. In no case will an investment in shares in any fund be assigned to a total risk weight less than 20 percent. If a bank chooses to assign a fund investment on a pro rata basis, and the sum of the investment limits of assets in the fund's prospectus exceeds 100 percent, the bank must assign risk weights in descending order. If, in order to maintain a necessary degree of short-term liquidity, a fund is permitted to hold an insignificant amount of its assets in short-term, highly liquid securities of superior credit quality that do not qualify for a preferential risk weight, such securities generally will be disregarded when determining the risk category into which the bank's holding in the overall fund should be assigned. The prudent use of hedging instruments by a fund to reduce the risk of its assets also will not increase the risk weighting of the fund investment. For example, the use of hedging instruments by a fund to reduce the interest rate risk of its government bond portfolio will not increase the risk weight of that fund above the 20 percent category. Nonetheless, if a fund engages in any activities that appear speculative in nature or has any other characteristics that are inconsistent with the preferential risk weighting assigned to the fund's assets, holdings in the fund will be assigned to the 100 percent risk category.

on a bank that are incommensurate with the risk weight otherwise specified below for the asset or off-balance sheet item. In addition, the Federal Reserve will, on a case-by-case basis, determine the appropriate credit conversion factor for any off-balance sheet item that does not fit wholly within one of the credit conversion factors set forth below or that imposes risks on a bank that are incommensurate with the credit conversion factors otherwise specified below for the off-balance sheet item. In making such a determination, the Federal Reserve will consider the similarity of the asset or off-balance sheet item to assets or off-balance sheet items explicitly treated in the guidelines, as well as other relevant factors.

B. Collateral, Guarantees, and Other Considerations

1. *Collateral.* The only forms of collateral that are formally recognized by the risk-based capital framework are: Cash on deposit in the bank; securities issued or guaranteed by the central governments of the OECD-based group of countries,²⁸ U.S. Government agencies, or U.S. Government-sponsored agencies; and securities issued by multilateral lending institutions or regional development banks. Claims fully secured by such collateral generally are assigned to the 20 percent risk-weight category. Collateralized transactions meeting all the conditions de-

²⁸The OECD-based group of countries comprises all full members of the Organization for Economic Cooperation and Development (OECD) regardless of entry date, as well as countries that have concluded special lending arrangements with the International Monetary Fund (IMF) associated with the IMF's General Arrangements to Borrow, but excludes any country that has rescheduled its external sovereign debt within the previous five years. As of November 1995, the OECD included the following countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States; and Saudi Arabia had concluded special lending arrangements with the IMF associated with the IMF's General Arrangements to Borrow. A rescheduling of external sovereign debt generally would include any renegotiation of terms arising from a country's inability or unwillingness to meet its external debt service obligations, but generally would not include renegotiations of debt in the normal course of business, such as a renegotiation to allow the borrower to take advantage of a decline in interest rates or other change in market conditions.

scribed in section III.C.1. may be assigned a zero percent risk weight.

With regard to collateralized claims that may be assigned to the 20 percent risk-weight category, the extent to which qualifying securities are recognized as collateral is determined by their current market value. If such a claim is only partially secured, that is, the market value of the pledged securities is less than the face amount of a balance-sheet asset or an off-balance-sheet item, the portion that is covered by the market value of the qualifying collateral is assigned to the 20 percent risk category, and the portion of the claim that is not covered by collateral in the form of cash or a qualifying security is assigned to the risk category appropriate to the obligor or, if relevant, the guarantor. For example, to the extent that a claim on a private sector obligor is collateralized by the current market value of U.S. Government securities, it would be placed in the 20 percent risk category, and the balance would be assigned to the 100 percent risk category.

2. *Guarantees.* Guarantees of the OECD and non-OECD central governments, U.S. Government agencies, U.S. Government-sponsored agencies, state and local governments of the OECD-based group of countries, multilateral lending institutions and regional development banks, U.S. depository institutions, and foreign banks are also recognized. If a claim is partially guaranteed, that is, coverage of the guarantee is less than the face amount of a balance sheet asset or an off-balance sheet item, the portion that is not fully covered by the guarantee is assigned to the risk category appropriate to the obligor or, if relevant, to any collateral. The face amount of a claim covered by two types of guarantees that have different risk weights, such as a U.S. Government guarantee and a state guarantee, is to be apportioned between the two risk categories appropriate to the guarantors.

The existence of other forms of collateral or guarantees that the risk-based capital framework does not formally recognize may be taken into consideration in evaluating the risks inherent in a bank's loan portfolio—which, in turn, would affect the overall supervisory assessment of the bank's capital adequacy.

3. *Recourse obligations, direct credit substitutes, residual interests, and asset- and mortgage-backed securities.* Direct credit substitutes, assets transferred with recourse, and securities issued in connection with asset securitizations and structured financings are treated as described below. The term "asset securitizations" or "securitizations" in this rule includes structured financings, as well as asset securitization transactions.

a. *Definitions*—i. *Credit derivative* means a contract that allows one party (the "protection purchaser") to transfer the credit risk

of an asset or off-balance sheet credit exposure to another party (the “protection provider”). The value of a credit derivative is dependent, at least in part, on the credit performance of the “reference asset.”

ii. *Credit-enhancing representations and warranties* means representations and warranties that are made or assumed in connection with a transfer of assets (including loan servicing assets) and that obligate the bank to protect investors from losses arising from credit risk in the assets transferred or the loans serviced. Credit-enhancing representations and warranties include promises to protect a party from losses resulting from the default or nonperformance of another party or from an insufficiency in the value of the collateral. Credit-enhancing representations and warranties do not include:

1. Early default clauses and similar warranties that permit the return of, or premium refund clauses covering, 1-4 family residential first mortgage loans that qualify for a 50 percent risk weight for a period not to exceed 120 days from the date of transfer. These warranties may cover only those loans that were originated within 1 year of the date of transfer;

2. Premium refund clauses that cover assets guaranteed, in whole or in part, by the U.S. Government, a U.S. Government agency or a government-sponsored enterprise, provided the premium refund clauses are for a period not to exceed 120 days from the date of transfer; or

3. Warranties that permit the return of assets in instances of misrepresentation, fraud or incomplete documentation.

iii. *Direct credit substitute* means an arrangement in which a bank assumes, in form or in substance, credit risk associated with an on- or off-balance sheet credit exposure that was not previously owned by the bank (third-party asset) and the risk assumed by the bank exceeds the pro rata share of the bank’s interest in the third-party asset. If the bank has no claim on the third-party asset, then the bank’s assumption of any credit risk with respect to the third party asset is a direct credit substitute. Direct credit substitutes include, but are not limited to:

1. Financial standby letters of credit that support financial claims on a third party that exceed a bank’s pro rata share of losses in the financial claim;

2. Guarantees, surety arrangements, credit derivatives, and similar instruments backing financial claims that exceed a bank’s pro rata share in the financial claim;

3. Purchased subordinated interests or securities that absorb more than their pro rata share of losses from the underlying assets;

4. Credit derivative contracts under which the bank assumes more than its pro rata share of credit risk on a third party exposure;

5. Loans or lines of credit that provide credit enhancement for the financial obligations of an account party;

6. Purchased loan servicing assets if the servicer is responsible for credit losses or if the servicer makes or assumes credit-enhancing representations and warranties with respect to the loans serviced. Mortgage servicer cash advances that meet the conditions of section III.B.3.a.viii. of this appendix are not direct credit substitutes;

7. Clean-up calls on third party assets. Clean-up calls that are 10 percent or less of the original pool balance that are exercisable at the option of the bank are not direct credit substitutes; and

8. Liquidity facilities that provide liquidity support to ABCP (other than eligible ABCP liquidity facilities).

iv. *Eligible ABCP liquidity facility* means a liquidity facility supporting ABCP, in form or in substance, that is subject to an asset quality test at the time of draw that precludes funding against assets that are 90 days or more past due or in default. In addition, if the assets that an eligible ABCP liquidity facility is required to fund against are externally rated assets or exposures at the inception of the facility, the facility can be used to fund only those assets or exposures that are externally rated investment grade at the time of funding. Notwithstanding the eligibility requirements set forth in the two preceding sentences, a liquidity facility will be considered an eligible ABCP liquidity facility if the assets that are funded under the liquidity facility and which do not meet the eligibility requirements are guaranteed, either conditionally or unconditionally, by the U.S. government or its agencies, or by the central government of an OECD country.

v. *Externally rated* means that an instrument or obligation has received a credit rating from a nationally recognized statistical rating organization.

vi. *Face amount* means the notional principal, or face value, amount of an off-balance sheet item; the amortized cost of an asset not held for trading purposes; and the fair value of a trading asset.

vii. *Financial asset* means cash or other monetary instrument, evidence of debt, evidence of an ownership interest in an entity, or a contract that conveys a right to receive or exchange cash or another financial instrument from another party.

viii. *Financial standby letter of credit* means a letter of credit or similar arrangement that represents an irrevocable obligation to a third-party beneficiary:

1. To repay money borrowed by, or advanced to, or for the account of, a second party (the account party), or

2. To make payment on behalf of the account party, in the event that the account

party fails to fulfill its obligation to the beneficiary.

ix. *Liquidity Facility* means a legally binding commitment to provide liquidity support to ABCP by lending to, or purchasing assets from, any structure, program, or conduit in the event that funds are required to repay maturing ABCP.

x. *Mortgage servicer cash advance* means funds that a residential mortgage loan servicer advances to ensure an uninterrupted flow of payments, including advances made to cover foreclosure costs or other expenses to facilitate the timely collection of the loan. A mortgage servicer cash advance is not a recourse obligation or a direct credit substitute if:

1. The servicer is entitled to full reimbursement and this right is not subordinated to other claims on the cash flows from the underlying asset pool; or

2. For any one loan, the servicer's obligation to make nonreimbursable advances is contractually limited to an insignificant amount of the outstanding principal balance of that loan.

xi. *Nationally recognized statistical rating organization (NRSRO)* means an entity recognized by the Division of Market Regulation of the Securities and Exchange Commission (or any successor Division) (Commission) as a nationally recognized statistical rating organization for various purposes, including the Commission's uniform net capital requirements for brokers and dealers.

xii. *Recourse* means the retention, by a bank, in form or in substance, of any credit risk directly or indirectly associated with an asset it has transferred and sold that exceeds a pro rata share of the bank's claim on the asset. If a bank has no claim on a transferred asset, then the retention of any risk of credit loss is recourse. A recourse obligation typically arises when a bank transfers assets and retains an explicit obligation to repurchase the assets or absorb losses due to a default on the payment of principal or interest or any other deficiency in the performance of the underlying obligor or some other party. Recourse may also exist implicitly if a bank provides credit enhancement beyond any contractual obligation to support assets it has sold. The following are examples of recourse arrangements:

1. Credit-enhancing representations and warranties made on the transferred assets;

2. Loan servicing assets retained pursuant to an agreement under which the bank will be responsible for credit losses associated with the loans being serviced. Mortgage servicer cash advances that meet the conditions of section III.B.3.a.x. of this appendix are not recourse arrangements;

3. Retained subordinated interests that absorb more than their pro rata share of losses from the underlying assets;

4. Assets sold under an agreement to repurchase, if the assets are not already included on the balance sheet;

5. Loan strips sold without contractual recourse where the maturity of the transferred loan is shorter than the maturity of the commitment under which the loan is drawn;

6. Credit derivatives issued that absorb more than the bank's pro rata share of losses from the transferred assets;

7. Clean-up calls at inception that are greater than 10 percent of the balance of the original pool of transferred loans. Clean-up calls that are 10 percent or less of the original pool balance that are exercisable at the option of the bank are not recourse arrangements; and

8. Liquidity facilities that provide liquidity support to ABCP (other than eligible ABCP liquidity facilities).

xiii. *Residual interest* means any on-balance sheet asset that represents an interest (including a beneficial interest) created by a transfer that qualifies as a sale (in accordance with generally accepted accounting principles) of financial assets, whether through a securitization or otherwise, and that exposes the bank to credit risk directly or indirectly associated with the transferred assets that exceeds a pro rata share of the bank's claim on the assets, whether through subordination provisions or other credit enhancement techniques. Residual interests generally include credit-enhancing I/Os, spread accounts, cash collateral accounts, retained subordinated interests, other forms of over-collateralization, and similar assets that function as a credit enhancement. Residual interests further include those exposures that, in substance, cause the bank to retain the credit risk of an asset or exposure that had qualified as a residual interest before it was sold. Residual interests generally do not include interests purchased from a third party, except that purchased credit-enhancing I/Os are residual interests for purposes of this appendix.

xiv. *Risk participation* means a participation in which the originating party remains liable to the beneficiary for the full amount of an obligation (e.g., a direct credit substitute) notwithstanding that another party has acquired a participation in that obligation.

xv. *Securitization* means the pooling and repackaging by a special purpose entity of assets or other credit exposures into securities that can be sold to investors. Securitization includes transactions that create stratified credit risk positions whose performance is dependent upon an underlying pool of credit exposures, including loans and commitments.

xvi. *Sponsor* means a bank that establishes an ABCP program; approves the sellers permitted to participate in the program; approves the asset pools to be purchased by the

program; or administers the program by monitoring the assets, arranging for debt placement, compiling monthly reports, or ensuring compliance with the program documents and with the program's credit and investment policy.

xvii. *Structured finance program* means a program where receivable interests and asset-backed securities issued by multiple participants are purchased by a special purpose entity that repackages those exposures into securities that can be sold to investors. Structured finance programs allocate credit risks, generally, between the participants and credit enhancement provided to the program.

xviii. *Traded position* means a position that is externally rated and is retained, assumed, or issued in connection with an asset securitization, where there is a reasonable expectation that, in the near future, the rating will be relied upon by unaffiliated investors to purchase the position; or an unaffiliated third party to enter into a transaction involving the position, such as a purchase, loan, or repurchase agreement.

b. *Credit equivalent amounts and risk weight of recourse obligations and direct credit substitutes.* i. *Credit equivalent amount.* Except as otherwise provided in sections III.B.3.c. through f. and III.B.5. of this appendix, the credit equivalent amount for a recourse obligation or direct credit substitute is the full amount of the credit-enhanced assets for which the bank directly or indirectly retains or assumes credit risk multiplied by a 100 percent conversion factor.

ii. *Risk-weight factor.* To determine the bank's risk-weight factor for off-balance sheet recourse obligations and direct credit substitutes, the credit equivalent amount is

assigned to the risk category appropriate to the obligor in the underlying transaction, after considering any associated guarantees or collateral. For a direct credit substitute that is an on-balance sheet asset (e.g., a purchased subordinated security), a bank must calculate risk-weighted assets using the amount of the direct credit substitute and the full amount of the assets it supports, i.e., all the more senior positions in the structure. The treatment of direct credit substitutes that have been syndicated or in which risk participations have been conveyed or acquired is set forth in section III.D.1 of this appendix.

c. *Externally-rated positions: credit equivalent amounts and risk weights of recourse obligations, direct credit substitutes, residual interests, and asset- and mortgage-backed securities (including asset-backed commercial paper).* i. *Traded positions.* With respect to a recourse obligation, direct credit substitute, residual interest (other than a credit-enhancing I/O strip) or asset- and mortgage-backed security (including asset-backed commercial paper) that is a traded position and that has received an external rating on a long-term position that is one grade below investment grade or better or a short-term rating that is investment grade, the bank may multiply the face amount of the position by the appropriate risk weight, determined in accordance with the tables below. Stripped mortgage-backed securities and other similar instruments, such as interest-only or principal-only strips that are not credit enhancements, must be assigned to the 100 percent risk category. If a traded position has received more than one external rating, the lowest single rating will apply.

Long-term rating category	Examples	Risk weight (In percent)
Highest or second highest investment grade	AAA, AA	20
Third highest investment grade	A	50
Lowest investment grade	BBB	100
One category below investment grade	BB	200

Short-term rating	Examples	Risk weight (In percent)
Highest investment grade	A-1, P-1	20
Second highest investment grade	A-2, P-2	50
Lowest investment grade	A-3, P-3	100

ii. *Non-traded positions.* A recourse obligation, direct credit substitute, or residual interest (but not a credit-enhancing I/O strip) extended in connection with a securitization that is not a traded position may be assigned a risk weight in accordance with section III.B.3.c.i. of this appendix if:

1. It has been externally rated by more than one NRSRO;

2. It has received an external rating on a long-term position that is one grade below investment grade or better or on a short-term position that is investment grade by all NRSROs providing a rating;

3. The ratings are publicly available; and

4. The ratings are based on the same criteria used to rate traded positions.

If the ratings are different, the lowest rating will determine the risk category to

which the recourse obligation, direct credit substitute, or residual interest will be assigned.

d. *Senior positions not externally rated.* For a recourse obligation, direct credit substitute, residual interest, or asset- or mortgage-backed security that is not externally rated but is senior or preferred in all features to a traded position (including collateralization and maturity), a bank may apply a risk weight to the face amount of the senior position in accordance with section III.B.3.c.i. of this appendix, based on the traded position, subject to any current or prospective supervisory guidance and the bank satisfying the Federal Reserve that this treatment is appropriate. This section will apply only if the traded subordinated position provides substantive credit support to the unrated position until the unrated position matures.

e. *Capital requirement for residual interests—*
 i. *Capital requirement for credit-enhancing I/O strips.* After applying the concentration limit to credit-enhancing I/O strips (both purchased and retained) in accordance with sections II.B.2.c. through e. of this appendix, a bank must maintain risk-based capital for a credit-enhancing I/O strip (both purchased and retained), regardless of the external rating on that position, equal to the remaining amount of the credit-enhancing I/O strip (net of any existing associated deferred tax liability), even if the amount of risk-based capital required to be maintained exceeds the full risk-based capital requirement for the assets transferred. Transactions that, in substance, result in the retention of credit risk associated with a transferred credit-enhancing I/O strip will be treated as if the credit-enhancing I/O strip was retained by the bank and not transferred.

ii. *Capital requirement for other residual interests.* 1. If a residual interest does not meet the requirements of sections III.B.3.c. or d. of this appendix, a bank must maintain risk-based capital equal to the remaining amount of the residual interest that is retained on the balance sheet (net of any existing associated deferred tax liability), even if the amount of risk-based capital required to be maintained exceeds the full risk-based capital requirement for the assets transferred. Transactions that, in substance, result in the retention of credit risk associated with a transferred residual interest will be treated as if the residual interest was retained by the bank and not transferred.

2. Where the aggregate capital requirement for residual interests and other recourse obligation in connection with the same transfer of assets exceed the full risk-based capital requirement for those assets, a bank must maintain risk-based capital equal to the greater of the risk-based capital requirement for the residual interest as calculated under section III.B.3.e.ii.1 of this appendix or the full risk-based capital requirement for the assets transferred.

f. *Positions that are not rated by an NRSRO.* A position (but not a residual interest) maintained in connection with a securitization and that is not rated by a NRSRO may be risk-weighted based on the bank's determination of the credit rating of the position, as specified in the table below, multiplied by the face amount of the position. In order to obtain this treatment, the bank's system for determining the credit rating of the position must meet one of the three alternative standards set out in sections III.B.3.f.i. through III.B.3.f.iii. of this appendix.

Rating category	Examples	Risk weight (In percent)
Highest or second highest investment grade	AAA,AA	100
Third highest investment grade	A	100
Lowest investment grade	BBB	100
One category below investment grade	BB	200

i. *Internal risk rating used for asset-backed programs.* A direct credit substitute (other than a purchased credit-enhancing I/O) is assumed in connection with an asset-backed commercial paper program sponsored by the bank and the bank is able to demonstrate to the satisfaction of the Federal Reserve, prior to relying upon its use, that the bank's internal credit risk rating system is adequate. Adequate internal credit risk rating systems usually contain the following criteria:

1. The internal credit risk system is an integral part of the bank's risk management system, which explicitly incorporates the full range of risks arising from a bank's participation in securitization activities;

2. Internal credit ratings are linked to measurable outcomes, such as the probability that the position will experience any loss, the position's expected loss given default, and the degree of variance in losses given default on that position;

3. The bank's internal credit risk system must separately consider the risk associated with the underlying loans or borrowers, and the risk associated with the structure of a particular securitization transaction;

4. The bank's internal credit risk system must identify gradations of risk among "pass" assets and other risk positions;

5. The bank must have clear, explicit criteria that are used to classify assets into

each internal risk grade, including subjective factors;

6. The bank must have independent credit risk management or loan review personnel assigning or reviewing the credit risk ratings;

7. The bank must have an internal audit procedure that periodically verifies that the internal credit risk ratings are assigned in accordance with the established criteria;

8. The bank must monitor the performance of the internal credit risk ratings assigned to nonrated, nontraded direct credit substitutes over time to determine the appropriateness of the initial credit risk rating assignment and adjust individual credit risk ratings, or the overall internal credit risk ratings system, as needed; and

9. The internal credit risk system must make credit risk rating assumptions that are consistent with, or more conservative than, the credit risk rating assumptions and methodologies of NRSROs.

ii. *Program Ratings.* A direct credit substitute or recourse obligation (other than a residual interest) is assumed or retained in connection with a structured finance program and a NRSRO has reviewed the terms of the program and stated a rating for positions associated with the program. If the program has options for different combinations of assets, standards, internal credit enhancements and other relevant factors, and the NRSRO specifies ranges of rating categories to them, the bank may apply the rating category that corresponds to the bank's position. In order to rely on a program rating, the bank must demonstrate to the Federal Reserve's satisfaction that the credit risk rating assigned to the program meets the same standards generally used by NRSROs for rating traded positions. The bank must also demonstrate to the Federal Reserve's satisfaction that the criteria underlying the NRSRO's assignment of ratings for the program are satisfied for the particular position. If a bank participates in a securitization sponsored by another party, the Federal Reserve may authorize the bank to use this approach based on a programmatic rating obtained by the sponsor of the program.

iii. *Computer Program.* The bank is using an acceptable credit assessment computer program to determine the rating of a direct credit substitute or recourse obligation (but not residual interest) issued in connection with a structured finance program. A NRSRO must have developed the computer program, and the bank must demonstrate to the Federal Reserve's satisfaction that ratings under the program correspond credibly and reliably with the rating of traded positions.

g. *Limitations on risk-based capital requirements—i. Low-level exposure.* If the maximum contractual exposure to loss retained or as-

sumed by a bank in connection with a recourse obligation or a direct credit substitute is less than the effective risk-based capital requirement for the enhanced assets, the risk-based capital requirement is limited to the maximum contractual exposure, less any recourse liability account established in accordance with generally accepted accounting principles. This limitation does not apply when a bank provides credit enhancement beyond any contractual obligation to support assets it has sold.

ii. *Mortgage-related securities or participation certificates retained in a mortgage loan swap.* If a bank holds a mortgage-related security or a participation certificate as a result of a mortgage loan swap with recourse, capital is required to support the recourse obligation plus the percentage of the mortgage-related security or participation certificate that is not covered by the recourse obligation. The total amount of capital required for the on-balance sheet asset and the recourse obligation, however, is limited to the capital requirement for the underlying loans, calculated as if the bank continued to hold these loans as on-balance sheet assets.

iii. *Related on-balance sheet assets.* If a recourse obligation or direct credit substitute subject to section III.B.3. of this appendix also appears as a balance sheet asset, the balance sheet asset is not included in a bank's risk-weighted assets to the extent the value of the balance sheet asset is already included in the off-balance sheet credit equivalent amount for the recourse obligation or direct credit substitute, except in the case of loan servicing assets and similar arrangements with embedded recourse obligations or direct credit substitutes. In that case, both the on-balance sheet assets and the related recourse obligations and direct credit substitutes must be separately risk-weighted and incorporated into the risk-based capital calculation.

4. *Maturity.* Maturity is generally not a factor in assigning items to risk categories with the exception of claims on non-OECD banks, commitments, and interest rate and foreign exchange rate contracts. Except for commitments, short-term is defined as one year or less *remaining* maturity and long-term is defined as over one year *remaining* maturity. In the case of commitments, short-term is defined as one year or less *original* maturity and long-term is defined as over one year *original* maturity.

5. *Small Business Loans and Leases on Personal Property Transferred with Recourse.* a. Notwithstanding other provisions of this appendix A, a qualifying bank that has transferred small business loans and leases on personal property (small business obligations) with recourse shall include in weighted-risk assets only the amount of retained recourse, provided two conditions are met. First, the transaction must be treated as a sale under

GAAP and, second, the bank must establish pursuant to GAAP a non-capital reserve sufficient to meet the bank's reasonably estimated liability under the recourse arrangement. Only loans and leases to businesses that meet the criteria for a small business concern established by the Small Business Administration under section 3(a) of the Small Business Act are eligible for this capital treatment.

b. For purposes of this appendix A, a bank is qualifying if it meets the criteria set forth in the Board's prompt corrective action regulation (12 CFR 208.40) for well capitalized or, by order of the Board, adequately capitalized. For purposes of determining whether a bank meets the criteria, its capital ratios must be calculated without regard to the preferential capital treatment for transfers of small business obligations with recourse specified in section III.B.5.a. of this appendix A. The total outstanding amount of recourse retained by a qualifying bank on transfers of small business obligations receiving the preferential capital treatment cannot exceed 15 percent of the bank's total risk-based capital. By order, the Board may approve a higher limit.

c. If a bank ceases to be qualifying or exceeds the 15 percent capital limitation, the preferential capital treatment will continue to apply to any transfers of small business obligations with recourse that were consummated during the time that the bank was qualifying and did not exceed the capital limit.

d. The risk-based capital ratios of the bank shall be calculated without regard to the preferential capital treatment for transfers of small business obligations with recourse specified in section III.B.5.a. of this appendix A for purposes of:

(i) Determining whether a bank is adequately capitalized, undercapitalized, significantly undercapitalized, or critically undercapitalized under prompt corrective action (12 CFR 208.43(b)(1)); and

(ii) Reclassifying a well capitalized bank to adequately capitalized and requiring an adequately capitalized bank to comply with certain mandatory or discretionary supervisory actions as if the bank were in the next lower prompt corrective action capital category (12 CFR 208.43(c)).

6. *Asset-backed commercial paper programs.* a. An asset-backed commercial paper (ABCP) program means a program that primarily issues externally rated commercial paper backed by assets or other exposures held in a bankruptcy-remote, special purpose entity.

b. A bank that qualifies as a primary beneficiary and must consolidate an ABCP program that is defined as a variable interest entity under GAAP may exclude the consolidated ABCP program assets from risk-weighted assets provided that the bank is the sponsor of the ABCP program. If a bank

excludes such consolidated ABCP program assets, the bank must assess the appropriate risk-based capital charge against any exposures of the bank arising in connection with such ABCP programs, including direct credit substitutes, recourse obligations, residual interests, liquidity facilities, and loans, in accordance with sections III.B.3., III.C., and III.D. of this appendix.

c. If a bank has multiple overlapping exposures (such as a program-wide credit enhancement and multiple pool-specific liquidity facilities) to an ABCP program that is not consolidated for risk-based capital purposes, the bank is not required to hold duplicative risk-based capital under this appendix against the overlapping position. Instead, the bank should apply to the overlapping position the applicable risk-based capital treatment that results in the highest capital charge.

C. Risk Weights

Attachment III contains a listing of the risk categories, a summary of the types of assets assigned to each category and the weight associated with each category, that is, 0 percent, 20 percent, 50 percent, and 100 percent. A brief explanation of the components of each category follows.

1. *Category 1: zero percent.* This category includes cash (domestic and foreign) owned and held in all offices of the bank or in transit and gold bullion held in the bank's own vaults or in another bank's vaults on an allocated basis, to the extent it is offset by gold bullion liabilities.²⁹ The category also includes all direct claims (including securities, loans, and leases) on, and the portions of claims that are directly and unconditionally guaranteed by, the central governments³⁰ of

²⁹ All other holdings of bullion are assigned to the 100 percent risk category.

³⁰ A central government is defined to include departments and ministries, including the central bank, of the central government. The U.S. central bank includes the 12 Federal Reserve Banks, and the stock held in these banks as a condition of membership is assigned to the zero percent risk category. The definition of central government does not include state, provincial, or local governments; or commercial enterprises owned by the central government. In addition, it does not include local government entities or commercial enterprises whose obligations are guaranteed by the central government, although any claims on such entities guaranteed by central governments are placed in the same general risk category as other claims guaranteed by central governments. OECD central governments are defined as central governments of the OECD-based

Continued

the OECD countries and U.S. Government agencies,³¹ as well as all direct local currency claims on, and the portions of local currency claims that are directly and unconditionally guaranteed by, the central governments of non-OECD countries, to the extent that the bank has liabilities booked in that currency. A claim is not considered to be unconditionally guaranteed by a central government if the validity of the guarantee is dependent upon some affirmative action by the holder or a third party. Generally, securities guaranteed by the U.S. Government or its agencies that are actively traded in financial markets, such as GNMA securities, are considered to be unconditionally guaranteed.

This category also includes claims collateralized by cash on deposit in the bank or by securities issued or guaranteed by OECD central governments or U.S. government agencies for which a positive margin of collateral is maintained on a daily basis, fully taking into account any change in the bank's exposure to the obligor or counterparty under a claim in relation to the market value of the collateral held in support of that claim.

2. *Category 2: 20 percent.* a. This category includes cash items in the process of collection, both foreign and domestic; short-term claims (including demand deposits) on, and the portions of short-term claims that are guaranteed³² by, U.S. depository institu-

group of countries; non-OECD central governments are defined as central governments that do not belong to the OECD-based group countries.

³¹A U.S. Government agency is defined as an instrumentality of the U.S. Government whose obligations are fully and explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. Government. Such agencies include the Government National Mortgage Association (GNMA), the Veterans Administration (VA), the Federal Housing Administration (FHA), the Export-Import Bank (Exim Bank), the Overseas Private Investment Corporation (OPIC), the Commodity Credit Corporation (CCC), and the Small Business Administration (SBA).

³²Claims guaranteed by U.S. depository institutions and foreign banks include risk participations in both bankers acceptances and standby letters of credit, as well as participations in commitments, that are conveyed to other U.S. depository institutions or foreign banks.

tions³³ and foreign banks;³⁴ and long-term claims on, and the portions of long-term claims that are guaranteed by, U.S. depository institutions and OECD banks.³⁵

b. This category also includes the portions of claims that are conditionally guaranteed by OECD central governments and U.S. Government agencies, as well as the portions of local currency claims that are conditionally guaranteed by non-OECD central governments, to the extent that the bank has liabilities booked in that currency. In addition, this category also includes claims on, and the portions of claims that are guaranteed by, U.S. government-sponsored³⁶ agencies and claims on, and the portions of

³³U.S. depository institutions are defined to include branches (foreign and domestic) of federally-insured banks and depository institutions chartered and headquartered in the 50 states of the United States, the District of Columbia, Puerto Rico, and U.S. territories and possessions. The definition encompasses banks, mutual or stock savings banks, savings or building and loan associations, cooperative banks, credit unions, and international banking facilities of domestic banks. U.S.-chartered depository institutions owned by foreigners are also included in the definition. However, branches and agencies of foreign banks located in the U.S., as well as all bank holding companies, are excluded.

³⁴Foreign banks are distinguished as either OECD banks or non-OECD banks. OECD banks include banks and their branches (foreign and domestic) organized under the laws of countries (other than the U.S.) that belong to the OECD-based group of countries. Non-OECD banks include banks and their branches (foreign and domestic) organized under the laws of countries that do not belong to the OECD-based group of countries. For this purpose, a bank is defined as an institution that engages in the business of banking; is recognized as a bank by the bank supervisory or monetary authorities of the country of its organization or principal banking operations; receives deposits to a substantial extent in the regular course of business; and has the power to accept demand deposits.

³⁵Long-term claims on, or guaranteed by, non-OECD banks and all claims on bank holding companies are assigned to the 100 percent risk category, as are holdings of bank-issued securities that qualify as capital of the issuing banks.

³⁶For this purpose, U.S. government-sponsored agencies are defined as agencies originally established or chartered by the Federal government to serve public purposes specified by the U.S. Congress but whose obligations are *not explicitly* guaranteed by the full faith and credit of the U.S. government.

claims guaranteed by, the International Bank for Reconstruction and Development (World Bank), the International Finance Corporation, the Interamerican Development Bank, the Asian Development Bank, the African Development Bank, the European Investment Bank, the European Bank for Reconstruction and Development, the Nordic Investment Bank, and other multilateral lending institutions or regional development banks in which the U.S. government is a shareholder or contributing member. General obligation claims on, or portions of claims guaranteed by the full faith and credit of, states or other political subdivisions of the U.S. or other countries of the OECD-based group are also assigned to this category.³⁷

c. This category also includes the portions of claims (including repurchase transactions) collateralized by cash on deposit in the bank or by securities issued or guaranteed by OECD central governments or U.S. government agencies that do not qualify for the zero percent risk-weight category; collateralized by securities issued or guaranteed by U.S. government-sponsored agencies; or collateralized by securities issued by multilateral lending institutions or regional development banks in which the U.S. government is a shareholder or contributing member.

d. This category also includes claims³⁸ on, or guaranteed by, a qualifying securities firm incorporated in the United States or other member of the OECD-based group of countries³⁹ provided that: The qualifying se-

These agencies include the Federal Home Loan Mortgage Corporation (FHLMC), the Federal National Mortgage Association (FNMA), the Farm Credit System, the Federal Home Loan Bank System, and the Student Loan Marketing Association (SLMA). Claims on U.S. government-sponsored agencies include capital stock in a Federal Home Loan Bank that is held as a condition of membership in that Bank.

³⁷ Claims on, or guaranteed by, states or other political subdivisions of countries that do not belong to the OECD-based group of countries are placed in the 100 percent risk category.

³⁸ Claims on a qualifying securities firm that are instruments the firm, or its parent company, uses to satisfy its applicable capital requirements are not eligible for this risk weight.

³⁹ With regard to securities firms incorporated in the United States, qualifying securities firms are those securities firms that are broker-dealers registered with the Securities and Exchange Commission (SEC) and are in compliance with the SEC's net capital rule, 17 CFR 240.15c3-1. With regard to securities firms incorporated in any other country

curities firm has a long-term issuer credit rating, or a rating on at least one issue of long-term debt, in one of the three highest investment grade rating categories from a nationally recognized statistical rating organization; or the claim is guaranteed by the firm's parent company and the parent company has such a rating. If ratings are available from more than one rating agency, the lowest rating will be used to determine whether the rating requirement has been met. This category also includes a collateralized claim on a qualifying securities firm in such a country, without regard to satisfaction of the rating standard, provided that the claim arises under a contract that:

(1) Is a reverse repurchase/repurchase agreement or securities lending/borrowing transaction executed using standard industry documentation;

(2) Is collateralized by debt or equity securities that are liquid and readily marketable;

(3) Is marked-to-market daily;

(4) Is subject to a daily margin maintenance requirement under the standard industry documentation; and

(5) Can be liquidated, terminated, or accelerated immediately in bankruptcy or similar proceeding, and the security or collateral agreement will not be stayed or avoided, under applicable law of the relevant jurisdiction.⁴⁰

in the OECD-based group of countries, qualifying securities firms are those securities firms that a bank is able to demonstrate are subject to consolidated supervision and regulation (covering their direct and indirect subsidiaries, but not necessarily their parent organizations) comparable to that imposed on banks in OECD countries. Such regulation must include risk-based capital requirements comparable to those applied to banks under the Accord on International Convergence of Capital Measurement and Capital Standards (1988, as amended in 1998) (Basel Accord).

⁴⁰ For example, a claim is exempt from the automatic stay in bankruptcy in the United States if it arises under a securities contract or a repurchase agreement subject to section 555 or 559 of the Bankruptcy Code, respectively (11 U.S.C. 555 or 559), a qualified financial contract under section 11(e)(8) of the Federal Deposit Insurance Act (12 U.S.C. 1821(e)(8)), or a netting contract between financial institutions under 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).

3. *Category 3: 50 percent.* This category includes loans fully secured by first liens⁴¹ on 1- to 4-family residential properties, either owner-occupied or rented, or on multifamily residential properties,⁴² that meet certain criteria.⁴³ Loans included in this category

⁴¹ If a bank holds the first and junior lien(s) on a residential property and no other party holds an intervening lien, the transaction is treated as a single loan secured by a first lien for the purposes of determining the loan-to-value ratio and assigning a risk weight.

⁴² Loans that qualify as loans secured by 1- to 4-family residential properties or multifamily residential properties are listed in the instructions to the commercial bank Call Report. In addition, for risk-based capital purposes, loans secured by 1- to 4-family residential properties include loans to builders with substantial project equity for the construction of 1- to 4-family residences that have been presold under firm contracts to purchasers who have obtained firm commitments for permanent qualifying mortgage loans and have made substantial earnest money deposits. Such loans to builders will be considered prudently underwritten only if the bank has obtained sufficient documentation that the buyer of the home intends to purchase the home (i.e., has a legally binding written sales contract) and has the ability to obtain a mortgage loan sufficient to purchase the home (i.e., has a firm written commitment for permanent financing of the home upon completion).

The instructions to the Call Report also discuss the treatment of loans, including multifamily housing loans, that are sold subject to a pro rata loss sharing arrangement. Such an arrangement should be treated by the selling bank as sold (and excluded from balance sheet assets) to the extent that the sales agreement provides for the purchaser of the loan to share in any loss incurred on the loan on a pro rata basis with the selling bank. In such a transaction, from the standpoint of the selling bank, the portion of the loan that is treated as sold is not subject to the risk-based capital standards. In connection with sales of multifamily housing loans in which the purchaser of a loan shares in any loss incurred on the loan with the selling institution on other than a pro rata basis, these other loss sharing arrangements are taken into account for purposes of determining the extent to which such loans are treated by the selling bank as sold (and excluded from balance sheet assets) under the risk-based capital framework in the same manner as prescribed for reporting purposes in the instructions to the Call Report.

⁴³ Residential property loans that do not meet all the specified criteria or that are made for the purpose of speculative property

must have been made in accordance with prudent underwriting standards;⁴⁴ be performing in accordance with their original terms; and not be 90 days or more past due or carried in nonaccrual status. The following additional criteria must also be applied to a loan secured by a multifamily residential property that is included in this category: all principal and interest payments on the loan must have been made on time for at least the year preceding placement in this category, or in the case where the existing property owner is refinancing a loan on that property, all principal and interest payments on the loan being refinanced must have been made on time for at least the year preceding placement in this category; amortization of the principal and interest must occur over a period of not more than 30 years and the minimum original maturity for repayment of principal must not be less than 7 years; and the annual net operating income (before debt service) generated by the property during its most recent fiscal year must not be less than 120 percent of the loan's current annual debt service (115 percent if the loan is based on a floating interest rate) or, in the case of a cooperative or other not-for-profit housing project, the property must generate sufficient cash flow to provide comparable protection to the institution. Also included in this category are privately-issued mortgage-backed securities provided that

(1) The structure of the security meets the criteria described in section III(B)(3) above;

(2) If the security is backed by a pool of conventional mortgages, on 1- to 4-family residential or multifamily residential properties each underlying mortgage meets the criteria described above in this section for

development are placed in the 100 percent risk category.

⁴⁴ Prudent underwriting standards include a conservative ratio of the current loan balance to the value of the property. In the case of a loan secured by multifamily residential property, the loan-to-value ratio is not conservative if it exceeds 80 percent (75 percent if the loan is based on a floating interest rate). Prudent underwriting standards also dictate that a loan-to-value ratio used in the case of originating a loan to acquire a property would not be deemed conservative unless the value is based on the lower of the acquisition cost of the property or appraised (or if appropriate, evaluated) value. Otherwise, the loan-to-value ratio generally would be based upon the value of the property as determined by the most current appraisal, or if appropriate, the most current evaluation. All appraisals must be made in a manner consistent with the Federal banking agencies' real estate appraisal regulations and guidelines and with the bank's own appraisal guidelines.

eligibility for the 50 percent risk category at the time the pool is originated;

(3) If the security is backed by privately-issued mortgage-backed securities, *each* underlying security qualifies for the 50 percent risk category; and

(4) If the security is backed by a pool of multifamily residential mortgages, principal and interest payments on the security are not 30 days or more past due.

Privately-issued mortgage-backed securities that do not meet these criteria or that do not qualify for a lower risk weight are generally assigned to the 100 percent risk category.

Also assigned to this category are *revenue* (non-general obligation) bonds or similar obligations, including loans and leases, that are obligations of states or other political subdivisions of the U.S. (for example, municipal revenue bonds) or other countries of the OECD-based group, but for which the government entity is committed to repay the debt with revenues from the specific projects financed, rather than from general tax funds.

Credit equivalent amounts of derivative contracts involving standard risk obligors (that is, obligors whose loans or debt securities would be assigned to the 100 percent risk category) are included in the 50 percent category, unless they are backed by collateral or guarantees that allow them to be placed in a lower risk category.

4. *Category 4: 100 percent.* a. All assets not included in the categories above are assigned to this category, which comprises standard risk assets. The bulk of the assets typically found in a loan portfolio would be assigned to the 100 percent category.

b. This category includes long-term claims on, and the portions of long-term claims that are guaranteed by, non-OECD banks, and all claims on non-OECD central governments that entail some degree of transfer risk.⁴⁵ This category includes all claims on foreign and domestic private-sector obligors not included in the categories above (including loans to nondepository financial institutions and bank holding companies); claims on commercial firms owned by the public sector; customer liabilities to the bank on acceptances outstanding involving standard risk claims;⁴⁶ investments in fixed assets,

⁴⁵ Such assets include all nonlocal currency claims on, and the portions of claims that are guaranteed by, non-OECD central governments and those portions of local currency claims on, or guaranteed by, non-OECD central governments that exceed the local currency liabilities held by the bank.

⁴⁶ Customer liabilities on acceptances outstanding involving nonstandard risk claims, such as claims on U.S. depository institutions, are assigned to the risk category appropriate to the identity of the obligor or, if

premises, and other real estate owned; common and preferred stock of corporations, including stock acquired for debts previously contracted; all stripped mortgage-backed securities and similar instruments; and commercial and consumer loans (except those assigned to lower risk categories due to recognized guarantees or collateral and loans secured by residential property that qualify for a lower risk weight). This category also includes claims representing capital of a qualifying securities firm.

c. Also included in this category are industrial-development bonds and similar obligations issued under the auspices of states or political subdivisions of the OECD-based group of countries for the benefit of a private party or enterprise where that party or enterprise, not the government entity, is obligated to pay the principal and interest, and all obligations of states or political subdivisions of countries that do not belong to the OECD-based group.

d. The following assets also are assigned a risk weight of 100 percent if they have not been deducted from capital: investments in unconsolidated companies, joint ventures, or associated companies; instruments that qualify as capital issued by other banking organizations; and any intangibles, including those that may have been grandfathered into capital.

D. Off-Balance Sheet Items

The face amount of an off-balance sheet item is generally incorporated into risk-weighted assets in two steps. The face amount is first multiplied by a credit conversion factor, except for direct credit substitutes and recourse obligations as discussed in section III.D.1. of this appendix. The resultant credit equivalent amount is assigned to the appropriate risk category according to the obligor or, if relevant, the guarantor, the nature of any collateral, or external credit ratings.⁴⁷

relevant, the nature of the collateral or guarantees backing the claims. Portions of acceptances conveyed as risk participations to U.S. depository institutions or foreign banks are assigned to the 20 percent risk category appropriate to short-term claims guaranteed by U.S. depository institutions and foreign banks.

⁴⁷ The sufficiency of collateral and guarantees for off-balance-sheet items is determined by the market value of the collateral or the amount of the guarantee in relation to the face amount of the item, except for derivative contracts, for which this determination is generally made in relation to the credit equivalent amount. Collateral and

Continued

1. *Items with a 100-percent conversion factor.*

a. Except as otherwise provided in section III.B.3. of this appendix, the full amount of an asset or transaction supported, in whole or in part, by a direct credit substitute or a recourse obligation. Direct credit substitutes and recourse obligations are defined in section III.B.3. of this appendix.

b. Sale and repurchase agreements and forward agreements. Forward agreements are legally binding contractual obligations to purchase assets with certain drawdown at a specified future date. Such obligations include forward purchases, forward forward deposits placed,⁴⁸ and partly-paid shares and securities; they do not include commitments to make residential mortgage loans or forward foreign exchange contracts.

c. Securities lent by a bank are treated in one of two ways, depending upon whether the lender is at risk of loss. If a bank, as agent for a customer, lends the customer's securities and does not indemnify the customer against loss, then the transaction is excluded from the risk-based capital calculation. If, alternatively, a bank lends its own securities or, acting as agent for a customer, lends the customer's securities and indemnifies the customer against loss, the transaction is converted at 100 percent and assigned to the risk weight category appropriate to the obligor, or, if applicable, to any collateral delivered to the lending bank, or the independent custodian acting on the lending bank's behalf. Where a bank is acting as agent for a customer in a transaction involving the lending or sale of securities that is collateralized by cash delivered to the bank, the transaction is deemed to be collateralized by cash on deposit in the bank for purposes of determining the appropriate risk-weight category, provided that any indemnification is limited to no more than the difference between the market value of the securities and the cash collateral received and any reinvestment risk associated with that cash collateral is borne by the customer.

d. In the case of direct credit substitutes in which a risk participation⁴⁹ has been conveyed, the full amount of the assets that are supported, in whole or in part, by the credit enhancement are converted to a credit equivalent amount at 100 percent. However,

guarantees are subject to the same provisions noted under section III.B of this appendix A.

⁴⁸ Forward forward deposits accepted are treated as interest rate contracts.

⁴⁹ That is, a participation in which the originating bank remains liable to the beneficiary for the full amount of the direct credit substitute if the party that has acquired the participation fails to pay when the instrument is drawn.

the *pro rata* share of the credit equivalent amount that has been conveyed through a risk participation is assigned to whichever risk category is lower: the risk category appropriate to the obligor, after considering any relevant guarantees or collateral, or the risk category appropriate to the institution acquiring the participation.⁵⁰ Any remainder is assigned to the risk category appropriate to the obligor, guarantor, or collateral. For example, the *pro rata* share of the full amount of the assets supported, in whole or in part, by a direct credit substitute conveyed as a risk participation to a U.S. domestic depository institution or foreign bank is assigned to the 20 percent risk category.⁵¹

e. In the case of direct credit substitutes in which a risk participation has been acquired, the acquiring bank's percentage share of the direct credit substitute is multiplied by the full amount of the assets that are supported, in whole or in part, by the credit enhancement and converted to a credit equivalent amount at 100 percent. The credit equivalent amount of an acquisition of a risk participation in a direct credit substitute is assigned to the risk category appropriate to the account party obligor or, if relevant, the nature of the collateral or guarantees.

f. In the case of direct credit substitutes that take the form of a syndication where each bank is obligated only for its *pro rata* share of the risk and there is no recourse to the originating bank, each bank will only include its *pro rata* share of the assets supported, in whole or in part, by the direct credit substitute in its risk-based capital calculation.⁵²

* * * * *

⁵⁰ A risk participation in bankers acceptances conveyed to other institutions is also assigned to the risk category appropriate to the institution acquiring the participation or, if relevant, the guarantor or nature of the collateral.

⁵¹ Risk participations with a remaining maturity of over one year that are conveyed to non-OECD banks are to be assigned to the 100 percent risk category, unless a lower risk category is appropriate to the obligor, guarantor, or collateral.

⁵² For example, if a bank has a 10 percent share of a \$10 syndicated direct credit substitute that provides credit support to a \$100 loan, then the bank's \$1 *pro rata* share in the enhancement means that a \$10 *pro rata* share of the loan is included in risk weighted assets.

2. *Items with a 50 percent conversion factor.* a. Transaction-related contingencies are converted at 50 percent. Such contingencies include bid bonds, performance bonds, warranties, standby letters of credit related to particular transactions, and performance standby letters of credit, as well as acquisitions of risk participations in performance standby letters of credit. Performance standby letters of credit represent obligations backing the performance of nonfinancial or commercial contracts or undertakings. To the extent permitted by law or regulation, performance standby letters of credit include arrangements backing, among other things, subcontractors' and suppliers' performance, labor and materials contracts, and construction bids.

b. The unused portion of commitments with an *original* maturity exceeding one year, including underwriting commitments, and commercial and consumer credit commitments also are converted at 50 percent. Original maturity is defined as the length of time between the date the commitment is issued and the earliest date on which: (1) The bank can, at its option, unconditionally (without cause) cancel the commitment,⁵³ and (2) the bank is scheduled to (and as a normal practice actually does) review the facility to determine whether or not it should be extended. Such reviews must continue to be conducted at least annually for such a facility to qualify as a short-term commitment.

c.i. Commitments are defined as any legally binding arrangements that obligate a bank to extend credit in the form of loans or leases; to purchase loans, securities, or other assets; or to participate in loans and leases. They also include overdraft facilities, revolving credit, home equity and mortgage lines of credit, eligible ABCP liquidity facilities, and similar transactions. Normally, commitments involve a written contract or agreement and a commitment fee, or some other form of consideration. Commitments are included in weighted-risk assets regardless of whether they contain "material adverse change" clauses or other provisions that are intended to relieve the issuer of its funding obligation under certain conditions. In the case of commitments structured as syndications, where the bank is obligated solely for its *pro rata* share, only the bank's proportional share of the syndicated commitment

⁵³In the case of consumer home equity or mortgage lines of credit secured by liens on 1-4 family residential properties, the bank is deemed able to unconditionally cancel the commitment for the purpose of this criterion if, at its option, it can prohibit additional extensions of credit, reduce the credit line, and terminate the commitment to the full extent permitted by relevant Federal law.

is taken into account in calculating the risk-based capital ratio.

ii Banks that are subject to the market risk rules are required to convert the notional amount of eligible ABCP liquidity facilities, in form or in substance, with an original maturity of over one year that are carried in the trading account at 50 percent to determine the appropriate credit equivalent amount even though those facilities are structured or characterized as derivatives or other trading book assets. Liquidity facilities that support ABCP, in form or in substance, (including those positions to which the market risk rules may not be applied as set forth in section 2(a) of appendix E to part 208) that are not eligible ABCP liquidity facilities are to be considered recourse obligations or direct credit substitutes, and assessed the appropriate risk-based capital treatment in accordance with section III.B.3. of this appendix.

d. Once a commitment has been converted at 50 percent, any portion that has been conveyed to other U.S. depository institutions or OECD banks as participations in which the originating bank retains the full obligation to the borrower if the participating bank fails to pay when the instrument is drawn, is assigned to the 20 percent risk category. This treatment is analogous to that accorded to conveyances of risk participations in standby letters of credit. The acquisition of a participation in a commitment by a bank is converted at 50 percent and assigned to the risk category appropriate to the account party obligor or, if relevant, the nature of the collateral or guarantees.

e. Revolving underwriting facilities (RUFs), note issuance facilities (NIFs), and other similar arrangements also are converted at 50 percent regardless of maturity. These are facilities under which a borrower can issue on a revolving basis short-term paper in its own name, but for which the underwriting banks have a legally binding commitment either to purchase any notes the borrower is unable to sell by the roll-over date or to advance funds to the borrower.

3. *Items with a 20 percent conversion factor.* Short-term, self-liquidating trade-related contingencies which arise from the movement of goods are converted at 20 percent. Such contingencies generally include commercial letters of credit and other documentary letters of credit collateralized by the underlying shipments.

4. *Items with a 10 percent conversion factor.* a. Unused portions of eligible ABCP liquidity facilities with an original maturity of one year or less are converted at 10 percent.

b. Banks that are subject to the market risk rules are required to convert the notional amount of eligible ABCP liquidity facilities, in form or in substance, with an original maturity of one year or less that are carried in the trading account at 10 percent

to determine the appropriate credit equivalent amount even though those facilities are structured or characterized as derivatives or other trading book assets. Liquidity facilities that support ABCP, in form or in substance, (including those positions to which the market risk rules may not be applied as set forth in section 2(a) of appendix E of this part) that are not eligible ABCP liquidity facilities are to be considered recourse obligations or direct credit substitutes and assessed the appropriate risk-based capital requirement in accordance with section III.B.3. of this appendix.

5. *Items with a zero percent conversion factor.* These include unused portions of commitments (with the exception of eligible ABCP liquidity facilities) with an original maturity of one year or less,⁵⁴ or which are unconditionally cancelable at any time, provided a separate credit decision is made before each drawing under the facility. Unused portions of lines of credit on retail credit cards and related plans are deemed to be short-term commitments if the bank has the unconditional right to cancel the line of credit at any time, in accordance with applicable law.

E. Derivative Contracts (Interest Rate, Exchange Rate, Commodity—including precious metals) and Equity-Linked Contracts)

1. *Scope.* Credit equivalent amounts are computed for each of the following off-balance-sheet derivative contracts:

a. Interest Rate Contracts. These include single currency interest rate swaps, basis swaps, forward rate agreements, interest rate options purchased (including caps, collars, and floors purchased), and any other instrument linked to interest rates that gives rise to similar credit risks (including when-issued securities and forward forward deposits accepted).

b. Exchange Rate Contracts. These include cross-currency interest rate swaps, forward foreign exchange contracts, currency options purchased, and any other instrument linked to exchange rates that gives rise to similar credit risks.

c. Equity Derivative Contracts. These include equity-linked swaps, equity-linked options purchased, forward equity-linked contracts, and any other instrument linked to equities that gives rise to similar credit risks.

d. Commodity (including precious metal) Derivative Contracts. These include commodity-linked swaps, commodity-linked options purchased, forward commodity-linked contracts, and any other instrument linked to commodities that gives rise to similar credit risks.

e. Exceptions. Exchange rate contracts with an original maturity of fourteen or fewer calendar days and derivative contracts traded on exchanges that require daily receipt and payment of cash variation margin may be excluded from the risk-based ratio calculation. Gold contracts are accorded the same treatment as exchange rate contracts except that gold contracts with an original maturity of fourteen or fewer calendar days are included in the risk-based ratio calculation. Over-the-counter options purchased are included and treated in the same way as other derivative contracts.

2. *Calculation of credit equivalent amounts. a.* The credit equivalent amount of a derivative contract that is not subject to a qualifying bilateral netting contract in accordance with section III.E.3. of this appendix A is equal to the sum of (i) the current exposure (sometimes referred to as the replacement cost) of the contract; and (ii) an estimate of the potential future credit exposure of the contract.

b. The current exposure is determined by the mark-to-market value of the contract. If the mark-to-market value is positive, then the current exposure is equal to that mark-to-market value. If the mark-to-market value is zero or negative, then the current exposure is zero. Mark-to-market values are measured in dollars, regardless of the currency or currencies specified in the contract, and should reflect changes in underlying rates, prices, and indices, as well as counterparty credit quality.

c. The potential future credit exposure of a contract, including a contract with a negative mark-to-market value, is estimated by multiplying the notional principal amount of the contract by a credit conversion factor. Banks should use, subject to examiner review, the effective rather than the apparent or stated notional amount in this calculation. The credit conversion factors are:

CONVERSION FACTORS
[In percent]

Remaining maturity	Interest rate	Exchange rate and gold	Equity	Commodity, excluding precious metals	Precious metals, except gold
One year or less	0.0	1.0	6.0	10.0	7.0
Over one to five years	0.5	5.0	8.0	12.0	7.0

⁵⁴ [Reserved]

CONVERSION FACTORS—Continued
[In percent]

Remaining maturity	Interest rate	Exchange rate and gold	Equity	Commodity, excluding precious metals	Precious metals, except gold
Over five years	1.5	7.5	10.0	15.0	8.0

d. For a contract that is structured such that on specified dates any outstanding exposure is settled and the terms are reset so that the market value of the contract is zero, the remaining maturity is equal to the time until the next reset date. For an interest rate contract with a remaining maturity of more than one year that meets these criteria, the minimum conversion factor is 0.5 percent.

e. For a contract with multiple exchanges of principal, the conversion factor is multiplied by the number of remaining payments in the contract. A derivative contract not included in the definitions of interest rate, exchange rate, equity, or commodity contracts as set forth in section III.E.1. of this appendix A, is subject to the same conversion factors as a commodity, excluding precious metals.

f. No potential future exposure is calculated for a single currency interest rate swap in which payments are made based upon two floating rate indices (a so called floating/floating or basis swap); the credit exposure on such a contract is evaluated solely on the basis of the mark-to-market value.

g. The Board notes that the conversion factors set forth above, which are based on observed volatilities of the particular types of instruments, are subject to review and modification in light of changing volatilities or market conditions.

3. *Netting.* a. For purposes of this appendix A, netting refers to the offsetting of positive and negative mark-to-market values when determining a current exposure to be used in the calculation of a credit equivalent amount. Any legally enforceable form of bilateral netting (that is, netting with a single counterparty) of derivative contracts is recognized for purposes of calculating the credit equivalent amount provided that:

i. The netting is accomplished under a written netting contract that creates a single legal obligation, covering all included individual contracts, with the effect that the bank would have a claim to receive, or obligation to pay, only the net amount of the sum of the positive and negative mark-to-market values on included individual contracts in the event that a counterparty, or a counterparty to whom the contract has been validly assigned, fails to perform due to any

of the following events: default, insolvency, liquidation, or similar circumstances.

ii. The bank obtains a written and reasoned legal opinion(s) representing that in the event of a legal challenge—including one resulting from default, insolvency, liquidation, or similar circumstances—the relevant court and administrative authorities would find the bank's exposure to be the net amount under:

1. The law of the jurisdiction in which the counterparty is chartered or the equivalent location in the case of noncorporate entities, and if a branch of the counterparty is involved, then also under the law of the jurisdiction in which the branch is located;

2. The law that governs the individual contracts covered by the netting contract; and

3. The law that governs the netting contract.

iii. The bank establishes and maintains procedures to ensure that the legal characteristics of netting contracts are kept under review in the light of possible changes in relevant law.

iv. The bank maintains in its files documentation adequate to support the netting of derivative contracts, including a copy of the bilateral netting contract and necessary legal opinions.

b. A contract containing a walkaway clause is not eligible for netting for purposes of calculating the credit equivalent amount.⁵⁵

c. A bank netting individual contracts for the purpose of calculating credit equivalent amounts of derivative contracts, represents that it has met the requirements of this appendix A and all the appropriate documents are in the bank's files and available for inspection by the Federal Reserve. The Federal Reserve may determine that a bank's files are inadequate or that a netting contract, or any of its underlying individual contracts, may not be legally enforceable under any one of the bodies of law described in section

⁵⁵ A walkaway clause is a provision in a netting contract that permits a non-defaulting counterparty to make lower payments than it would make otherwise under the contract, or no payment at all, to a defaulter or to the estate of a defaulter, even if the defaulter or the estate of the defaulter is a net creditor under the contract.

III.E.3.a.ii. of this appendix A. If such a determination is made, the netting contract may be disqualified from recognition for risk-based capital purposes or underlying individual contracts may be treated as though they are not subject to the netting contract.

d. The credit equivalent amount of contracts that are subject to a qualifying bilateral netting contract is calculated by adding (i) the current exposure of the netting contract (net current exposure) and (ii) the sum of the estimates of potential future credit exposures on all individual contracts subject to the netting contract (gross potential future exposure) adjusted to reflect the effects of the netting contract.⁵⁶

e. The net current exposure is the sum of all positive and negative mark-to-market values of the individual contracts included in the netting contract. If the net sum of the mark-to-market values is positive, then the net current exposure is equal to that sum. If the net sum of the mark-to-market values is zero or negative, then the net current exposure is zero. The Federal Reserve may determine that a netting contract qualifies for risk-based capital netting treatment even though certain individual contracts included under the netting contract may not qualify. In such instances, the nonqualifying contracts should be treated as individual contracts that are not subject to the netting contract.

f. Gross potential future exposure, or A_{gross} is calculated by summing the estimates of potential future exposure (determined in accordance with section III.E.2 of this appendix A) for each individual contract subject to the qualifying bilateral netting contract.

g. The effects of the bilateral netting contract on the gross potential future exposure are recognized through the application of a formula that results in an adjusted add-on amount (A_{net}). The formula, which employs the ratio of net current exposure to gross current exposure (NGR) is expressed as:

$$A_{\text{net}} = (0.4 \times A_{\text{gross}}) + 0.6(\text{NGR} \times A_{\text{gross}})$$

h. The NGR may be calculated in accordance with either the counterparty-by-counterparty approach or the aggregate approach.

i. Under the counterparty-by-counterparty approach, the NGR is the ratio of the net current exposure for a netting contract to the gross current exposure of the netting contract. The gross current exposure is the

sum of the current exposures of all individual contracts subject to the netting contract calculated in accordance with section III.E.2. of this appendix A. Net negative mark-to-market values for individual netting contracts with the same counterparty may not be used to offset net positive mark-to-market values for other netting contracts with that counterparty.

ii. Under the aggregate approach, the NGR is the ratio of the sum of all of the net current exposures for qualifying bilateral netting contracts to the sum of all of the gross current exposures for those netting contracts (each gross current exposure is calculated in the same manner as in section III.E.3.h.i. of this appendix A). Net negative mark-to-market values for individual counterparties may not be used to offset net positive mark-to-market values for other counterparties.

iii. A bank must consistently use either the counterparty-by-counterparty approach or the aggregate approach to calculate the NGR. Regardless of the approach used, the NGR should be applied individually to each qualifying bilateral netting contract to determine the adjusted add-on for that netting contract.

i. In the event a netting contract covers contracts that are normally excluded from the risk-based ratio calculation—for example, exchange rate contracts with an original maturity of fourteen or fewer calendar days or instruments traded on exchanges that require daily payment and receipt of cash variation margin—a bank may elect to either include or exclude all mark-to-market values of such contracts when determining net current exposure, provided the method chosen is applied consistently.

4. *Risk Weights.* Once the credit equivalent amount for a derivative contract, or a group of derivative contracts subject to a qualifying bilateral netting contract, has been determined, that amount is assigned to the risk category appropriate to the counterparty, or, if relevant, the guarantor or the nature of any collateral.⁵⁷ However, the maximum risk weight applicable to the credit equivalent amount of such contracts is 50 percent.

5. *Avoidance of double counting.* a. In certain cases, credit exposures arising from the derivative contracts covered by section III.E. of this appendix A may already be reflected,

⁵⁶ For purposes of calculating potential future credit exposure to a netting counterparty for foreign exchange contracts and other similar contracts in which notional principal is equivalent to cash flows, total notional principal is defined as the net receipts falling due on each value date in each currency.

⁵⁷ For derivative contracts, sufficiency of collateral or guarantees is generally determined by the market value of the collateral or the amount of the guarantee in relation to the credit equivalent amount. Collateral and guarantees are subject to the same provisions noted under section III.B. of this appendix A.

in part, on the balance sheet. To avoid double counting such exposures in the assessment of capital adequacy and, perhaps, assigning inappropriate risk weights, counterparty credit exposures arising from the derivative instruments covered by these guidelines may need to be excluded from balance sheet assets in calculating a bank's risk-based capital ratios.

b. Examples of the calculation of credit equivalent amounts for contracts covered under this section III.E. are contained in Attachment V of this appendix A.

IV. Minimum Supervisory Ratios and Standards

The interim and final supervisory standards set forth below specify *minimum* supervisory ratios based primarily on broad credit risk considerations. As noted above, the risk-based ratio does not take explicit account of the quality of individual asset portfolios or the range of other types of risks to which banks may be exposed, such as interest rate, liquidity, market or operational risks. For this reason, banks are generally expected to operate with capital positions above the minimum ratios.

Institutions with high or inordinate levels of risk are expected to operate well above minimum capital standards. Banks experiencing or anticipating significant growth are also expected to maintain capital, including tangible capital positions, well above the minimum levels. For example, most such institutions generally have operated at capital levels ranging from 100 to 200 basis points above the stated minimums. Higher capital ratios could be required if warranted by the particular circumstances or risk profiles of individual banks. In all cases, banks should hold capital commensurate with the level and nature of all of the risks, including the volume and severity of problem loans, to which they are exposed.

Upon adoption of the risk-based framework, any bank that does not meet the interim or final supervisory ratios, or whose capital is otherwise considered inadequate, is expected to develop and implement a plan acceptable to the Federal Reserve for achieving an adequate level of capital consistent with the provisions of these guidelines or with the special circumstances affecting the individual institution. In addition, such banks should avoid any actions, including increased risk-taking or unwarranted expansion, that would lower or further erode their capital positions.

A. Minimum Risk-Based Ratio After Transition Period

As reflected in Attachment VI, by year-end 1992, all state member banks should meet a minimum ratio of qualifying total capital to weighted risk assets of 8 percent, of which at least 4.0 percentage points should be in the

form of Tier 1 capital. For purposes of section IV.A., Tier 1 capital is defined as the sum of core capital elements less goodwill and other intangible assets required to be deducted in accordance with section II.B.1.b. of this appendix. The maximum amount of supplementary capital elements that qualifies as Tier 2 capital is limited to 100 percent of Tier 1 capital. In addition, the combined maximum amount of subordinated debt and intermediate-term preferred stock that qualifies as Tier 2 capital is limited to 50 percent of Tier 1 capital. The maximum amount of the allowance for loan and lease losses that qualifies as Tier 2 capital is limited to 1.25 percent of gross weighted risk assets. Allowances for loan and lease losses in excess of this limit may, of course, be maintained, but would not be included in a bank's total capital. The Federal Reserve will continue to require banks to maintain reserves at levels fully sufficient to cover losses inherent in their loan portfolios.

Qualifying total capital is calculated by adding Tier 1 capital and Tier 2 capital (limited to 100 percent of Tier 1 capital) and then deducting from this sum certain investments in banking or finance subsidiaries that are not consolidated for accounting or supervisory purposes, reciprocal holdings of banking organization capital securities, or other items at the direction of the Federal Reserve. These deductions are discussed above in section II(B).

B. Transition Arrangements

The transition period for implementing the risk-based capital standard ends on December 31, 1992. Initially, the risk-based capital guidelines do not establish a minimum level of capital. However, by year-end 1990, banks are expected to meet a minimum interim target ratio for qualifying total capital to weighted risk assets of 7.25 percent, at least one-half of which should be in the form of Tier 1 capital. For purposes of meeting the 1990 interim target, the amount of loan loss reserves that may be included in capital is limited to 1.5 percent of weighted risk assets and up to 10 percent of a bank's Tier 1 capital may consist of supplementary capital elements. Thus, the 7.25 percent interim target ratio implies a minimum ratio of Tier 1 capital to weighted risk assets of 3.6 percent (one-half of 7.25) and a minimum ratio of core capital elements to weighted risk assets ratio of 3.25 percent (nine-tenths of the Tier 1 capital ratio).

Through year-end 1990, banks have the option of complying with the minimum 7.25 percent year-end 1990 risk-based capital standard, in lieu of the minimum 5.5 percent primary and 6 percent total capital to total assets capital ratios set forth in appendix B to part 225 of the Federal Reserve's Regulation Y. In addition, as more fully set forth in

appendix B to this part, banks are expected to maintain a minimum ratio of Tier 1 capital total assets during this transition period.

ATTACHMENT I—SAMPLE CALCULATION OF RISK-BASED CAPITAL RATIO FOR STATE MEMBER BANKS

Example of a bank with \$6,000 in total capital and the following assets and off-balance sheet items:

Balance Sheet Assets:	
Cash	\$5,000
U.S. Treasuries	20,000
Balances at domestic banks	5,000
Loans secured by first liens on 1-4 family residential properties	5,000
Loans to private corporations	65,000
Total Balance Sheet Assets	\$100,000
Off-Balance Sheet Items:	
Standby letters of credit ("SLCs") backing general obligation debt issues of U.S. municipalities ("GOs")	\$10,000
Long-term legally binding commitments to private corporations	20,000
Total Off-Balance Sheet Items	30,000

This bank's total capital to total assets (leverage) ratio would be: $(\$6,000/\$100,000)=6.00\%$

To compute the bank's weighted risk assets:

1. Compute the credit equivalent amount of each off-balance sheet ("OBS") item

OBS item	Face value		Conversion factor		Credit equivalent amount
SLCS backing municipal GOs	\$10,000	×	1.00	=	\$10,000
Long-term commitments to private corporations	20,000	×	0.50	=	10,000
2. Multiply each balance sheet asset and the credit equivalent amount of each OBS item by the appropriate risk weight.					
0% Category:					
Cash	\$ 5,000				
U.S. Treasuries	20,000				
	25,000	×	0	=	0
20% Category:					
Balances at domestic banks	5,000				
Credit equivalent amounts of SLCs backing GOs of U.S. municipalities	10,000				
	15,000	×	.20	=	\$3,000
50% Category:					
Loans secured by first liens on 1-4 family residential properties	5,000	×	.50	=	2,500
100% Category:					
Loans to private corporations	65,000				
Credit equivalent amounts of long-term commitments to private corporations	10,000				
	75,000	×	1.00	=	75,000
Total risk-weighted assets					80,500

This bank's ratio of total capital to weighted risk assets (risk-based capital ratio) would be: $(\$6,000/\$80,500)=7.45\%$

[54 FR 4198, Jan. 27, 1989; 54 FR 12531, Mar. 27, 1989, as amended at 55 FR 32831, Aug. 10, 1990; 56 FR 51156, Oct. 10, 1991; 57 FR 2012, Jan. 17, 1992; 57 FR 60719, Dec. 22, 1992; 57 FR 62179, 62182, Dec. 30, 1992; 58 FR 7979, Feb. 11, 1993; 58 FR 68738, Dec. 29, 1993; Reg. H, 59 FR 62992, Dec. 7, 1994; 59 FR 63244, Dec. 8, 1994; 59 FR 64563, Dec. 15, 1994; 59 FR 65924, 65925, Dec. 22, 1994; 60 FR 8180, Feb. 13, 1995; 60 FR 39229, 39230, Aug. 1, 1995; 60 FR 39493, Aug. 2, 1995; 60 FR 45615, Aug. 31, 1995; 60 FR 46176, 46178, Sept. 5, 1995; 60 FR 66044, Dec. 20, 1995; 61 FR 47370, Sept. 6, 1996; 63 FR 42675, Aug. 10, 1998; 63 FR 46522, Sept. 1, 1998; 63 FR 58621, Nov. 2, 1998; 64 FR 10200, Mar. 2, 1999; 66 FR 59636, Nov. 29, 2001; 66 FR 67074, Dec. 28, 2001; 67 FR 3797, Jan. 25, 2002; 67 FR 16977, Apr. 9, 2002; 68 FR 56535, Oct. 1, 2003; 69 FR 22385, Apr. 26, 2004; 69 FR 25672, May 7, 2004; 69 FR 44916, July 28, 2004; 70 FR 11834, Mar. 10, 2005]

APPENDIX B TO PART 208—CAPITAL ADEQUACY GUIDELINES FOR STATE MEMBER BANKS: TIER 1 LEVERAGE MEASURE

I. OVERVIEW

a. The Board of Governors of the Federal Reserve System has adopted a minimum ratio of tier 1 capital to total assets to assist in the assessment of the capital adequacy of state member banks.¹ The principal objective of this measure is to place a constraint on the maximum degree to which a state member bank can leverage its equity capital base. It is intended to be used as a supplement to the risk-based capital measure.

b. The guidelines apply to all state member banks on a consolidated basis and are to be used in the examination and supervisory process as well as in the analysis of applications acted upon by the Federal Reserve. The Board will review the guidelines from time to time and will consider the need for possible adjustments in light of any significant changes in the economy, financial markets, and banking practices.

II. THE TIER 1 LEVERAGE RATIO

a. The minimum ratio of Tier 1 capital to total assets for strong banking institutions (rated composite "1" under the UFIRS rating system of banks) is 3.0 percent. For all other institutions, the minimum ratio of Tier 1 capital to total assets is 4.0 percent. Banking institutions with supervisory, financial, operational, or managerial weaknesses, as well as institutions that are anticipating or experiencing significant growth, are expected to maintain capital ratios well above the minimum levels. Moreover, higher capital ratios may be required for any banking institution if warranted by its particular circumstances or risk profile. In all cases, institutions should hold capital commensurate with the level and nature of the risks, including the volume and severity of problem loans, to which they are exposed.

b. A bank's tier 1 leverage ratio is calculated by dividing its tier 1 capital (the numerator of the ratio) by its average total consolidated assets (the denominator of the ratio). The ratio will also be calculated using period-end assets whenever necessary, on a case-by-case basis. For the purpose of this leverage ratio, the definition of tier 1 capital as set forth in the risk-based capital guidelines contained in appendix A of this part will be used.² As a general matter, average

total consolidated assets are defined as the quarterly average total assets (defined net of the allowance for loan and lease losses) reported on the bank's Reports of Condition and Income (Call Reports), less goodwill; amounts of mortgage servicing assets, non-mortgage servicing assets, and purchased credit card relationships that, in the aggregate, are in excess of 100 percent of Tier 1 capital; amounts of nonmortgage servicing assets and purchased credit card relationships that, in the aggregate, are in excess of 25 percent of Tier 1 capital; amounts of credit-enhancing interest-only strips that are in excess of 25 percent of Tier 1 capital; all other identifiable intangible assets; any investments in subsidiaries or associated companies that the Federal Reserve determines should be deducted Tier 1 capital; deferred tax assets that are dependent upon future taxable income, net of their valuation allowance, in excess of the limitations set forth in section II.B.4 of appendix A of this part; and the amount of the total adjusted carrying value of nonfinancial equity investments that is subject to a deduction from Tier 1 capital.³

c. Notwithstanding other provisions of this appendix B, a qualifying bank that has transferred small business loans and leases on personal property (small business obligations) with recourse shall, for purposes of calculating its tier 1 leverage ratio, exclude from its average total consolidated assets the outstanding principal amount of the small business loans and leases transferred with recourse, provided two conditions are met. First, the transaction must be treated as a sale under generally accepted accounting principles (GAAP) and, second, the bank

the equity accounts of consolidated subsidiaries, and qualifying noncumulative perpetual preferred stock. In addition, as a general matter, Tier 1 capital excludes goodwill; amounts of mortgage servicing assets, non-mortgage servicing assets, and purchased credit card relationships that, in the aggregate, exceed 100 percent of Tier 1 capital; nonmortgage servicing assets and purchased credit card relationships that, in the aggregate, exceed 25 percent of Tier 1 capital; amounts of credit enhancing interest-only strips in excess of 25 percent of Tier 1 capital; other identifiable intangible assets; deferred tax assets that are dependent upon future taxable income, net of their valuation allowance, in excess of certain limitations; and a percentage of the bank's nonfinancial equity investments. The Federal Reserve may exclude certain other investments in subsidiaries or associated companies as appropriate.

³Deductions from Tier 1 capital and other adjustments are discussed more fully in section II.B in appendix A of this part.

¹Supervisory risk-based capital ratios that related capital to weighted-risk assets for state member banks are outlined in Appendix A to this part.

²Tier 1 capital for state member banks includes common equity, minority interest in

must establish pursuant to GAAP a non-capital reserve sufficient to meet the bank's reasonably estimated liability under the recourse arrangement. Only loans and leases to businesses that meet the criteria for a small business concern established by the Small Business Administration under section 3(a) of the Small Business Act are eligible for this capital treatment.

d. For purposes of this appendix B, a bank is qualifying if it meets the criteria set forth in the Board's prompt corrective action regulation (12 CFR 208.40) for well capitalized or, by order of the Board, adequately capitalized. For purposes of determining whether a bank meets these criteria, its capital ratios must be calculated without regard to the preferential capital treatment for transfers of small business obligations with recourse specified in section II.c. of this appendix B. The total outstanding amount of recourse retained by a qualifying bank on transfers of small business obligations receiving the preferential capital treatment cannot exceed 15 percent of the bank's total risk-based capital. By order, the Board may approve a higher limit.

e. If a bank ceases to be qualifying or exceeds the 15 percent capital limitation, the preferential capital treatment will continue to apply to any transfers of small business obligations with recourse that were consummated during the time that the bank was qualifying and did not exceed the capital limit.

f. The leverage capital ratio of the bank shall be calculated without regard to the preferential capital treatment for transfers of small business obligations with recourse specified in section II of this appendix B for purposes of:

(i) Determining whether a bank is adequately capitalized, undercapitalized, significantly undercapitalized, or critically undercapitalized under prompt corrective action (12 CFR 208.43(b)(1)); and

(ii) Reclassifying a well capitalized bank to adequately capitalized and requiring an adequately capitalized bank to comply with certain mandatory or discretionary supervisory actions as if the bank were in the next lower prompt corrective action capital category (12 CFR 208.43(c)).

g. Whenever appropriate, including when a bank is undertaking expansion, seeking to engage in new activities or otherwise facing unusual or abnormal risks, the Board will continue to consider the level of an individual bank's tangible tier 1 leverage ratio (after deducting all intangibles) in making an overall assessment of capital adequacy. This is consistent with the Federal Reserve's risk-based capital guidelines and long-standing Board policy and practice with regard to leverage guidelines. Banks experiencing growth, whether internally or by acquisition, are expected to maintain strong capital

position substantially above minimum supervisory levels, without significant reliance on intangible assets.

[Reg. H, 59 FR 65925, Dec. 22, 1994, as amended at 60 FR 39230, Aug. 1, 1995; 60 FR 45615, Aug. 31, 1995; 63 FR 42675, Aug. 10, 1998; 63 FR 58621, Nov. 2, 1998; 64 FR 10200, Mar. 2, 1999; 66 FR 59643, Nov. 29, 2001; 67 FR 3800, Jan. 25, 2002]

APPENDIX C TO PART 208—INTERAGENCY GUIDELINES FOR REAL ESTATE LENDING POLICIES

The agencies' regulations require that each insured depository institution adopt and maintain a written policy that establishes appropriate limits and standards for all extensions of credit that are secured by liens on or interests in real estate or made for the purpose of financing the construction of a building or other improvements.¹ These guidelines are intended to assist institutions in the formulation and maintenance of a real estate lending policy that is appropriate to the size of the institution and the nature and scope of its individual operations, as well as satisfies the requirements of the regulation.

Each institution's policies must be comprehensive, and consistent with safe and sound lending practices, and must ensure that the institution operates within limits and according to standards that are reviewed and approved at least annually by the board of directors. Real estate lending is an integral part of many institutions' business plans and, when undertaken in a prudent manner, will not be subject to examiner criticism.

LOAN PORTFOLIO MANAGEMENT CONSIDERATIONS

The lending policy should contain a general outline of the scope and distribution of the institution's credit facilities and the manner in which real estate loans are made, serviced, and collected. In particular, the institution's policies on real estate lending should:

- Identify the geographic areas in which the institution will consider lending.
- Establish a loan portfolio diversification policy and set limits for real estate loans by type and geographic market (e.g., limits on higher risk loans).
- Identify appropriate terms and conditions by type of real estate loan.

¹The agencies have adopted a uniform rule on real estate lending. See 12 CFR part 365 (FDIC); 12 CFR part 208, subpart E (FRB); 12 CFR part 34, subpart D (OCC); and 12 CFR 563.100–101 (OTS).

Federal Reserve System

Pt. 208, App. C

- Establish loan origination and approval procedures, both generally and by size and type of loan.
- Establish prudent underwriting standards that are clear and measurable, including loan-to-value limits, that are consistent with these supervisory guidelines.
- Establish review and approval procedures for exception loans, including loans with loan-to-value percentages in excess of supervisory limits.
- Establish loan administration procedures, including documentation, disbursement, collateral inspection, collection, and loan review.
- Establish real estate appraisal and evaluation programs.
- Require that management monitor the loan portfolio and provide timely and adequate reports to the board of directors.

The institution should consider both internal and external factors in the formulation of its loan policies and strategic plan. Factors that should be considered include:

- The size and financial condition of the institution.
- The expertise and size of the lending staff.
- The need to avoid undue concentrations of risk.
- Compliance with all real estate related laws and regulations, including the Community Reinvestment Act, anti-discrimination laws, and for savings associations, the Qualified Thrift Lender test.
- Market conditions.

The institution should monitor conditions in the real estate markets in its lending area so that it can react quickly to changes in market conditions that are relevant to its lending decisions. Market supply and demand factors that should be considered include:

- Demographic indicators, including population and employment trends.
- Zoning requirements.
- Current and projected vacancy, construction, and absorption rates.
- Current and projected lease terms, rental rates, and sales prices, including concessions.
- Current and projected operating expenses for different types of projects.
- Economic indicators, including trends and diversification of the lending area.
- Valuation trends, including discount and direct capitalization rates.

UNDERWRITING STANDARDS

Prudently underwritten real estate loans should reflect all relevant credit factors, including:

- The capacity of the borrower, or income from the underlying property, to adequately service the debt.
- The value of the mortgaged property.
- The overall creditworthiness of the borrower.
- The level of equity invested in the property.
- Any secondary sources of repayment.
- Any additional collateral or credit enhancements (such as guarantees, mortgage insurance or takeout commitments).

The lending policies should reflect the level of risk that is acceptable to the board of directors and provide clear and measurable underwriting standards that enable the institution's lending staff to evaluate these credit factors. The underwriting standards should address:

- The maximum loan amount by type of property.
- Maximum loan maturities by type of property.
- Amortization schedules.
- Pricing structure for different types of real estate loans.
- Loan-to-value limits by type of property.

For development and construction projects, and completed commercial properties, the policy should also establish, commensurate with the size and type of the project or property:

- Requirements for feasibility studies and sensitivity and risk analyses (*e.g.*, sensitivity of income projections to changes in economic variables such as interest rates, vacancy rates, or operating expenses).
- Minimum requirements for initial investment and maintenance of hard equity by the borrower (*e.g.*, cash or unencumbered investment in the underlying property).
- Minimum standards for net worth, cash flow, and debt service coverage of the borrower or underlying property.
- Standards for the acceptability of and limits on non-amortizing loans.
- Standards for the acceptability of and limits on the use of interest reserves.
- Pre-leasing and pre-sale requirements for income-producing property.
- Pre-sale and minimum unit release requirements for non-income-producing property loans.
- Limits on partial recourse or non-recourse loans and requirements for guarantor support.
- Requirements for takeout commitments.
- Minimum covenants for loan agreements.

LOAN ADMINISTRATION

The institution should also establish loan administration procedures for its real estate portfolio that address:

- Documentation, including:

Type and frequency of financial statements, including requirements for verification of information provided by the borrower;

Type and frequency of collateral evaluations (appraisals and other estimates of value).

- Loan closing and disbursement.
- Payment processing.
- Escrow administration.
- Collateral administration.
- Loan payoffs.
- Collections and foreclosure, including:
 - Delinquency follow-up procedures;
 - Foreclosure timing;
 - Extensions and other forms of forbearance;
 - Acceptance of deeds in lieu of foreclosure.
- Claims processing (*e.g.*, seeking recovery on a defaulted loan covered by a government guaranty or insurance program).
- Servicing and participation agreements.

SUPERVISORY LOAN-TO-VALUE LIMITS

Institutions should establish their own internal loan-to-value limits for real estate loans. These internal limits should not exceed the following supervisory limits:

Loan category	Loan-to-value limit (percent)
Raw land	65
Land development	75
Construction:	
Commercial, multifamily, ¹ and other non-residential	80
1- to 4-family residential	85
Improved property	85
Owner-occupied 1- to 4-family and home equity	(²)

¹ Multifamily construction includes condominiums and cooperatives.

² A loan-to-value limit has not been established for permanent mortgage or home equity loans on owner-occupied, 1- to 4-family residential property. However, for any such loan with a loan-to-value ratio that equals or exceeds 90 percent at origination, an institution should require appropriate credit enhancement in the form of either mortgage insurance or readily marketable collateral.

The supervisory loan-to-value limits should be applied to the underlying property that collateralizes the loan. For loans that fund multiple phases of the same real estate project (*e.g.*, a loan for both land development and construction of an office building), the appropriate loan-to-value limit is the limit applicable to the final phase of the project funded by the loan; however, loan disbursements should not exceed actual development or construction outlays. In situations where a loan is fully cross-collateralized by two or more properties or is secured by a collateral pool of two or more properties, the appropriate maximum loan amount under supervisory loan-to-value limits is the sum of the value of each property, less senior liens, multiplied by the appro-

appropriate loan-to-value limit for each property. To ensure that collateral margins remain within the supervisory limits, lenders should redetermine conformity whenever collateral substitutions are made to the collateral pool.

In establishing internal loan-to-value limits, each lender is expected to carefully consider the institution-specific and market factors listed under “Loan Portfolio Management Considerations,” as well as any other relevant factors, such as the particular subcategory or type of loan. For any subcategory of loans that exhibits greater credit risk than the overall category, a lender should consider the establishment of an internal loan-to-value limit for that subcategory that is lower than the limit for the overall category.

The loan-to-value ratio is only one of several pertinent credit factors to be considered when underwriting a real estate loan. Other credit factors to be taken into account are highlighted in the “Underwriting Standards” section above. Because of these other factors, the establishment of these supervisory limits should not be interpreted to mean that loans at these levels will automatically be considered sound.

LOANS IN EXCESS OF THE SUPERVISORY LOAN-TO-VALUE LIMITS

The agencies recognize that appropriate loan-to-value limits vary not only among categories of real estate loans but also among individual loans. Therefore, it may be appropriate in individual cases to originate or purchase loans with loan-to-value ratios in excess of the supervisory loan-to-value limits, based on the support provided by other credit factors. Such loans should be identified in the institutions’s records, and their aggregate amount reported at least quarterly to the institution’s board of directors. (See additional reporting requirements described under “Exceptions to the General Policy.”)

The aggregate amount of all loans in excess of the supervisory loan-to-value limits should not exceed 100 percent of total capital.² Moreover, within the aggregate limit, total loans for all commercial, agricultural, multifamily or other non-1-to-4 family residential properties should not exceed 30 percent of total capital. An institution will

²For the state member banks, the term “total capital” means “total risk-based capital” as defined in appendix A to 12 CFR part 208. For insured state non-member banks, “total capital” refers to that term described in table I of appendix A to 12 CFR part 325. For national banks, the term “total capital” is defined at 12 CFR 3.2(e). For savings associations, the term “total capital” is defined at 12 CFR 567.5(c).

come under increased supervisory scrutiny as the total of such loans approaches these levels.

In determining the aggregate amount of such loans, institutions should: (a) Include all loans secured by the same property if any one of those loans exceeds the supervisory loan-to-value limits; and (b) include the recourse obligation of any such loan sold with recourse. Conversely, a loan should no longer be reported to the directors as part of aggregate totals when reduction in principal or senior liens, or additional contribution of collateral or equity (e.g., improvements to the real property securing the loan), bring the loan-to-value ratio into compliance with supervisory limits.

EXCLUDED TRANSACTIONS

The agencies also recognize that there are a number of lending situations in which other factors significantly outweigh the need to apply the supervisory loan-to-value limits. These include:

- Loans guaranteed or insured by the U.S. government or its agencies, provided that the amount of the guaranty or insurance is at least equal to the portion of the loan that exceeds the supervisory loan-to-value limit.
- Loans backed by the full faith and credit of a state government, provided that the amount of the assurance is at least equal to the portion of the loan that exceeds the supervisory loan-to-value limit.
- Loans guaranteed or insured by a state, municipal or local government, or an agency thereof, provided that the amount of the guaranty or insurance is at least equal to the portion of the loan that exceeds the supervisory loan-to-value limit, and provided that the lender has determined that the guarantor or insurer has the financial capacity and willingness to perform under the terms of the guaranty or insurance agreement.
- Loans that are to be sold promptly after origination, without recourse, to a financially responsible third party.
- Loans that are renewed, refinanced, or restructured without the advancement of new funds or an increase in the line of credit (except for reasonable closing costs), or loans that are renewed, refinanced, or restructured in connection with a workout situation, either with or without the advancement of new funds, where consistent with safe and sound banking practices and part of a clearly defined and well-documented program to achieve orderly liquidation of the debt, reduce risk of loss, or maximize recovery on the loan.
- Loans that facilitate the sale of real estate acquired by the lender in the ordinary course of collecting a debt previously contracted in good faith.
- Loans for which a lien on or interest in real property is taken as additional collat-

eral through an abundance of caution by the lender (e.g., the institution takes a blanket lien on all or substantially all of the assets of the borrower, and the value of the real property is low relative to the aggregate value of all other collateral).

- Loans, such as working capital loans, where the lender does not rely principally on real estate as security and the extension of credit is not used to acquire, develop, or construct permanent improvements on real property.
- Loans for the purpose of financing permanent improvements to real property, but not secured by the property, if such security interest is not required by prudent underwriting practice.

EXCEPTIONS TO THE GENERAL LENDING POLICY

Some provision should be made for the consideration of loan requests from credit-worthy borrowers whose credit needs do not fit within the institution's general lending policy. An institution may provide for prudently underwritten exceptions to its lending policies, including loan-to-value limits, on a loan-by-loan basis. However, any exceptions from the supervisory loan-to-value limits should conform to the aggregate limits on such loans discussed above.

The board of directors is responsible for establishing standards for the review and approval of exception loans. Each institution should establish an appropriate internal process for the review and approval of loans that do not conform to its own internal policy standards. The approval of any such loan should be supported by a written justification that clearly sets forth all of the relevant credit factors that support the underwriting decision. The justification and approval documents for such loans should be maintained as a part of the permanent loan file. Each institution should monitor compliance with its real estate lending policy and individually report exception loans of a significant size to its board of directors.

SUPERVISORY REVIEW OF REAL ESTATE LENDING POLICIES AND PRACTICES

The real estate lending policies of institutions will be evaluated by examiners during the course of their examinations to determine if the policies are consistent with safe and sound lending practices, these guidelines, and the requirements of the regulation. In evaluating the adequacy of the institution's real estate lending policies and practices, examiners will take into consideration the following factors:

- The nature and scope of the institution's real estate lending activities.
- The size and financial condition of the institution.
- The quality of the institution's management and internal controls.

- The expertise and size of the lending and loan administration staff.
- Market conditions.

Lending policy exception reports will also be reviewed by examiners during the course of their examinations to determine whether the institutions' exceptions are adequately documented and appropriate in light of all of the relevant credit considerations. An excessive volume of exceptions to an institution's real estate lending policy may signal a weakening of its underwriting practices, or may suggest a need to revise the loan policy.

DEFINITIONS

For the purposes of these Guidelines:

Construction loan means an extension of credit for the purpose of erecting or rehabilitating buildings or other structures, including any infrastructure necessary for development.

Extension of credit or loan means:

- (1) The total amount of any loan, line of credit, or other legally binding lending commitment with respect to real property; and
- (2) The total amount, based on the amount of consideration paid, of any loan, line of credit, or other legally binding lending commitment acquired by a lender by purchase, assignment, or otherwise.

Improved property loan means an extension of credit secured by one of the following types of real property:

- (1) Farmland, ranchland or timberland committed to ongoing management and agricultural production;
- (2) 1- to 4-family residential property that is not owner-occupied;
- (3) Residential property containing five or more individual dwelling units;
- (4) Completed commercial property; or
- (5) Other income-producing property that has been completed and is available for occupancy and use, except income-producing owner-occupied 1- to 4-family residential property.

Land development loan means an extension of credit for the purpose of improving unimproved real property prior to the erection of structures. The improvement of unimproved real property may include the laying or placement of sewers, water pipes, utility cables, streets, and other infrastructure necessary for future development.

Loan origination means the time of inception of the obligation to extend credit (i.e., when the last event or prerequisite, controllable by the lender, occurs causing the lender to become legally bound to fund an extension of credit).

Loan-to-value or *loan-to-value ratio* means the percentage or ratio that is derived at the time of loan origination by dividing an extension of credit by the total value of the property(ies) securing or being improved by the extension of credit plus the amount of any readily marketable collateral and other

acceptable collateral that secures the extension of credit. The total amount of all senior liens on or interests in such property(ies) should be included in determining the loan-to-value ratio. When mortgage insurance or collateral is used in the calculation of the loan-to-value ratio, and such credit enhancement is later released or replaced, the loan-to-value ratio should be recalculated.

Other acceptable collateral means any collateral in which the lender has a perfected security interest, that has a quantifiable value, and is accepted by the lender in accordance with safe and sound lending practices. Other acceptable collateral should be appropriately discounted by the lender consistent with the lender's usual practices for making loans secured by such collateral. Other acceptable collateral includes, among other items, unconditional irrevocable standby letters of credit for the benefit of the lender.

Owner-occupied, when used in conjunction with the term *1- to 4-family residential property* means that the owner of the underlying real property occupies at least one unit of the real property as a principal residence of the owner.

Readily marketable collateral means insured deposits, financial instruments, and bullion in which the lender has a perfected interest. Financial instruments and bullion must be salable under ordinary circumstances with reasonable promptness at a fair market value determined by quotations based on actual transactions, on an auction or similarly available daily bid and ask price market. Readily marketable collateral should be appropriately discounted by the lender consistent with the lender's usual practices for making loans secured by such collateral.

Value means an opinion or estimate, set forth in an appraisal or evaluation, whichever may be appropriate, of the market value of real property, prepared in accordance with the agency's appraisal regulations and guidance. For loans to purchase an existing property, the term "value" means the lesser of the actual acquisition cost or the estimate of value.

1- to 4-family residential property means property containing fewer than five individual dwelling units, including manufactured homes permanently affixed to the underlying property (when deemed to be real property under state law).

[57 FR 62896, 62900, Dec. 31, 1992; 58 FR 4460, Jan. 14, 1993; 63 FR 58621, Nov. 2, 1998]

APPENDIX D-1 TO PART 208—INTER-AGENCY GUIDELINES ESTABLISHING STANDARDS FOR SAFETY AND SOUNDNESS

TABLE OF CONTENTS

I. Introduction

- A. Preservation of existing authority.
- B. Definitions.

II. Operational and Managerial Standards

- A. Internal controls and information systems.
- B. Internal audit system.
- C. Loan documentation.
- D. Credit underwriting.
- E. Interest rate exposure.
- F. Asset growth.
- G. Asset quality.
- H. Earnings.
- I. Compensation, fees and benefits.

III. Prohibition on Compensation That Constitutes an Unsafe and Unsound Practice

- A. Excessive compensation.
- B. Compensation leading to material financial loss.

I. INTRODUCTION

1. Section 39 of the Federal Deposit Insurance Act¹ (FDI Act) requires each Federal banking agency (collectively, the agencies) to establish certain safety and soundness standards by regulation or by guideline for all insured depository institutions. Under section 39, the agencies must establish three types of standards: (1) Operational and managerial standards; (2) compensation standards; and (3) such standards relating to asset quality, earnings, and stock valuation as they determine to be appropriate.

ii. Section 39(a) requires the agencies to establish operational and managerial standards relating to: (1) Internal controls, information systems and internal audit systems, in accordance with section 36 of the FDI Act (12 U.S.C. 1831m); (2) loan documentation; (3) credit underwriting; (4) interest rate exposure; (5) asset growth; and (6) compensation, fees, and benefits, in accordance with subsection (c) of section 39. Section 39(b) requires the agencies to establish standards re-

lating to asset quality, earnings, and stock valuation that the agencies determine to be appropriate.

iii. Section 39(c) requires the agencies to establish standards prohibiting as an unsafe and unsound practice any compensatory arrangement that would provide any executive officer, employee, director, or principal shareholder of the institution with excessive compensation, fees or benefits and any compensatory arrangement that could lead to material financial loss to an institution. Section 39(c) also requires that the agencies establish standards that specify when compensation is excessive.

iv. If an agency determines that an institution fails to meet any standard established by guideline under subsection (a) or (b) of section 39, the agency may require the institution to submit to the agency an acceptable plan to achieve compliance with the standard. In the event that an institution fails to submit an acceptable plan within the time allowed by the agency or fails in any material respect to implement an accepted plan, the agency must, by order, require the institution to correct the deficiency. The agency may, and in some cases must, take other supervisory actions until the deficiency has been corrected.

v. The agencies have adopted amendments to their rules and regulations to establish deadlines for submission and review of compliance plans.²

vi. The following Guidelines set out the safety and soundness standards that the agencies use to identify and address problems at insured depository institutions before capital becomes impaired. The agencies believe that the standards adopted in these Guidelines serve this end without dictating how institutions must be managed and operated. These standards are designed to identify potential safety and soundness concerns and ensure that action is taken to address those concerns before they pose a risk to the deposit insurance funds.

A. Preservation of Existing Authority

Neither section 39 nor these Guidelines in any way limits the authority of the agencies to address unsafe or unsound practices, violations of law, unsafe or unsound conditions, or other practices. Action under section 39 and these Guidelines may be taken independently of, in conjunction with, or in addition

¹Section 39 of the Federal Deposit Insurance Act (12 U.S.C. 1831p-1) was added by section 132 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA), Pub. L. 102-242, 105 Stat. 2236 (1991), and amended by section 956 of the Housing and Community Development Act of 1992, Pub. L. 102-550, 106 Stat. 3895 (1992) and section 318 of the Riegle Community Development and Regulatory Improvement Act of 1994, Pub. L. 103-325, 108 Stat. 2160 (1994).

²For the Office of the Comptroller of the Currency, these regulations appear at 12 CFR Part 30; for the Board of Governors of the Federal Reserve System, these regulations appear at 12 CFR Part 263; for the Federal Deposit Insurance Corporation, these regulations appear at 12 CFR Part 308, subpart R, and for the Office of Thrift Supervision, these regulations appear at 12 CFR Part 570.

to any other enforcement action available to the agencies. Nothing in these Guidelines limits the authority of the FDIC pursuant to section 38(i)(2)(F) of the FDI Act (12 U.S.C. 1831(o)) and Part 325 of Title 12 of the Code of Federal Regulations.

B. Definitions

1. *In general.* For purposes of these Guidelines, except as modified in the Guidelines or unless the context otherwise requires, the terms used have the same meanings as set forth in sections 3 and 39 of the FDI Act (12 U.S.C. 1813 and 1831p-1).

2. *Board of directors,* in the case of a state-licensed insured branch of a foreign bank and in the case of a federal branch of a foreign bank, means the managing official in charge of the insured foreign branch.

3. *Compensation* means all direct and indirect payments or benefits, both cash and non-cash, granted to or for the benefit of any executive officer, employee, director, or principal shareholder, including but not limited to payments or benefits derived from an employment contract, compensation or benefit agreement, fee arrangement, perquisite, stock option plan, postemployment benefit, or other compensatory arrangement.

4. *Director* shall have the meaning described in 12 CFR 215.2(c).³

5. *Executive officer* shall have the meaning described in 12 CFR 215.2(d).⁴

6. *Principal shareholder* shall have the meaning described in 12 CFR 215.2(l).⁵

II. OPERATIONAL AND MANAGERIAL STANDARDS

A. *Internal controls and information systems.* An institution should have internal controls and information systems that are appropriate to the size of the institution and the nature, scope and risk of its activities and that provide for:

1. An organizational structure that establishes clear lines of authority and responsibility for monitoring adherence to established policies;
2. Effective risk assessment;
3. Timely and accurate financial, operational and regulatory reports;
4. Adequate procedures to safeguard and manage assets; and
5. Compliance with applicable laws and regulations.

³In applying these definitions for savings associations, pursuant to 12 U.S.C. 1464, savings associations shall use the terms "savings association" and "insured savings association" in place of the terms "member bank" and "insured bank".

⁴See footnote 3 in section I.B.4. of this appendix.

⁵See footnote 3 in section I.B.4. of this appendix.

B. *Internal audit system.* An institution should have an internal audit system that is appropriate to the size of the institution and the nature and scope of its activities and that provides for:

1. Adequate monitoring of the system of internal controls through an internal audit function. For an institution whose size, complexity or scope of operations does not warrant a full scale internal audit function, a system of independent reviews of key internal controls may be used;
2. Independence and objectivity;
3. Qualified persons;
4. Adequate testing and review of information systems;
5. Adequate documentation of tests and findings and any corrective actions;
6. Verification and review of management actions to address material weaknesses; and
7. Review by the institution's audit committee or board of directors of the effectiveness of the internal audit systems.

C. *Loan documentation.* An institution should establish and maintain loan documentation practices that:

1. Enable the institution to make an informed lending decision and to assess risk, as necessary, on an ongoing basis;
2. Identify the purpose of a loan and the source of repayment, and assess the ability of the borrower to repay the indebtedness in a timely manner;
3. Ensure that any claim against a borrower is legally enforceable;
4. Demonstrate appropriate administration and monitoring of a loan; and
5. Take account of the size and complexity of a loan.

D. *Credit underwriting.* An institution should establish and maintain prudent credit underwriting practices that:

1. Are commensurate with the types of loans the institution will make and consider the terms and conditions under which they will be made;
2. Consider the nature of the markets in which loans will be made;
3. Provide for consideration, prior to credit commitment, of the borrower's overall financial condition and resources, the financial responsibility of any guarantor, the nature and value of any underlying collateral, and the borrower's character and willingness to repay as agreed;
4. Establish a system of independent, ongoing credit review and appropriate communication to management and to the board of directors;
5. Take adequate account of concentration of credit risk; and
6. Are appropriate to the size of the institution and the nature and scope of its activities.

E. *Interest rate exposure.* An institution should:

1. Manage interest rate risk in a manner that is appropriate to the size of the institution and the complexity of its assets and liabilities; and

2. Provide for periodic reporting to management and the board of directors regarding interest rate risk with adequate information for management and the board of directors to assess the level of risk.

F. *Asset growth.* An institution's asset growth should be prudent and consider:

1. The source, volatility and use of the funds that support asset growth;

2. Any increase in credit risk or interest rate risk as a result of growth; and

3. The effect of growth on the institution's capital.

G. *Asset quality.* An insured depository institution should establish and maintain a system that is commensurate with the institution's size and the nature and scope of its operations to identify problem assets and prevent deterioration in those assets. The institution should:

1. Conduct periodic asset quality reviews to identify problem assets;

2. Estimate the inherent losses in those assets and establish reserves that are sufficient to absorb estimated losses;

3. Compare problem asset totals to capital;

4. Take appropriate corrective action to resolve problem assets;

5. Consider the size and potential risks of material asset concentrations; and

6. Provide periodic asset reports with adequate information for management and the board of directors to assess the level of asset risk.

H. *Earnings.* An insured depository institution should establish and maintain a system that is commensurate with the institution's size and the nature and scope of its operations to evaluate and monitor earnings and ensure that earnings are sufficient to maintain adequate capital and reserves. The institution should:

1. Compare recent earnings trends relative to equity, assets, or other commonly used benchmarks to the institution's historical results and those of its peers;

2. Evaluate the adequacy of earnings given the size, complexity, and risk profile of the institution's assets and operations;

3. Assess the source, volatility, and sustainability of earnings, including the effect of nonrecurring or extraordinary income or expense;

4. Take steps to ensure that earnings are sufficient to maintain adequate capital and reserves after considering the institution's asset quality and growth rate; and

5. Provide periodic earnings reports with adequate information for management and the board of directors to assess earnings performance.

I. *Compensation, fees and benefits.* An institution should maintain safeguards to pre-

vent the payment of compensation, fees, and benefits that are excessive or that could lead to material financial loss to the institution.

III. PROHIBITION ON COMPENSATION THAT CONSTITUTES AN UNSAFE AND UNSOUND PRACTICE

A. Excessive Compensation

Excessive compensation is prohibited as an unsafe and unsound practice. Compensation shall be considered excessive when amounts paid are unreasonable or disproportionate to the services performed by an executive officer, employee, director, or principal shareholder, considering the following:

1. The combined value of all cash and non-cash benefits provided to the individual;

2. The compensation history of the individual and other individuals with comparable expertise at the institution;

3. The financial condition of the institution;

4. Comparable compensation practices at comparable institutions, based upon such factors as asset size, geographic location, and the complexity of the loan portfolio or other assets;

5. For postemployment benefits, the projected total cost and benefit to the institution;

6. Any connection between the individual and any fraudulent act or omission, breach of trust or fiduciary duty, or insider abuse with regard to the institution; and

7. Any other factors the agencies determine to be relevant.

B. Compensation Leading to Material Financial Loss

Compensation that could lead to material financial loss to an institution is prohibited as an unsafe and unsound practice.

[60 FR 35678, 35682, July 10, 1995, as amended by Reg. H, 61 FR 43951, Aug. 27, 1996]

APPENDIX D-2 TO PART 208—INTER-AGENCY GUIDELINES ESTABLISHING INFORMATION SECURITY STANDARDS

TABLE OF CONTENTS

I. Introduction	
A. Scope	
B. Preservation of Existing Authority	
C. Definitions	
II. Standards for Safeguarding Customer Information	
A. Information Security Program	
B. Objectives	
III. Development and Implementation of Customer Information Security Program	
A. Involve the Board of Directors	
B. Assess Risk	
C. Manage and Control Risk	
D. Oversee Service Provider Arrangements	
E. Adjust the Program	

- F. Report to the Board
- G. Implement the Standards

I. INTRODUCTION

These Interagency Guidelines Establishing Standards for Safeguarding Customer Information (Guidelines) set forth standards pursuant to sections 501 and 505 of the Gramm-Leach-Bliley Act (15 U.S.C. 6801 and 6805), in the same manner, to the extent practicable, as standards prescribed pursuant to section 39 of the Federal Deposit Insurance Act (12 U.S.C. 1831p-1). These Guidelines address standards for developing and implementing administrative, technical, and physical safeguards to protect the security, confidentiality, and integrity of customer information. These Guidelines also address standards with respect to the proper disposal of consumer information, pursuant to sections 621 and 628 of the Fair Credit Reporting Act (15 U.S.C. 1681s and 1681w).

A. *Scope.* The Guidelines apply to customer information maintained by or on behalf of state member banks (banks) and their nonbank subsidiaries, except for brokers, dealers, persons providing insurance, investment companies, and investment advisors. Pursuant to §§ 211.9 and 211.24 of this chapter, these guidelines also apply to customer information maintained by or on behalf of Edge corporations, agreement corporations, and uninsured state-licensed branches or agencies of a foreign bank. These Guidelines also apply to the proper disposal of consumer information by or on behalf of such entities.

B. *Preservation of Existing Authority.* Neither section 39 nor these Guidelines in any way limit the authority of the Board to address unsafe or unsound practices, violations of law, unsafe or unsound conditions, or other practices. The Board may take action under section 39 and these Guidelines independently of, in conjunction with, or in addition to, any other enforcement action available to the Board.

C. Definitions.

1. Except as modified in the Guidelines, or unless the context otherwise requires, the terms used in these Guidelines have the same meanings as set forth in sections 3 and 39 of the Federal Deposit Insurance Act (12 U.S.C. 1813 and 1831p-1).

2. For purposes of the Guidelines, the following definitions apply:

a. *Board of directors*, in the case of a branch or agency of a foreign bank, means the managing official in charge of the branch or agency.

b. *Consumer information* means any record about an individual, whether in paper, electronic, or other form, that is a consumer report or is derived from a consumer report and that is maintained or otherwise possessed by or on behalf of the bank for a business purpose. Consumer information also means a compilation of such records. The

term does not include any record that does not identify an individual.

i. *Examples.* (1) *Consumer information* includes:

(A) A consumer report that a bank obtains;

(B) Information from a consumer report that the bank obtains from its affiliate after the consumer has been given a notice and has elected not to opt out of that sharing;

(C) Information from a consumer report that the bank obtains about an individual who applies for but does not receive a loan, including any loan sought by an individual for a business purpose;

(D) Information from a consumer report that the bank obtains about an individual who guarantees a loan (including a loan to a business entity); or

(E) Information from a consumer report that the bank obtains about an employee or prospective employee.

(2) *Consumer information does not include:*

(A) Aggregate information, such as the mean credit score, derived from a group of consumer reports; or

(B) Blind data, such as payment history on accounts that are not personally identifiable, that may be used for developing credit scoring models or for other purposes.

c. *Consumer report* has the same meaning as set forth in the Fair Credit Reporting Act, 15 U.S.C. 1681a(d).

d. *Customer* means any customer of the bank as defined in § 216.3(h) of this chapter.

e. *Customer information* means any record containing nonpublic personal information, as defined in § 216.3(n) of this chapter, about a customer, whether in paper, electronic, or other form, that is maintained by or on behalf of the bank.

f. *Customer information systems* means any methods used to access, collect, store, use, transmit, protect, or dispose of customer information.

g. *Service provider* means any person or entity that maintains, processes, or otherwise is permitted access to customer information or consumer information through its provision of services directly to the bank.

h. *Subsidiary* means any company controlled by a bank, except a broker, dealer, person providing insurance, investment company, investment advisor, insured depository institution, or subsidiary of an insured depository institution.

II. STANDARDS FOR INFORMATION SECURITY

A. *Information Security Program.* Each bank shall implement a comprehensive written information security program that includes administrative, technical, and physical safeguards appropriate to the size and complexity of the bank and the nature and scope of its activities. While all parts of the bank are not required to implement a uniform set of policies, all elements of the information security program must be coordinated. A

bank also shall ensure that each of its subsidiaries is subject to a comprehensive information security program. The bank may fulfill this requirement either by including a subsidiary within the scope of the bank's comprehensive information security program or by causing the subsidiary to implement a separate comprehensive information security program in accordance with the standards and procedures in sections II and III of this appendix that apply to banks.

B. *Objectives.* A bank's information security program shall be designed to:

1. Ensure the security and confidentiality of customer information;
2. Protect against any anticipated threats or hazards to the security or integrity of such information;
3. Protect against unauthorized access to or use of such information that could result in substantial harm or inconvenience to any customer; and
4. Ensure the proper disposal of customer information and consumer information.

III. DEVELOPMENT AND IMPLEMENTATION OF INFORMATION SECURITY PROGRAM

A. *Involve the Board of Directors.* The board of directors or an appropriate committee of the board of each bank shall:

1. Approve the bank's written information security program; and
2. Oversee the development, implementation, and maintenance of the bank's information security program, including assigning specific responsibility for its implementation and reviewing reports from management.

B. *Assess Risk.* Each bank shall:

1. Identify reasonably foreseeable internal and external threats that could result in unauthorized disclosure, misuse, alteration, or destruction of customer information or customer information systems.
2. Assess the likelihood and potential damage of these threats, taking into consideration the sensitivity of customer information.
3. Assess the sufficiency of policies, procedures, customer information systems, and other arrangements in place to control risks.

C. *Manage and Control Risk.* Each bank shall:

1. Design its information security program to control the identified risks, commensurate with the sensitivity of the information as well as the complexity and scope of the bank's activities. Each bank must consider whether the following security measures are appropriate for the bank and, if so, adopt those measures the bank concludes are appropriate:
 - a. Access controls on customer information systems, including controls to authenticate and permit access only to authorized individuals and controls to prevent employees from providing customer information to

unauthorized individuals who may seek to obtain this information through fraudulent means.

- b. Access restrictions at physical locations containing customer information, such as buildings, computer facilities, and records storage facilities to permit access only to authorized individuals;

- c. Encryption of electronic customer information, including while in transit or in storage on networks or systems to which unauthorized individuals may have access;

- d. Procedures designed to ensure that customer information system modifications are consistent with the bank's information security program;

- e. Dual control procedures, segregation of duties, and employee background checks for employees with responsibilities for or access to customer information;

- f. Monitoring systems and procedures to detect actual and attempted attacks on or intrusions into customer information systems;

- g. Response programs that specify actions to be taken when the bank suspects or detects that unauthorized individuals have gained access to customer information systems, including appropriate reports to regulatory and law enforcement agencies; and

- h. Measures to protect against destruction, loss, or damage of customer information due to potential environmental hazards, such as fire and water damage or technological failures.

2. Train staff to implement the bank's information security program.

3. Regularly test the key controls, systems and procedures of the information security program. The frequency and nature of such tests should be determined by the bank's risk assessment. Tests should be conducted or reviewed by independent third parties or staff independent of those that develop or maintain the security programs.

4. Develop, implement, and maintain, as part of its information security program, appropriate measures to properly dispose of customer information and consumer information in accordance with each of the requirements in this paragraph III.

D. *Oversee Service Provider Arrangements.* Each bank shall:

1. Exercise appropriate due diligence in selecting its service providers;

2. Require its service providers by contract to implement appropriate measures designed to meet the objectives of these Guidelines; and

3. Where indicated by the bank's risk assessment, monitor its service providers to confirm that they have satisfied their obligations as required by paragraph D.2. As part of this monitoring, a bank should review audits, summaries of test results, or other equivalent evaluations of its service providers.

E. *Adjust the Program.* Each bank shall monitor, evaluate, and adjust, as appropriate, the information security program in light of any relevant changes in technology, the sensitivity of its customer information, internal or external threats to information, and the bank's own changing business arrangements, such as mergers and acquisitions, alliances and joint ventures, outsourcing arrangements, and changes to customer information systems.

F. *Report to the Board.* Each bank shall report to its board or an appropriate committee of the board at least annually. This report should describe the overall status of the information security program and the bank's compliance with these Guidelines. The reports should discuss material matters related to its program, addressing issues such as: risk assessment; risk management and control decisions; service provider arrangements; results of testing; security breaches or violations and management's responses; and recommendations for changes in the information security program.

G. *Implement the Standards.*

1. *Effective date.* Each bank must implement an information security program pursuant to these Guidelines by July 1, 2001.

2. *Two-year grandfathering of agreements with service providers.* Until July 1, 2003, a contract that a bank has entered into with a service provider to perform services for it or functions on its behalf satisfies the provisions of section III.D., even if the contract does not include a requirement that the servicer maintain the security and confidentiality of customer information, as long as the bank entered into the contract on or before March 5, 2001.

3. *Effective date for measures relating to the disposal of consumer information.* Each bank must satisfy these Guidelines with respect to the proper disposal of consumer information by July 1, 2005.

4. *Exception for existing agreements with service providers relating to the disposal of consumer information.* Notwithstanding the requirement in paragraph III.G.3., a bank's contracts with its service providers that have access to consumer information and that may dispose of consumer information, entered into before July 1, 2005, must comply with the provisions of the Guidelines relating to the proper disposal of consumer information by July 1, 2006.

SUPPLEMENT A TO APPENDIX D-2 TO PART 208—INTERAGENCY GUIDANCE ON RESPONSE PROGRAMS FOR UNAUTHORIZED ACCESS TO CUSTOMER INFORMATION AND CUSTOMER NOTICE

I. BACKGROUND

This Guidance¹ interprets section 501(b) of the Gramm-Leach-Bliley Act ("GLBA") and the Interagency Guidelines Establishing Information Security Standards (the "Security Guidelines")² and describes response programs, including customer notification procedures, that a financial institution should develop and implement to address unauthorized access to or use of customer information that could result in substantial harm or inconvenience to a customer. The scope of, and definitions of terms used in, this Guidance are identical to those of the Security Guidelines. For example, the term "customer information" is the same term used in the Security Guidelines, and means any record containing nonpublic personal information about a customer, whether in paper, electronic, or other form, maintained by or on behalf of the institution.

A. *Interagency Security Guidelines*

Section 501(b) of the GLBA required the Agencies to establish appropriate standards for financial institutions subject to their jurisdiction that include administrative, technical, and physical safeguards, to protect the security and confidentiality of customer information. Accordingly, the Agencies issued Security Guidelines requiring every financial institution to have an information security program designed to:

1. Ensure the security and confidentiality of customer information;
2. Protect against any anticipated threats or hazards to the security or integrity of such information; and
3. Protect against unauthorized access to or use of such information that could result in substantial harm or inconvenience to any customer.

¹This Guidance is being jointly issued by the Board of Governors of the Federal Reserve System (Board), the Federal Deposit Insurance Corporation (FDIC), the Office of the Comptroller of the Currency (OCC), and the Office of Thrift Supervision (OTS).

²12 CFR part 30, app. B (OCC); 12 CFR part 208, app. D-2 and part 225, app. F (Board); 12 CFR part 364, app. B (FDIC); and 12 CFR part 570, app. B (OTS). The "Interagency Guidelines Establishing Information Security Standards" were formerly known as "The Interagency Guidelines Establishing Standards for Safeguarding Customer Information."

B. Risk Assessment and Controls

1. The Security Guidelines direct every financial institution to assess the following risks, among others, when developing its information security program:

a. Reasonably foreseeable internal and external threats that could result in unauthorized disclosure, misuse, alteration, or destruction of customer information or customer information systems;

b. The likelihood and potential damage of threats, taking into consideration the sensitivity of customer information; and

c. The sufficiency of policies, procedures, customer information systems, and other arrangements in place to control risks.³

2. Following the assessment of these risks, the Security Guidelines require a financial institution to design a program to address the identified risks. The particular security measures an institution should adopt will depend upon the risks presented by the complexity and scope of its business. At a minimum, the financial institution is required to consider the specific security measures enumerated in the Security Guidelines,⁴ and adopt those that are appropriate for the institution, including:

a. Access controls on customer information systems, including controls to authenticate and permit access only to authorized individuals and controls to prevent employees from providing customer information to unauthorized individuals who may seek to obtain this information through fraudulent means;

b. Background checks for employees with responsibilities for access to customer information; and

c. Response programs that specify actions to be taken when the financial institution suspects or detects that unauthorized individuals have gained access to customer information systems, including appropriate reports to regulatory and law enforcement agencies.⁵

C. Service Providers

The Security Guidelines direct every financial institution to require its service providers by contract to implement appropriate measures designed to protect against unauthorized access to or use of customer information that could result in substantial harm or inconvenience to any customer.⁶

³See Security Guidelines, III.B.

⁴See Security Guidelines, III.C.

⁵See Security Guidelines, III.C.

⁶See Security Guidelines, II.B. and III.D. Further, the Agencies note that, in addition to contractual obligations to a financial institution, a service provider may be required to implement its own comprehensive information security program in accordance with the Safeguards Rule promulgated by the

II. RESPONSE PROGRAM

Millions of Americans, throughout the country, have been victims of identity theft.⁷ Identity thieves misuse personal information they obtain from a number of sources, including financial institutions, to perpetrate identity theft. Therefore, financial institutions should take preventative measures to safeguard customer information against attempts to gain unauthorized access to the information. For example, financial institutions should place access controls on customer information systems and conduct background checks for employees who are authorized to access customer information.⁸ However, every financial institution should also develop and implement a risk-based response program to address incidents of unauthorized access to customer information in customer information systems⁹ that occur nonetheless. A response program should be a key part of an institution's information security program.¹⁰ The program should be appropriate to the size and complexity of the institution and the nature and scope of its activities.

In addition, each institution should be able to address incidents of unauthorized access to customer information in customer information systems maintained by its domestic

Federal Trade Commission ("FTC"), 16 CFR part 314.

⁷The FTC estimates that nearly 10 million Americans discovered they were victims of some form of identity theft in 2002. See The Federal Trade Commission, *Identity Theft Survey Report*, (September 2003), available at <http://www.ftc.gov/os/2003/09/synovaterreport.pdf>.

⁸Institutions should also conduct background checks of employees to ensure that the institution does not violate 12 U.S.C. 1829, which prohibits an institution from hiring an individual convicted of certain criminal offenses or who is subject to a prohibition order under 12 U.S.C. 1818(e)(6).

⁹Under the Guidelines, an institution's *customer information systems* consist of all of the methods used to access, collect, store, use, transmit, protect, or dispose of customer information, including the systems maintained by its service providers. See Security Guidelines, I.C.2.d (I.C.2.c for OTS).

¹⁰See FFIEC Information Technology Examination Handbook, Information Security Booklet, Dec. 2002 available at http://www.ffiec.gov/ffiecinfobase/html_pages/infosec_book_frame.htm. Federal Reserve SR 97-32, Sound Practice Guidance for Information Security for Networks, Dec. 4, 1997; OCC Bulletin 2000-14, "Infrastructure Threats—Intrusion Risks" (May 15, 2000), for additional guidance on preventing, detecting, and responding to intrusions into financial institution computer systems.

and foreign service providers. Therefore, consistent with the obligations in the Guidelines that relate to these arrangements, and with existing guidance on this topic issued by the Agencies,¹¹ an institution's contract with its service provider should require the service provider to take appropriate actions to address incidents of unauthorized access to the financial institution's customer information, including notification to the institution as soon as possible of any such incident, to enable the institution to expeditiously implement its response program.

A. Components of a Response Program

1. At a minimum, an institution's response program should contain procedures for the following:

a. Assessing the nature and scope of an incident, and identifying what customer information systems and types of customer information have been accessed or misused;

b. Notifying its primary Federal regulator as soon as possible when the institution becomes aware of an incident involving unauthorized access to or use of *sensitive* customer information, as defined below;

c. Consistent with the Agencies' Suspicious Activity Report ("SAR") regulations,¹² noti-

fying appropriate law enforcement authorities, in addition to filing a timely SAR in situations involving Federal criminal violations requiring immediate attention, such as when a reportable violation is ongoing;

d. Taking appropriate steps to contain and control the incident to prevent further unauthorized access to or use of customer information, for example, by monitoring, freezing, or closing affected accounts, while preserving records and other evidence;¹³ and

e. Notifying customers when warranted.

2. Where an incident of unauthorized access to customer information involves customer information systems maintained by an institution's service providers, it is the responsibility of the financial institution to notify the institution's customers and regulator. However, an institution may authorize or contract with its service provider to notify the institution's customers or regulator on its behalf.

III. CUSTOMER NOTICE

Financial institutions have an affirmative duty to protect their customers' information against unauthorized access or use. Notifying customers of a security incident involving the unauthorized access or use of the customer's information in accordance with the standard set forth below is a key part of that duty. Timely notification of customers is important to manage an institution's reputation risk. Effective notice also may reduce an institution's legal risk, assist in maintaining good customer relations, and enable the institution's customers to take steps to protect themselves against the consequences of identity theft. When customer notification is warranted, an institution may not forgo notifying its customers of an incident because the institution believes that it may be potentially embarrassed or inconvenienced by doing so.

A. Standard for Providing Notice

When a financial institution becomes aware of an incident of unauthorized access to sensitive customer information, the institution should conduct a reasonable investigation to promptly determine the likelihood that the information has been or will be misused. If the institution determines

of Suspicious Activity Reports, May 6, 1997; OTS CEO Memorandum 139, Identity Theft and Pretext Calling, May 4, 2001; CEO Memorandum 126, New Suspicious Activity Report Form, July 5, 2000; <http://www.ots.treas.gov/BSA> (for the latest SAR form and filing instructions required by OTS as of July 1, 2003).

¹³See FFIEC Information Technology Examination Handbook, Information Security Booklet, Dec. 2002, pp. 68-74.

¹¹See Federal Reserve SR Ltr. 00-04, Outsourcing of Information and Transaction Processing, Feb. 9, 2000; OCC Bulletin 2001-47, "Third-Party Relationships Risk Management Principles," Nov. 1, 2001; FDIC FIL 68-99, Risk Assessment Tools and Practices for Information System Security, July 7, 1999; OTS Thrift Bulletin 82a, Third Party Arrangements, Sept. 1, 2004.

¹²An institution's obligation to file a SAR is set out in the Agencies' SAR regulations and Agency guidance. See 12 CFR 21.11 (national banks, Federal branches and agencies); 12 CFR 208.62 (State member banks); 12 CFR 211.5(k) (Edge and agreement corporations); 12 CFR 211.24(f) (uninsured State branches and agencies of foreign banks); 12 CFR 225.4(f) (bank holding companies and their nonbank subsidiaries); 12 CFR part 353 (State non-member banks); and 12 CFR 563.180 (savings associations). National banks must file SARs in connection with computer intrusions and other computer crimes. See OCC Bulletin 2000-14, "Infrastructure Threats—Intrusion Risks" (May 15, 2000); Advisory Letter 97-9, "Reporting Computer Related Crimes" (November 19, 1997) (general guidance still applicable though instructions for new SAR form published in 65 FR 1229, 1230 (January 7, 2000)). See also Federal Reserve SR 01-11, Identity Theft and Pretext Calling, Apr. 26, 2001; SR 97-28, Guidance Concerning Reporting of Computer Related Crimes by Financial Institutions, Nov. 6, 1997; FDIC FIL 48-2000, Suspicious Activity Reports, July 14, 2000; FIL 47-97, Preparation

that misuse of its information about a customer has occurred or is reasonably possible, it should notify the affected customer as soon as possible. Customer notice may be delayed if an appropriate law enforcement agency determines that notification will interfere with a criminal investigation and provides the institution with a written request for the delay. However, the institution should notify its customers as soon as notification will no longer interfere with the investigation.

1. Sensitive Customer Information

Under the Guidelines, an institution must protect against unauthorized access to or use of customer information that could result in substantial harm or inconvenience to any customer. Substantial harm or inconvenience is most likely to result from improper access to *sensitive customer information* because this type of information is most likely to be misused, as in the commission of identity theft. For purposes of this Guidance, *sensitive customer information* means a customer's name, address, or telephone number, in conjunction with the customer's social security number, driver's license number, account number, credit or debit card number, or a personal identification number or password that would permit access to the customer's account. *Sensitive customer information* also includes any combination of components of customer information that would allow someone to log onto or access the customer's account, such as user name and password or password and account number.

2. Affected Customers

If a financial institution, based upon its investigation, can determine from its logs or other data precisely which customers' information has been improperly accessed, it may limit notification to those customers with regard to whom the institution determines that misuse of their information has occurred or is reasonably possible. However, there may be situations where the institution determines that a group of files has been accessed improperly, but is unable to identify which specific customers' information has been accessed. If the circumstances of the unauthorized access lead the institution to determine that misuse of the information is reasonably possible, it should notify all customers in the group.

B. Content of Customer Notice

1. Customer notice should be given in a clear and conspicuous manner. The notice should describe the incident in general terms and the type of customer information that was the subject of unauthorized access or use. It also should generally describe what the institution has done to protect the customers' information from further unauthor-

ized access. In addition, it should include a telephone number that customers can call for further information and assistance.¹⁴ The notice also should remind customers of the need to remain vigilant over the next twelve to twenty-four months, and to promptly report incidents of suspected identity theft to the institution. The notice should include the following additional items, when appropriate:

- a. A recommendation that the customer review account statements and immediately report any suspicious activity to the institution;
- b. A description of fraud alerts and an explanation of how the customer may place a fraud alert in the customer's consumer reports to put the customer's creditors on notice that the customer may be a victim of fraud;
- c. A recommendation that the customer periodically obtain credit reports from each nationwide credit reporting agency and have information relating to fraudulent transactions deleted;
- d. An explanation of how the customer may obtain a credit report free of charge; and
- e. Information about the availability of the FTC's online guidance regarding steps a consumer can take to protect against identity theft. The notice should encourage the customer to report any incidents of identity theft to the FTC, and should provide the FTC's Web site address and toll-free telephone number that customers may use to obtain the identity theft guidance and report suspected incidents of identity theft.¹⁵

2. The Agencies encourage financial institutions to notify the nationwide consumer reporting agencies prior to sending notices to a large number of customers that include contact information for the reporting agencies.

C. Delivery of Customer Notice

Customer notice should be delivered in any manner designed to ensure that a customer can reasonably be expected to receive it. For example, the institution may choose to contact all customers affected by telephone or

¹⁴The institution should, therefore, ensure that it has reasonable policies and procedures in place, including trained personnel, to respond appropriately to customer inquiries and requests for assistance.

¹⁵Currently, the FTC Web site for the ID Theft brochure and the FTC Hotline phone number are <http://www.consumer.gov/idtheft> and 1-877-IDTHEFT. The institution may also refer customers to any materials developed pursuant to section 151(b) of the FACT Act (educational materials developed by the FTC to teach the public how to prevent identity theft).

by mail, or by electronic mail for those customers for whom it has a valid e-mail address and who have agreed to receive communications electronically.

[Reg. H, 66 FR 8634, Feb. 1, 2001, as amended at 69 FR 77617, Dec. 28, 2004; 70 FR 15753, Mar. 29, 2005; 71 FR 5780, Feb. 3, 2006]

APPENDIX E TO PART 208—CAPITAL ADEQUACY GUIDELINES FOR STATE MEMBER BANKS; MARKET RISK MEASURE

Section 1. Purpose, Applicability, Scope, and Effective Date

(a) *Purpose.* The purpose of this appendix is to ensure that banks with significant exposure to market risk maintain adequate capital to support that exposure.¹ This appendix supplements and adjusts the risk-based capital ratio calculations under appendix A of this part with respect to those banks.

(b) *Applicability.* (1) This appendix applies to any insured state member bank whose trading activity² (on a worldwide consolidated basis) equals:

- (i) 10 percent or more of total assets;³ or
- (ii) \$1 billion or more.

(2) The Federal Reserve may additionally apply this appendix to any insured state member bank if the Federal Reserve deems it necessary or appropriate for safe and sound banking practices.

(3) The Federal Reserve may exclude an insured state member bank otherwise meeting the criteria of paragraph (b)(1) of this section from coverage under this appendix if it determines the bank meets such criteria as a consequence of accounting, operational, or similar considerations, and the Federal Reserve deems it consistent with safe and sound banking practices.

(c) *Scope.* The capital requirements of this appendix support market risk associated with a bank's covered positions.

¹This appendix is based on a framework developed jointly by supervisory authorities from the countries represented on the Basle Committee on Banking Supervision and endorsed by the Group of Ten Central Bank Governors. The framework is described in a Basle Committee paper entitled "Amendment to the Capital Accord to Incorporate Market Risks," January 1996. Also see modifications issued in September 1997.

²Trading activity means the gross sum of trading assets and liabilities as reported in the bank's most recent quarterly Consolidated Report of Condition and Income (Call Report).

³Total assets means quarter-end total assets as reported in the bank's most recent Call Report.

(d) *Effective date.* This appendix is effective as of January 1, 1997. Compliance is not mandatory until January 1, 1998. Subject to supervisory approval, a bank may opt to comply with this appendix as early as January 1, 1997.⁴

Section 2. Definitions

For purposes of this appendix, the following definitions apply:

(a) *Covered positions* means all positions in a bank's trading account, and all foreign exchange⁵ and commodity positions, whether or not in the trading account.⁶ Positions include on-balance-sheet assets and liabilities and off-balance-sheet items. Securities subject to repurchase and lending agreements are included as if they are still owned by the lender. Covered positions exclude all positions in a bank's trading account that, in form or in substance, act as liquidity facilities that provide liquidity support to asset-backed commercial paper. Such excluded positions are subject to the risk-based capital requirements set forth in appendix A of this part.

(b) *Market risk* means the risk of loss resulting from movements in market prices. Market risk consists of general market risk and specific risk components.

(1) *General market risk* means changes in the market value of covered positions resulting from broad market movements, such as changes in the general level of interest rates, equity prices, foreign exchange rates, or commodity prices.

(2) *Specific risk* means changes in the market value of specific positions due to factors other than broad market movements and includes event and default risk as well as idiosyncratic variations.

(c) *Tier 1* and *Tier 2 capital* are defined in appendix A of this part.

(d) *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 Federal Reserve; 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 appendix A of this part; and does not contain and is not covered by any covenants, terms, or restrictions that are inconsistent with safe and sound banking practices.

⁴A bank that voluntarily complies with the final rule prior to January 1, 1998, must comply with all of its provisions.

⁵Subject to supervisory review, a bank may exclude structural positions in foreign currencies from its covered positions.

⁶The term trading account is defined in the instructions to the Call Report.

(e) *Value-at-risk (VAR)* means the estimate of the maximum amount that the value of covered positions could decline during a fixed holding period within a stated confidence level, measured in accordance with section 4 of this appendix.

Section 3. Adjustments to the Risk-Based Capital Ratio Calculations

(a) *Risk-based capital ratio denominator.* A bank subject to this appendix shall calculate its risk-based capital ratio denominator as follows:

(1) *Adjusted risk-weighted assets.* Calculate adjusted risk-weighted assets, which equals risk-weighted assets (as determined in accordance with appendix A of this part) excluding the risk-weighted amounts of all covered positions (except foreign-exchange positions outside the trading account and over-the-counter derivative positions)⁷ and receivables arising from the posting of cash collateral that is associated with securities borrowing transactions to the extent the receivables are collateralized by the market value of the borrowed securities, provided that the following conditions are met:

(i) The transaction is based on securities includable in the trading book that are liquid and readily marketable,

(ii) The transaction is marked to market daily,

(iii) The transaction is subject to daily margin maintenance requirements, and

(iv)(A) 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

(B) If the transaction does not meet the criteria set forth in paragraph (iv)(A) of this section, then either:

(1) The bank has conducted sufficient legal review to reach a well-founded conclusion that:

(i) The securities borrowing agreement executed in connection with the transaction provides the bank 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

(ii) 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

(2) The transaction is either overnight or unconditionally cancelable at any time by the bank, and the bank has conducted sufficient legal review to reach a well-founded conclusion that:

(i) The securities borrowing agreement executed in connection with the transaction provides the bank 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

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

(2) *Measure for market risk.* Calculate the measure for market risk, which equals the sum of the VAR-based capital charge, the specific risk add-on (if any), and the capital charge for de minimis exposures (if any).

(i) *VAR-based capital charge.* The VAR-based capital charge equals the higher of:

(A) The previous day's VAR measure; or

(B) The average of the daily VAR measures for each of the preceding 60 business days multiplied by three, except as provided in section 4(e) of this appendix;

(ii) *Specific risk add-on.* The specific risk add-on is calculated in accordance with section 5 of this appendix; and

(iii) *Capital charge for de minimis exposure.* The capital charge for de minimis exposure is calculated in accordance with section 4(a) of this appendix.

(3) *Market risk equivalent assets.* Calculate market risk equivalent assets by multiplying the measure for market risk (as calculated in paragraph (a)(2) of this section) by 12.5.

(4) *Denominator calculation.* 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 bank's risk-based capital ratio denominator.

(b) *Risk-based capital ratio numerator.* A bank subject to this appendix shall calculate its risk-based capital ratio numerator by allocating capital as follows:

(1) *Credit risk allocation.* Allocate Tier 1 and Tier 2 capital equal to 8.0 percent of adjusted risk-weighted assets (as calculated in paragraph (a)(1) of this section).⁸

⁷Foreign-exchange positions outside the trading account and all over-the-counter derivative positions, whether or not in the trading account, must be included in adjusted risk-weighted assets as determined in appendix A of this part.

⁸A bank may not allocate Tier 3 capital to support credit risk (as calculated under appendix A of this part).

(2) *Market risk allocation.* Allocate Tier 1, Tier 2, and Tier 3 capital equal to the measure for market risk as calculated in paragraph (a)(2) of this section. The sum of Tier 2 and Tier 3 capital allocated for market risk must not exceed 250 percent of Tier 1 capital allocated for market risk. (This requirement means that Tier 1 capital allocated in this paragraph (b)(2) must equal at least 28.6 percent of the measure for market risk.)

(3) *Restrictions.* (i) The sum of Tier 2 capital (both allocated and excess) and Tier 3 capital (allocated in paragraph (b)(2) of this section) may not exceed 100 percent of Tier 1 capital (both allocated and excess).⁹

(ii) 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).

(4) *Numerator calculation.* Add Tier 1 capital (both allocated and excess), Tier 2 capital (both allocated and excess), and Tier 3 capital (allocated under paragraph (b)(2) of this section). The resulting sum is the bank's risk-based capital ratio numerator.

Section 4. Internal Models.

(a) *General.* For risk-based capital purposes, a bank subject to this appendix must use its internal model to measure its daily VAR, in accordance with the requirements of this section.¹⁰ The Federal Reserve may permit a bank to use alternative techniques to measure the market risk of de minimis exposures so long as the techniques adequately measure associated market risk.

(b) *Qualitative requirements.* A bank subject to this appendix must have a risk management system that meets the following minimum qualitative requirements:

(1) The bank must have a risk control unit that reports directly to senior management

⁹Excess Tier 1 capital means Tier 1 capital that has not been allocated in paragraphs (b)(1) and (b)(2) of this section. Excess Tier 2 capital means Tier 2 capital that has not been allocated in paragraph (b)(1) and (b)(2) of this section, subject to the restrictions in paragraph (b)(3) of this section.

¹⁰A bank's internal model may use any generally accepted measurement techniques, such as variance-covariance models, historical simulations, or Monte Carlo simulations. However, the level of sophistication and accuracy of a bank's internal model must be commensurate with the nature and size of its covered positions. A bank that modifies its existing modeling procedures to comply with the requirements of this appendix for risk-based capital purposes should, nonetheless, continue to use the internal model it considers most appropriate in evaluating risks for other purposes.

and is independent from business trading units.

(2) The bank's internal risk measurement model must be integrated into the daily management process.

(3) The bank's policies and procedures must identify, and the bank must conduct, appropriate stress tests and backtests.¹¹ The bank's policies and procedures must identify the procedures to follow in response to the results of such tests.

(4) The bank must conduct independent reviews of its risk measurement and risk management systems at least annually.

(c) *Market risk factors.* The bank's 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,¹² equity price risk, foreign exchange rate risk, and commodity price risk.

(d) *Quantitative requirements.* For regulatory capital purposes, VAR measures must meet the following quantitative requirements:

(1) The VAR measures must be calculated on a daily basis using a 99 percent, one-tailed confidence level with a price shock equivalent to a ten-business day movement in rates and prices. In order to calculate VAR measures based on a ten-day price shock, the bank may either calculate ten-day figures directly or convert VAR figures based on holding periods other than ten days to the equivalent of a ten-day holding period (for instance, by multiplying a one-day VAR measure by the square root of ten).

(2) The VAR measures must be based on an historical observation period (or effective observation period for a bank using a weighting scheme or other similar method) of at least one year. The bank must update data sets at least once every three months or more frequently as market conditions warrant.

(3) The VAR measures must include the risks arising from the non-linear price characteristics of options positions and the sensitivity of the market value of the positions to changes in the volatility of the underlying

¹¹Stress tests provide information about the impact of adverse market events on a bank's covered positions. Backtests provide information about the accuracy of an internal model by comparing a bank's daily VAR measures to its corresponding daily trading profits and losses.

¹²For material exposures in the major currencies and markets, modeling techniques must capture spread risk and must incorporate enough segments of the yield curve—at least six—to capture differences in volatility and less than perfect correlation of rates along the yield curve.

rates or prices. A bank with a large or complex options portfolio must measure the volatility of options positions by different maturities.

(4) The VAR measures may incorporate empirical correlations within and across risk categories, provided that the bank's process for measuring correlations is sound. In the event that the VAR measures do not incorporate empirical correlations across risk categories, then the bank must add the separate VAR measures for the four major risk categories to determine its aggregate VAR measure.

(e) *Backtesting.* (1) Beginning one year after a bank starts to comply with this appendix, a bank must conduct backtesting by comparing each of its most recent 250 business days' actual net trading profit or loss¹³ with the corresponding daily VAR measures generated for internal risk measurement purposes and calibrated to a one-day holding period and a 99 percent, one-tailed confidence level.

(2) Once each quarter, the bank must identify the number of exceptions, that is, the number of business days for which the magnitude of the actual daily net trading loss, if any, exceeds the corresponding daily VAR measure.

(3) A bank must use the multiplication factor indicated in Table 1 of this appendix in determining its capital charge for market risk under section 3(a)(2)(i)(B) of this appendix until it obtains the next quarter's backtesting results, unless the Federal Reserve determines that a different adjustment or other action is appropriate.

TABLE 1—MULTIPLICATION FACTOR 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. Specific Risk

(a) *Modeled specific risk.* A bank may use its internal model to measure specific risk. If the bank has demonstrated to the Federal Reserve that its internal model measures the specific risk, including event and default risk as well as idiosyncratic variation, of covered debt and equity positions and in-

¹³Actual net trading profits and losses typically include such things as realized and unrealized gains and losses on portfolio positions as well as fee income and commissions associated with trading activities.

cludes the specific risk measures in the VAR-based capital charge in section 3(a)(2)(i) of this appendix, then the bank has no specific risk add-on for purposes of section 3(a)(2)(ii) of this appendix. The model should explain the historical price variation in the trading portfolio and capture concentration, both magnitude and changes in composition. The model should also be robust to an adverse environment and have been validated through backtesting which assesses whether specific risk is being accurately captured.

(b) *Partially modeled specific risk.* (1) A bank that incorporates specific risk in its internal model but fails to demonstrate to the Federal Reserve that its internal model adequately measures all aspects of specific risk for covered debt and equity positions, including event and default risk, as provided by section 5(a), of this appendix must calculate its specific risk add-on in accordance with one of the following methods:

(i) If the model is susceptible to valid separation of the VAR measure into a specific risk portion and a general market risk portion, then the specific risk add-on is equal to the previous day's specific risk portion.

(ii) If the model does not separate the VAR measure into a specific risk portion and a general market risk portion, then the specific risk add-on is the sum of the previous day's VAR measures for subportfolios of covered debt and equity positions that contain specific risk.

(2) If a bank models the specific risk of covered debt positions but not covered equity positions (or vice versa), then the bank may determine its specific risk charge for the included positions under section 5(a) or 5(b)(1) of this appendix, as appropriate. The specific risk charge for the positions not included equals the standard specific risk capital charge under paragraph (c) of this section.

(c) *Specific risk not modeled.* If a bank does not model specific risk in accordance with section 5(a) or 5(b) of this appendix, then the bank's specific risk capital charge shall equal the standard specific risk capital charge, calculated as follows:

(1) *Covered debt positions.* (i) For purposes of this section 5, covered debt positions means fixed-rate or floating-rate debt instruments located in the trading account and instruments located in the trading account with values that react primarily to changes in interest rates, including certain non-convertible preferred stock, convertible bonds, and instruments subject to repurchase and lending agreements. Also included are derivatives (including written and purchased options) for which the underlying instrument is a covered debt instrument that is subject to a non-zero specific risk capital charge.

(A) For covered debt positions that are derivatives, a bank must risk-weight (as described in paragraph (c)(1)(iii) of this section) the market value of the effective notional amount of the underlying debt instrument or index portfolio. Swaps must be included as the notional position in the underlying debt instrument or index portfolio, with a receiving side treated as a long position and a paying side treated as a short position; and

(B) For covered debt positions that are options, whether long or short, a bank must risk-weight (as described in paragraph (c)(1)(iii) of this section) the market value of the effective notional amount of the underlying debt instrument or index multiplied by the option's delta.

(i) A bank may net long and short covered debt positions (including derivatives) in identical debt issues or indices.

(iii) A bank must multiply the absolute value of the current market value of each net long or short covered debt position by the appropriate specific risk weighting factor indicated in Table 2 of this appendix. The specific risk capital charge component for covered debt positions is the sum of the weighted values.

TABLE 2—SPECIFIC RISK WEIGHTING FACTORS FOR COVERED DEBT POSITIONS

Category	Remaining maturity (contractual)	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
Other	N/A	8.00

(A) The *government* category includes all debt instruments of central governments of OECD-based countries¹⁴ 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.

(B) 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.¹⁵ This category

¹⁴Organization for Economic Cooperation and Development (OECD)-based countries is defined in appendix A of this part.

¹⁵U.S. government-sponsored agencies, multilateral development banks, and OECD banks are defined in appendix A of this part.

also includes other debt instruments, including corporate debt and revenue instruments issued by states and other political subdivisions of OECD countries, that are:

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

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

(3) 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 Federal Reserve.

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

(2) *Covered equity positions.* (i) For purposes of this section 5, covered equity positions means equity instruments located in the trading account and instruments located in the trading account with values that react primarily to changes in equity prices, including voting or non-voting common stock, certain convertible bonds, and commitments to buy or sell equity instruments. Also included are derivatives (including written and purchased options) for which the underlying is a covered equity position.

(A) For covered equity positions that are derivatives, a bank must risk weight (as described in paragraph (c)(2)(iii) of this section) the market value of the effective notional amount of the underlying equity instrument or equity portfolio. Swaps must be included as the notional position in the underlying equity instrument or index portfolio, with a receiving side treated as a long position and a paying side treated as a short position; and

(B) For covered equity positions that are options, whether long or short, a bank must risk weight (as described in paragraph (c)(2)(iii) of this section) the market value of the effective notional amount of the underlying equity instrument or index multiplied by the option's delta.

(ii) A bank may net long and short covered equity positions (including derivatives) in identical equity issues or equity indices in the same market.¹⁶

(iii)(A) A bank must multiply the absolute value of the current market value of each net long or short covered equity position by a risk weighting factor of 8.0 percent, or by 4.0 percent if the equity is held in a portfolio

¹⁶A bank may also net positions in depository receipts against an opposite position in the underlying equity or identical equity in different markets, provided that the bank includes the costs of conversion.

Federal Reserve System

Pt. 208, App. F

that is both liquid and well-diversified.¹⁷ For covered equity positions that are index contracts comprising a well-diversified portfolio of equity instruments, the net long or short position is multiplied by a risk weighting factor of 2.0 percent.

(B) For covered equity positions from the following futures-related arbitrage strategies, a bank may apply a 2.0 percent risk weighting factor to one side (long or short) of each position with the opposite side exempt from charge, subject to review by the Federal Reserve:

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

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

(C) For futures contracts on broadly-based indices that are matched by offsetting positions in a basket of stocks comprising the index, a bank 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 comprises at least 90 percent of the capitalization of the index.

(iv) The specific risk capital charge component for covered equity positions is the sum of the weighted values.

[Reg. H, 61 FR 47370, Sept. 6, 1996, as amended at 62 FR 68067, Dec. 30, 1997; 64 FR 19037, 19038, Apr. 19, 1999; 65 FR 75858, Dec. 5, 2000; 69 FR 44918, July 28, 2004; 71 FR 8936, Feb. 22, 2006]

APPENDIX F TO PART 208—CAPITAL ADEQUACY GUIDELINES FOR BANKS: INTERNAL-RATINGS-BASED AND ADVANCED MEASUREMENT APPROACHES

Part I General Provisions

Section 1 Purpose, Applicability, Reservation of Authority, and Principle of Conservatism

Section 2 Definitions

Section 3 Minimum Risk-Based Capital Requirements

¹⁷ A portfolio is liquid and well-diversified if: (1) It is characterized by a limited sensitivity to price changes of any single equity issue or closely related group of equity issues held in the portfolio; (2) the volatility of the portfolio's value is not dominated by the volatility of any individual equity issue or by equity issues from any single industry or economic sector; (3) it contains a large number of individual equity positions, with no single position representing a substantial portion of the portfolio's total market value; and (4) it consists mainly of issues traded on organized exchanges or in well-established over-the-counter markets.

Part II Qualifying Capital

Section 11 Additional Deductions

Section 12 Deductions and Limitations Not Required

Section 13 Eligible Credit Reserves

Part III Qualification

Section 21 Qualification Process

Section 22 Qualification Requirements

Section 23 Ongoing Qualification

Section 24 Merger and Acquisition Transitional Arrangements

Part IV Risk-Weighted Assets for General Credit Risk

Section 31 Mechanics for Calculating Total Wholesale and Retail Risk-Weighted Assets

Section 32 Counterparty Credit Risk of Repo-Style Transactions, Eligible Margin Loans, and OTC Derivative Contracts

Section 33 Guarantees and Credit Derivatives: PD Substitution and LGD Adjustment Approaches

Section 34 Guarantees and Credit Derivatives: Double Default Treatment

Section 35 Risk-Based Capital Requirement for Unsettled Transactions

Part V Risk-Weighted Assets for Securitization Exposures

Section 41 Operational Criteria for Recognizing the Transfer of Risk

Section 42 Risk-Based Capital Requirement for Securitization Exposures

Section 43 Ratings-Based Approach (RBA)

Section 44 Internal Assessment Approach (IAA)

Section 45 Supervisory Formula Approach (SFA)

Section 46 Recognition of Credit Risk Mitigants for Securitization Exposures

Section 47 Risk-Based Capital Requirement for Early Amortization Provisions

Part VI Risk-Weighted Assets for Equity Exposures

Section 51 Introduction and Exposure Measurement

Section 52 Simple Risk Weight Approach (SRWA)

Section 53 Internal Models Approach (IMA)

Section 54 Equity Exposures to Investment Funds

Section 55 Equity Derivative Contracts

Part VII Risk-Weighted Assets for Operational Risk

Section 61 Qualification Requirements for Incorporation of Operational Risk Mitigants

Section 62 Mechanics of Risk-Weighted Asset Calculation

Part VIII Disclosure

Section 71 Disclosure Requirements

PART I. GENERAL PROVISIONS

Section 1. Purpose, Applicability, Reservation of Authority, and Principle of Conservatism

(a) *Purpose.* This appendix establishes:

(1) Minimum qualifying criteria for banks using bank-specific internal risk measurement and management processes for calculating risk-based capital requirements;

(2) Methodologies for such banks to calculate their risk-based capital requirements; and

(3) Public disclosure requirements for such banks.

(b) *Applicability.* (1) This appendix applies to a bank that:

(i) Has consolidated assets, as reported on the most recent year-end Consolidated Report of Condition and Income (Call Report) equal to \$250 billion or more;

(ii) Has consolidated total on-balance sheet foreign exposure at the most recent year-end equal to \$10 billion or more (where total on-balance sheet foreign exposure equals total cross-border claims less claims with head office or guarantor located in another country plus redistributed guaranteed amounts to the country of head office or guarantor plus local country claims on local residents plus revaluation gains on foreign exchange and derivative products, calculated in accordance with the Federal Financial Institutions Examination Council (FFIEC) 009 Country Exposure Report);

(iii) Is a subsidiary of a depository institution that uses 12 CFR part 3, appendix C, 12 CFR part 208, appendix F, 12 CFR part 325, appendix D, or 12 CFR part 567, appendix C, to calculate its risk-based capital requirements; or

(iv) Is a subsidiary of a bank holding company that uses 12 CFR part 225, Appendix G, to calculate its risk-based capital requirements.

(2) Any bank may elect to use this appendix to calculate its risk-based capital requirements.

(3) A bank that is subject to this appendix must use this appendix unless the Federal Reserve determines in writing that application of this appendix is not appropriate in light of the bank's asset size, level of complexity, risk profile, or scope of operations. In making a determination under this paragraph, the Federal Reserve will apply notice and response procedures in the same manner and to the same extent as the notice and response procedures in 12 CFR 263.202.

(c) *Reservation of authority*—(1) *Additional capital in the aggregate.* The Federal Reserve may require a bank to hold an amount of capital greater than otherwise required under this appendix if the Federal Reserve determines that the bank's risk-based capital requirement under this appendix is not commensurate with the bank's credit, market, operational, or other risks. In making a determination under this paragraph, the Federal Reserve will apply notice and response procedures in the same manner and to the same extent as the notice and response procedures in 12 CFR 263.202.

(2) *Specific risk-weighted asset amounts.* (i) If the Federal Reserve determines that the risk-weighted asset amount calculated under this appendix by the bank for one or more exposures is not commensurate with the risks associated with those exposures, the Federal Reserve may require the bank to assign a different risk-weighted asset amount to the exposures, to assign different risk parameters to the exposures (if the exposures are wholesale or retail exposures), or to use different model assumptions for the exposures (if relevant), all as specified by the Federal Reserve.

(ii) If the Federal Reserve determines that the risk-weighted asset amount for operational risk produced by the bank under this appendix is not commensurate with the operational risks of the bank, the Federal Reserve may require the bank to assign a different risk-weighted asset amount for operational risk, to change elements of its operational risk analytical framework, including distributional and dependence assumptions, or to make other changes to the bank's operational risk management processes, data and assessment systems, or quantification systems, all as specified by the Federal Reserve.

(3) *Other supervisory authority.* Nothing in this appendix limits the authority of the Federal Reserve 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.

(d) *Principle of conservatism.* Notwithstanding the requirements of this appendix, a bank may choose not to apply a provision of this appendix to one or more exposures, provided that:

(1) The bank can demonstrate on an ongoing basis to the satisfaction of the Federal Reserve that not applying the provision would, in all circumstances, unambiguously generate a risk-based capital requirement for each such exposure greater than that which would otherwise be required under this appendix;

(2) The bank appropriately manages the risk of each such exposure;

(3) The bank notifies the Federal Reserve in writing prior to applying this principle to each such exposure; and

(4) The exposures to which the bank applies this principle are not, in the aggregate, material to the bank.

Section 2. Definitions

Advanced internal ratings-based (IRB) systems means a bank's internal risk rating and segmentation system; risk parameter quantification system; data management and maintenance system; and control, oversight, and validation system for credit risk of wholesale and retail exposures.

Advanced systems means a bank's advanced IRB systems, operational risk management processes, operational risk data and assessment systems, operational risk quantification systems, and, to the extent the bank uses the following systems, the internal models methodology, double default excessive correlation detection process, IMA for equity exposures, and IAA for securitization exposures to ABCP programs.

Affiliate with respect to a company means any company that controls, is controlled by, or is under common control with, the company.

Applicable external rating means:

- (1) With respect to an exposure that has multiple external ratings assigned by NRSROs, the lowest solicited external rating assigned to the exposure by any NRSRO; and
- (2) With respect to an exposure that has a single external rating assigned by an NRSRO, the external rating assigned to the exposure by the NRSRO.

Applicable inferred rating means:

- (1) With respect to an exposure that has multiple inferred ratings, the lowest inferred rating based on a solicited external rating; and
- (2) With respect to an exposure that has a single inferred rating, the inferred rating.

Asset-backed commercial paper (ABCP) program means a program that primarily issues commercial paper that:

- (1) Has an external rating; and
- (2) Is backed by underlying exposures held in a bankruptcy-remote SPE.

Asset-backed commercial paper (ABCP) program sponsor means a bank that:

- (1) Establishes an ABCP program;
- (2) Approves the sellers permitted to participate in an ABCP program;
- (3) Approves the exposures to be purchased by an ABCP program; or
- (4) Administers the ABCP program by monitoring the underlying exposures, underwriting or otherwise arranging for the placement of debt or other obligations issued by the program, compiling monthly reports, or ensuring compliance with the program documents and with the program's credit and investment policy.

Backtesting means the comparison of a bank's internal estimates with actual outcomes during a sample period not used in model development. In this context, backtesting is one form of out-of-sample testing.

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

Benchmarking means the comparison of a bank's internal estimates with relevant internal and external data or with estimates based on other estimation techniques.

Business environment and internal control factors means the indicators of a bank's operational risk profile that reflect a current and

forward-looking assessment of the bank's underlying business risk factors and internal control environment.

Carrying value means, with respect to an asset, the value of the asset on the balance sheet of the bank, determined in accordance with GAAP.

Clean-up call means a contractual provision that permits an originating bank or servicer to call securitization exposures before their stated maturity or call date. See also *eligible clean-up call*.

Commodity derivative contract means a commodity-linked swap, purchased commodity-linked option, forward commodity-linked contract, or any other instrument linked to commodities that gives rise to similar counterparty credit risks.

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

Control. A person or company *controls* a company if it:

- (1) Owns, controls, or holds with power to vote 25 percent or more of a class of voting securities of the company; or
- (2) Consolidates the company for financial reporting purposes.

Controlled early amortization provision means an early amortization provision that meets all the following conditions:

- (1) The originating bank has appropriate policies and procedures to ensure that it has sufficient capital and liquidity available in the event of an early amortization;
- (2) Throughout the duration of the securitization (including the early amortization period), there is the same pro rata sharing of interest, principal, expenses, losses, fees, recoveries, and other cash flows from the underlying exposures based on the originating bank's and the investors' relative shares of the underlying exposures outstanding measured on a consistent monthly basis;
- (3) The amortization period is sufficient for at least 90 percent of the total underlying exposures outstanding at the beginning of the early amortization period to be repaid or recognized as in default; and
- (4) The schedule for repayment of investor principal is not more rapid than would be allowed by straight-line amortization over an 18-month period.

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

Credit-enhancing interest-only strip (CEIO) means an on-balance sheet asset that, in form or in substance:

(1) Represents a contractual right to receive some or all of the interest and no more than a minimal amount of principal due on the underlying exposures of a securitization; and

(2) Exposes the holder to credit risk directly or indirectly associated with the underlying exposures that exceeds a pro rata share of the holder's claim on the underlying exposures, whether through subordination provisions or other credit-enhancement techniques.

Credit-enhancing representations and warranties means representations and warranties that are made or assumed in connection with a transfer of underlying exposures (including loan servicing assets) and that obligate a bank to protect another party from losses arising from the credit risk of the underlying exposures. Credit-enhancing representations and warranties include provisions to protect a party from losses resulting from the default or nonperformance of the obligors of the underlying exposures or from an insufficiency in the value of the collateral backing the underlying exposures. Credit-enhancing representations and warranties do not include:

(1) Early default clauses and similar warranties that permit the return of, or premium refund clauses that cover, first-lien residential mortgage exposures for a period not to exceed 120 days from the date of transfer, provided that the date of transfer is within one year of origination of the residential mortgage exposure;

(2) Premium refund clauses that cover underlying exposures guaranteed, in whole or in part, by the U.S. government, a U.S. government agency, or a U.S. government sponsored enterprise, provided that the clauses are for a period not to exceed 120 days from the date of transfer; or

(3) Warranties that permit the return of underlying exposures in instances of misrepresentation, fraud, or incomplete documentation.

Credit risk mitigant means collateral, a credit derivative, or a guarantee.

Credit-risk-weighted assets means 1.06 multiplied by the sum of:

(1) Total wholesale and retail risk-weighted assets;

(2) Risk-weighted assets for securitization exposures; and

(3) Risk-weighted assets for equity exposures.

Current exposure means, with respect to a netting set, the larger of zero or the market value of a transaction or portfolio of transactions within the netting set that would be lost upon default of the counterparty, assuming no recovery on the value of the transactions. Current exposure is also called replacement cost.

Default—(1) *Retail*. (i) A retail exposure of a bank is in default if:

(A) The exposure is 180 days past due, in the case of a residential mortgage exposure or revolving exposure;

(B) The exposure is 120 days past due, in the case of all other retail exposures; or

(C) The bank has taken a full or partial charge-off, write-down of principal, or material negative fair value adjustment of principal on the exposure for credit-related reasons.

(ii) Notwithstanding paragraph (1)(i) of this definition, for a retail exposure held by a non-U.S. subsidiary of the bank that is subject to an internal ratings-based approach to capital adequacy consistent with the Basel Committee on Banking Supervision's "International Convergence of Capital Measurement and Capital Standards: A Revised Framework" in a non-U.S. jurisdiction, the bank may elect to use the definition of default that is used in that jurisdiction, provided that the bank has obtained prior approval from the Federal Reserve to use the definition of default in that jurisdiction.

(iii) A retail exposure in default remains in default until the bank has reasonable assurance of repayment and performance for all contractual principal and interest payments on the exposure.

(2) *Wholesale*. (i) A bank's wholesale obligor is in default if:

(A) The bank determines that the obligor is unlikely to pay its credit obligations to the bank in full, without recourse by the bank to actions such as realizing collateral (if held); or

(B) The obligor is past due more than 90 days on any material credit obligation(s) to the bank.¹

(ii) An obligor in default remains in default until the bank has reasonable assurance of repayment and performance for all contractual principal and interest payments on all exposures of the bank to the obligor (other than exposures that have been fully written-down or charged-off).

Dependence means a measure of the association among operational losses across and within units of measure.

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

Derivative contract means a financial contract whose value is derived from the values of one or more underlying assets, reference rates, or indices of asset values or reference rates. Derivative contracts include interest rate derivative contracts, exchange rate derivative contracts, equity derivative contracts, commodity derivative contracts, credit derivatives, and any other instrument

¹Overdrafts are past due once the obligor has breached an advised limit or been advised of a limit smaller than the current outstanding balance.

that poses similar counterparty credit risks. Derivative contracts also include unsettled securities, commodities, and foreign exchange transactions with a contractual settlement or delivery lag that is longer than the lesser of the market standard for the particular instrument or five business days.

Early amortization provision means a provision in the documentation governing a securitization that, when triggered, causes investors in the securitization exposures to be repaid before the original stated maturity of the securitization exposures, unless the provision:

(1) Is triggered solely by events not directly related to the performance of the underlying exposures or the originating bank (such as material changes in tax laws or regulations); or

(2) Leaves investors fully exposed to future draws by obligors on the underlying exposures even after the provision is triggered.

Economic downturn conditions means, with respect to an exposure held by the bank, those conditions in which the aggregate default rates for that exposure's wholesale or retail exposure subcategory (or subdivision of such subcategory selected by the bank) in the exposure's national jurisdiction (or subdivision of such jurisdiction selected by the bank) are significantly higher than average.

Effective maturity (M) of a wholesale exposure means:

(1) For wholesale exposures other than repo-style transactions, eligible margin loans, and OTC derivative contracts described in paragraph (2) or (3) of this definition:

(i) The weighted-average remaining maturity (measured in years, whole or fractional) of the expected contractual cash flows from the exposure, using the undiscounted amounts of the cash flows as weights; or

(ii) The nominal remaining maturity (measured in years, whole or fractional) of the exposure.

(2) For repo-style transactions, eligible margin loans, and OTC derivative contracts subject to a qualifying master netting agreement for which the bank does not apply the internal models approach in paragraph (d) of section 32 of this appendix, the weighted-average remaining maturity (measured in years, whole or fractional) of the individual transactions subject to the qualifying master netting agreement, with the weight of each individual transaction set equal to the notional amount of the transaction.

(3) For repo-style transactions, eligible margin loans, and OTC derivative contracts for which the bank applies the internal models approach in paragraph (d) of section 32 of this appendix, the value determined in paragraph (d)(4) of section 32 of this appendix.

Effective notional amount means, for an eligible guarantee or eligible credit derivative, the lesser of the contractual notional

amount of the credit risk mitigant and the EAD of the hedged exposure, multiplied by the percentage coverage of the credit risk mitigant. For example, the effective notional amount of an eligible guarantee that covers, on a pro rata basis, 40 percent of any losses on a \$100 bond would be \$40.

Eligible clean-up call means a clean-up call that:

(1) Is exercisable solely at the discretion of the originating bank or servicer;

(2) Is not structured to avoid allocating losses to securitization exposures held by investors or otherwise structured to provide credit enhancement to the securitization; and

(3) (i) For a traditional securitization, is only exercisable when 10 percent or less of the principal amount of the underlying exposures or securitization exposures (determined as of the inception of the securitization) is outstanding; or

(ii) For a synthetic securitization, is only exercisable when 10 percent or less of the principal amount of the reference portfolio of underlying exposures (determined as of the inception of the securitization) is outstanding.

Eligible credit derivative means a credit derivative in the form of a credit default swap, n^{th} -to-default swap, total return swap, or any other form of credit derivative approved by the Federal Reserve, provided that:

(1) The contract meets the requirements of an eligible guarantee and has been confirmed by the protection purchaser and the protection provider;

(2) Any assignment of the contract has been confirmed by all relevant parties;

(3) If the credit derivative is a credit default swap or n^{th} -to-default swap, the contract includes the following credit events:

(i) Failure to pay any amount due under the terms of the reference exposure, subject to any applicable minimal payment threshold that is consistent with standard market practice and with a grace period that is closely in line with the grace period of the reference exposure; and

(ii) Bankruptcy, insolvency, or inability of the obligor on the reference exposure to pay its debts, or its failure or admission in writing of its inability generally to pay its debts as they become due, and similar events;

(4) The terms and conditions dictating the manner in which the contract is to be settled are incorporated into the contract;

(5) If the contract allows for cash settlement, the contract incorporates a robust valuation process to estimate loss reliably and specifies a reasonable period for obtaining post-credit event valuations of the reference exposure;

(6) If the contract requires the protection purchaser to transfer an exposure to the protection provider at settlement, the terms of

at least one of the exposures that is permitted to be transferred under the contract provides that any required consent to transfer may not be unreasonably withheld;

(7) If the credit derivative is a credit default swap or nth-to-default swap, the contract clearly identifies the parties responsible for determining whether a credit event has occurred, specifies that this determination is not the sole responsibility of the protection provider, and gives the protection purchaser the right to notify the protection provider of the occurrence of a credit event; and

(8) If the credit derivative is a total return swap and the bank records net payments received on the swap as net income, the bank records offsetting deterioration in the value of the hedged exposure (either through reductions in fair value or by an addition to reserves).

Eligible credit reserves means all general allowances that have been established through a charge against earnings to absorb credit losses associated with on- or off-balance sheet wholesale and retail exposures, including the allowance for loan and lease losses (ALLL) associated with such exposures but excluding allocated transfer risk reserves established pursuant to 12 U.S.C. 3904 and other specific reserves created against recognized losses.

Eligible double default guarantor, with respect to a guarantee or credit derivative obtained by a bank, means:

(1) *U.S.-based entities*. A depository institution, a bank holding company, a savings and loan holding company (as defined in 12 U.S.C. 1467a) provided all or substantially all of the holding company's activities are permissible for a financial holding company under 12 U.S.C. 1843(k), a securities broker or dealer registered with the SEC under the Securities Exchange Act of 1934 (15 U.S.C. 78o *et seq.*), or an insurance company in the business of providing credit protection (such as a monoline bond insurer or re-insurer) that is subject to supervision by a State insurance regulator, if:

(i) At the time the guarantor issued the guarantee or credit derivative or at any time thereafter, the bank assigned a PD to the guarantor's rating grade that was equal to or lower than the PD associated with a long-term external rating in the third-highest investment-grade rating category; and

(ii) The bank currently assigns a PD to the guarantor's rating grade that is equal to or lower than the PD associated with a long-term external rating in the lowest investment-grade rating category; or

(2) *Non-U.S.-based entities*. A foreign bank (as defined in §211.2 of the Federal Reserve Board's Regulation K (12 CFR 211.2)), a non-U.S.-based securities firm, or a non-U.S.-based insurance company in the business of providing credit protection, if:

(i) The bank demonstrates that the guarantor is subject to consolidated supervision and regulation comparable to that imposed on U.S. depository institutions, securities broker-dealers, or insurance companies (as the case may be), or has issued and outstanding an unsecured long-term debt security without credit enhancement that has a long-term applicable external rating of at least investment grade;

(ii) At the time the guarantor issued the guarantee or credit derivative or at any time thereafter, the bank assigned a PD to the guarantor's rating grade that was equal to or lower than the PD associated with a long-term external rating in the third-highest investment-grade rating category; and

(iii) The bank currently assigns a PD to the guarantor's rating grade that is equal to or lower than the PD associated with a long-term external rating in the lowest investment-grade rating category.

Eligible guarantee means a guarantee that:

(1) Is written and unconditional;

(2) Covers all or a pro rata portion of all contractual payments of the obligor on the reference exposure;

(3) Gives the beneficiary a direct claim against the protection provider;

(4) Is not unilaterally cancelable by the protection provider for reasons other than the breach of the contract by the beneficiary;

(5) Is legally enforceable against the protection provider in a jurisdiction where the protection provider has sufficient assets against which a judgment may be attached and enforced;

(6) Requires the protection provider to make payment to the beneficiary on the occurrence of a default (as defined in the guarantee) of the obligor on the reference exposure in a timely manner without the beneficiary first having to take legal actions to pursue the obligor for payment;

(7) Does not increase the beneficiary's cost of credit protection on the guarantee in response to deterioration in the credit quality of the reference exposure; and

(8) Is not provided by an affiliate of the bank, unless the affiliate is an insured depository institution, bank, securities broker or dealer, or insurance company that:

(i) Does not control the bank; and

(ii) Is subject to consolidated supervision and regulation comparable to that imposed on U.S. depository institutions, securities broker-dealers, or insurance companies (as the case may be).

Eligible margin loan means an extension of credit where:

(1) The extension of credit is collateralized exclusively by liquid and readily marketable debt or equity securities, gold, or conforming residential mortgages;

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

(3) The extension of credit is conducted under an agreement that provides the bank the right to accelerate and terminate the extension of credit and to liquidate or set off collateral promptly upon an event of default (including upon an event of 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;² and

(4) The bank has conducted sufficient legal review to conclude with a well-founded basis (and maintains sufficient written documentation of that legal review) 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.

Eligible operational risk offsets means amounts, not to exceed expected operational loss, that:

(1) Are generated by internal business practices to absorb highly predictable and reasonably stable operational losses, including reserves calculated consistent with GAAP; and

(2) Are available to cover expected operational losses with a high degree of certainty over a one-year horizon.

Eligible purchased wholesale exposure means a purchased wholesale exposure that:

(1) The bank or securitization SPE purchased from an unaffiliated seller and did not directly or indirectly originate;

(2) Was generated on an arm's-length basis between the seller and the obligor (intercompany accounts receivable and receivables subject to contra-accounts between firms that buy and sell to each other do not satisfy this criterion);

(3) Provides the bank or securitization SPE with a claim on all proceeds from the exposure or a pro rata interest in the proceeds from the exposure;

(4) Has an M of less than one year; and

(5) When consolidated by obligor, does not represent a concentrated exposure relative

to the portfolio of purchased wholesale exposures.

Eligible securitization guarantor means:

(1) A sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Central Bank, the European Commission, a Federal Home Loan Bank, Federal Agricultural Mortgage Corporation (Farmer Mac), a multilateral development bank, a depository institution, a bank holding company, a savings and loan holding company (as defined in 12 U.S.C. 1467a) provided all or substantially all of the holding company's activities are permissible for a financial holding company under 12 U.S.C. 1843(k), a foreign bank (as defined in §211.2 of the Federal Reserve Board's Regulation K (12 CFR 211.2)), or a securities firm;

(2) Any other entity (other than a securitization SPE) that has issued and outstanding an unsecured long-term debt security without credit enhancement that has a long-term applicable external rating in one of the three highest investment-grade rating categories; or

(3) Any other entity (other than a securitization SPE) that has a PD assigned by the bank that is lower than or equal to the PD associated with a long-term external rating in the third highest investment-grade rating category.

Eligible servicer cash advance facility means a servicer cash advance facility in which:

(1) The servicer is entitled to full reimbursement of advances, except that a servicer may be obligated to make non-reimbursable advances for a particular underlying exposure if any such advance is contractually limited to an insignificant amount of the outstanding principal balance of that exposure;

(2) The servicer's right to reimbursement is senior in right of payment to all other claims on the cash flows from the underlying exposures of the securitization; and

(3) The servicer has no legal obligation to, and does not, make advances to the securitization if the servicer concludes the advances are unlikely to be repaid.

Equity derivative contract means an equity-linked swap, purchased equity-linked option, forward equity-linked contract, or any other instrument linked to equities that gives rise to similar counterparty credit risks.

Equity exposure means:

(1) A security or instrument (whether voting or non-voting) that represents a direct or indirect ownership interest in, and is a residual claim on, the assets and income of a company, unless:

(i) The issuing company is consolidated with the bank under GAAP;

(ii) The bank is required to deduct the ownership interest from tier 1 or tier 2 capital under this appendix;

(iii) The ownership interest incorporates a payment or other similar obligation on the

²This requirement is met where all transactions under the agreement are (i) executed under U.S. law and (ii) constitute "securities contracts" under section 555 of the Bankruptcy Code (11 U.S.C. 555), 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. 4401-4407) or the Federal Reserve Board's Regulation EE (12 CFR part 231).

part of the issuing company (such as an obligation to make periodic payments); or

(iv) The ownership interest is a securitization exposure;

(2) A security or instrument that is mandatorily convertible into a security or instrument described in paragraph (1) of this definition;

(3) An option or warrant that is exercisable for a security or instrument described in paragraph (1) of this definition; or

(4) Any other security or instrument (other than a securitization exposure) to the extent the return on the security or instrument is based on the performance of a security or instrument described in paragraph (1) of this definition.

Excess spread for a period means:

(1) Gross finance charge collections and other income received by a securitization SPE (including market interchange fees) over a period minus interest paid to the holders of the securitization exposures, servicing fees, charge-offs, and other senior trust or similar expenses of the SPE over the period; divided by

(2) The principal balance of the underlying exposures at the end of the period.

Exchange rate derivative contract means a cross-currency interest rate swap, forward foreign-exchange contract, currency option purchased, or any other instrument linked to exchange rates that gives rise to similar counterparty credit risks.

Excluded mortgage exposure means any one- to four-family residential pre-sold construction loan for a residence for which the purchase contract is cancelled that would receive a 100 percent risk weight under section 618(a)(2) of the Resolution Trust Corporation Refinancing, Restructuring, and Improvement Act and under and 12 CFR part 208, appendix A, section III.C.3.

Expected credit loss (ECL) means:

(1) For a wholesale exposure to a non-defaulted obligor or segment of non-defaulted retail exposures that is carried at fair value with gains and losses flowing through earnings or that is classified as held-for-sale and is carried at the lower of cost or fair value with losses flowing through earnings, zero.

(2) For all other wholesale exposures to non-defaulted obligors or segments of non-defaulted retail exposures, the product of PD times LGD times EAD for the exposure or segment.

(3) For a wholesale exposure to a defaulted obligor or segment of defaulted retail exposures, the bank's impairment estimate for allowance purposes for the exposure or segment.

(4) Total ECL is the sum of expected credit losses for all wholesale and retail exposures other than exposures for which the bank has applied the double default treatment in section 34 of this appendix.

Expected exposure (EE) means the expected value of the probability distribution of non-negative credit risk exposures to a counterparty at any specified future date before the maturity date of the longest term transaction in the netting set. Any negative market values in the probability distribution of market values to a counterparty at a specified future date are set to zero to convert the probability distribution of market values to the probability distribution of credit risk exposures.

Expected operational loss (EOL) means the expected value of the distribution of potential aggregate operational losses, as generated by the bank's operational risk quantification system using a one-year horizon.

Expected positive exposure (EPE) means the weighted average over time of expected (non-negative) exposures to a counterparty where the weights are the proportion of the time interval that an individual expected exposure represents. When calculating risk-based capital requirements, the average is taken over a one-year horizon.

Exposure at default (EAD). (1) For the on-balance sheet component of a wholesale exposure or segment of retail exposures (other than an OTC derivative contract, or a repo-style transaction or eligible margin loan for which the bank determines EAD under section 32 of this appendix), EAD means:

(i) If the exposure or segment is a security classified as available-for-sale, the bank's carrying value (including net accrued but unpaid interest and fees) for the exposure or segment less any allocated transfer risk reserve for the exposure or segment, less any unrealized gains on the exposure or segment, and plus any unrealized losses on the exposure or segment; or

(ii) If the exposure or segment is not a security classified as available-for-sale, the bank's carrying value (including net accrued but unpaid interest and fees) for the exposure or segment less any allocated transfer risk reserve for the exposure or segment.

(2) For the off-balance sheet component of a wholesale exposure or segment of retail exposures (other than an OTC derivative contract, or a repo-style transaction or eligible margin loan for which the bank determines EAD under section 32 of this appendix) in the form of a loan commitment, line of credit, trade-related letter of credit, or transaction-related contingency, EAD means the bank's best estimate of net additions to the outstanding amount owed the bank, including estimated future additional draws of principal and accrued but unpaid interest and fees, that are likely to occur over a one-year horizon assuming the wholesale exposure or the retail exposures in the segment were to go into default. This estimate of net additions must reflect what would be expected during economic downturn conditions. Trade-related letters of credit are short-

term, self-liquidating instruments that are used to finance the movement of goods and are collateralized by the underlying goods. Transaction-related contingencies relate to a particular transaction and include, among other things, performance bonds and performance-based letters of credit.

(3) For the off-balance sheet component of a wholesale exposure or segment of retail exposures (other than an OTC derivative contract, or a repo-style transaction or eligible margin loan for which the bank determines EAD under section 32 of this appendix) in the form of anything other than a loan commitment, line of credit, trade-related letter of credit, or transaction-related contingency, EAD means the notional amount of the exposure or segment.

(4) EAD for OTC derivative contracts is calculated as described in section 32 of this appendix. A bank also may determine EAD for repo-style transactions and eligible margin loans as described in section 32 of this appendix.

(5) For wholesale or retail exposures in which only the drawn balance has been securitized, the bank must reflect its share of the exposures' undrawn balances in EAD. Undrawn balances of revolving exposures for which the drawn balances have been securitized must be allocated between the seller's and investors' interests on a pro rata basis, based on the proportions of the seller's and investors' shares of the securitized drawn balances.

Exposure category means any of the wholesale, retail, securitization, or equity exposure categories.

External operational loss event data means, with respect to a bank, gross operational loss amounts, dates, recoveries, and relevant causal information for operational loss events occurring at organizations other than the bank.

External rating means a credit rating that is assigned by an NRSRO to an exposure, provided:

(1) The credit rating fully reflects the entire amount of credit risk with regard to all payments owed to the holder of the exposure. If a holder is owed principal and interest on an exposure, the credit rating must fully reflect the credit risk associated with timely repayment of principal and interest. If a holder is owed only principal on an exposure, the credit rating must fully reflect only the credit risk associated with timely repayment of principal; and

(2) The credit rating is published in an accessible form and is or will be included in the transition matrices made publicly available by the NRSRO that summarize the historical performance of positions rated by the NRSRO.

Financial collateral means collateral:

(1) In the form of:

(i) Cash on deposit with the bank (including cash held for the bank by a third-party custodian or trustee);

(ii) Gold bullion;

(iii) Long-term debt securities that have an applicable external rating of one category below investment grade or higher;

(iv) Short-term debt instruments that have an applicable external rating of at least investment grade;

(v) Equity securities that are publicly traded;

(vi) Convertible bonds that are publicly traded;

(vii) Money market mutual fund shares and other mutual fund shares if a price for the shares is publicly quoted daily; or

(viii) Conforming residential mortgages; and

(2) In which the bank has a perfected, first priority security interest or, outside of the United States, the legal equivalent thereof (with the exception of cash on deposit and notwithstanding the prior security interest of any custodial agent).

GAAP means generally accepted accounting principles as used in the United States.

Gain-on-sale means an increase in the equity capital (as reported on Schedule RC of the Call Report) of a bank that results from a securitization (other than an increase in equity capital that results from the bank's receipt of cash in connection with the securitization).

Guarantee means a financial guarantee, letter of credit, insurance, or other similar financial instrument (other than a credit derivative) that allows one party (beneficiary) to transfer the credit risk of one or more specific exposures (reference exposure) to another party (protection provider). See also *eligible guarantee*.

High volatility commercial real estate (HVCRE) exposure means a credit facility that finances or has financed the acquisition, development, or construction (ADC) of real property, unless the facility finances:

(1) One- to four-family residential properties; or

(2) Commercial real estate projects in which:

(i) The loan-to-value ratio is less than or equal to the applicable maximum supervisory loan-to-value ratio in the Federal Reserve's real estate lending standards at 12 CFR part 208, appendix C;

(ii) The borrower has contributed capital to the project in the form of cash or unencumbered readily marketable assets (or has paid development expenses out-of-pocket) of at least 15 percent of the real estate's appraised "as completed" value; and

(iii) The borrower contributed the amount of capital required by paragraph (2)(ii) of this definition before the bank advances

funds under the credit facility, and the capital contributed by the borrower, or internally generated by the project, is contractually required to remain in the project throughout the life of the project. The life of a project concludes only when the credit facility is converted to permanent financing or is sold or paid in full. Permanent financing may be provided by the bank that provided the ADC facility as long as the permanent financing is subject to the bank's underwriting criteria for long-term mortgage loans.

Inferred rating. A securitization exposure has an *inferred rating* equal to the external rating referenced in paragraph (2)(i) of this definition if:

- (1) The securitization exposure does not have an external rating; and
- (2) Another securitization exposure issued by the same issuer and secured by the same underlying exposures:
 - (i) Has an external rating;
 - (ii) Is subordinated in all respects to the unrated securitization exposure;
 - (iii) Does not benefit from any credit enhancement that is not available to the unrated securitization exposure; and
 - (iv) Has an effective remaining maturity that is equal to or longer than that of the unrated securitization exposure.

Interest rate derivative contract means a single-currency interest rate swap, basis swap, forward rate agreement, purchased interest rate option, when-issued securities, or any other instrument linked to interest rates that gives rise to similar counterparty credit risks.

Internal operational loss event data means, with respect to a bank, gross operational loss amounts, dates, recoveries, and relevant causal information for operational loss events occurring at the bank.

Investing bank means, with respect to a securitization, a bank that assumes the credit risk of a securitization exposure (other than an originating bank of the securitization). In the typical synthetic securitization, the investing bank sells credit protection on a pool of underlying exposures to the originating bank.

Investment fund means a company:

- (1) All or substantially all of the assets of which are financial assets; and
- (2) That has no material liabilities.

Investors' interest EAD means, with respect to a securitization, the EAD of the underlying exposures multiplied by the ratio of:

- (1) The total amount of securitization exposures issued by the securitization SPE to investors; divided by
- (2) The outstanding principal amount of underlying exposures.

Loss given default (LGD) means:

- (1) For a wholesale exposure, the greatest of:
 - (i) Zero;

- (ii) The bank's empirically based best estimate of the long-run default-weighted average economic loss, per dollar of EAD, the bank would expect to incur if the obligor (or a typical obligor in the loss severity grade assigned by the bank to the exposure) were to default within a one-year horizon over a mix of economic conditions, including economic downturn conditions; or

- (iii) The bank's empirically based best estimate of the economic loss, per dollar of EAD, the bank would expect to incur if the obligor (or a typical obligor in the loss severity grade assigned by the bank to the exposure) were to default within a one-year horizon during economic downturn conditions.

(2) For a segment of retail exposures, the greatest of:

(i) Zero;

- (ii) The bank's empirically based best estimate of the long-run default-weighted average economic loss, per dollar of EAD, the bank would expect to incur if the exposures in the segment were to default within a one-year horizon over a mix of economic conditions, including economic downturn conditions; or

- (iii) The bank's empirically based best estimate of the economic loss, per dollar of EAD, the bank would expect to incur if the exposures in the segment were to default within a one-year horizon during economic downturn conditions.

(3) The economic loss on an exposure in the event of default is all material credit-related losses on the exposure (including accrued but unpaid interest or fees, losses on the sale of collateral, direct workout costs, and an appropriate allocation of indirect workout costs). Where positive or negative cash flows on a wholesale exposure to a defaulted obligor or a defaulted retail exposure (including proceeds from the sale of collateral, workout costs, additional extensions of credit to facilitate repayment of the exposure, and draw-downs of unused credit lines) occur after the date of default, the economic loss must reflect the net present value of cash flows as of the default date using a discount rate appropriate to the risk of the defaulted exposure.

Main index means the Standard & Poor's 500 Index, the FTSE All-World Index, and any other index for which the bank can demonstrate to the satisfaction of the Federal Reserve that the equities represented in the index have comparable liquidity, depth of market, and size of bid-ask spreads as equities in the Standard & Poor's 500 Index and FTSE All-World Index.

Multilateral development bank means the International Bank for Reconstruction and Development, the International Finance Corporation, the Inter-American Development Bank, the Asian Development Bank, the African Development Bank, the European Bank for Reconstruction and Development, the

European Investment Bank, the European Investment Fund, the Nordic Investment Bank, the Caribbean Development Bank, the Islamic Development Bank, the Council of Europe Development Bank, and any other multilateral lending institution or regional development bank in which the U.S. government is a shareholder or contributing member or which the Federal Reserve determines poses comparable credit risk.

Nationally recognized statistical rating organization (NRSRO) means an entity registered with the SEC as a nationally recognized statistical rating organization under section 15E of the Securities Exchange Act of 1934 (15 U.S.C. 78o-7).

Netting set means a group of transactions with a single counterparty that are subject to a qualifying master netting agreement or qualifying cross-product master netting agreement. For purposes of the internal models methodology in paragraph (d) of section 32 of this appendix, each transaction that is not subject to such a master netting agreement is its own netting set.

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.

Obligor means the legal entity or natural person contractually obligated on a wholesale exposure, except that a bank may treat the following exposures as having separate obligors:

(1) Exposures to the same legal entity or natural person denominated in different currencies;

(2) (i) An income-producing real estate exposure for which all or substantially all of the repayment of the exposure is reliant on the cash flows of the real estate serving as collateral for the exposure; the bank, in economic substance, does not have recourse to the borrower beyond the real estate collateral; and no cross-default or cross-acceleration clauses are in place other than clauses obtained solely out of an abundance of caution; and

(ii) Other credit exposures to the same legal entity or natural person; and

(3) (i) A wholesale exposure authorized under section 364 of the U.S. Bankruptcy Code (11 U.S.C. 364) to a legal entity or natural person who is a debtor-in-possession for purposes of Chapter 11 of the Bankruptcy Code; and

(ii) Other credit exposures to the same legal entity or natural person.

Operational loss means a loss (excluding insurance or tax effects) resulting from an operational loss event. Operational loss includes all expenses associated with an operational loss event except for opportunity costs, forgone revenue, and costs related to risk management and control enhancements implemented to prevent future operational losses.

Operational loss event means an event that results in loss and is associated with any of the following seven operational loss event type categories:

(1) Internal fraud, which means the operational loss event type category that comprises operational losses resulting from an act involving at least one internal party of a type intended to defraud, misappropriate property, or circumvent regulations, the law, or company policy, excluding diversity- and discrimination-type events.

(2) External fraud, which means the operational loss event type category that comprises operational losses resulting from an act by a third party of a type intended to defraud, misappropriate property, or circumvent the law. Retail credit card losses arising from non-contractual, third-party initiated fraud (for example, identity theft) are external fraud operational losses. All other third-party initiated credit losses are to be treated as credit risk losses.

(3) Employment practices and workplace safety, which means the operational loss event type category that comprises operational losses resulting from an act inconsistent with employment, health, or safety laws or agreements, payment of personal injury claims, or payment arising from diversity- and discrimination-type events.

(4) Clients, products, and business practices, which means the operational loss event type category that comprises operational losses resulting from the nature or design of a product or from an unintentional or negligent failure to meet a professional obligation to specific clients (including fiduciary and suitability requirements).

(5) Damage to physical assets, which means the operational loss event type category that comprises operational losses resulting from the loss of or damage to physical assets from natural disaster or other events.

(6) Business disruption and system failures, which means the operational loss event type category that comprises operational losses resulting from disruption of business or system failures.

(7) Execution, delivery, and process management, which means the operational loss event type category that comprises operational losses resulting from failed transaction processing or process management or losses arising from relations with trade counterparties and vendors.

Operational risk means the risk of loss resulting from inadequate or failed internal processes, people, and systems or from external events (including legal risk but excluding strategic and reputational risk).

Operational risk exposure means the 99.9th percentile of the distribution of potential aggregate operational losses, as generated by the bank's operational risk quantification

system over a one-year horizon (and not incorporating eligible operational risk offsets or qualifying operational risk mitigants).

Originating bank, with respect to a securitization, means a bank that:

(1) Directly or indirectly originated or securitized the underlying exposures included in the securitization; or

(2) Serves as an ABCP program sponsor to the securitization.

Other retail exposure means an exposure (other than a securitization exposure, an equity exposure, a residential mortgage exposure, an excluded mortgage exposure, a qualifying revolving exposure, or the residual value portion of a lease exposure) that is managed as part of a segment of exposures with homogeneous risk characteristics, not on an individual-exposure basis, and is either:

(1) An exposure to an individual for non-business purposes; or

(2) An exposure to an individual or company for business purposes if the bank's consolidated business credit exposure to the individual or company is \$1 million or less.

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

Probability of default (PD) means:

(1) For a wholesale exposure to a non-defaulted obligor, the bank's empirically based best estimate of the long-run average one-year default rate for the rating grade assigned by the bank to the obligor, capturing the average default experience for obligors in the rating grade over a mix of economic conditions (including economic downturn conditions) sufficient to provide a reasonable estimate of the average one-year default rate over the economic cycle for the rating grade.

(2) For a segment of non-defaulted retail exposures, the bank's empirically based best estimate of the long-run average one-year default rate for the exposures in the segment, capturing the average default experience for exposures in the segment over a mix of economic conditions (including economic downturn conditions) sufficient to provide a reasonable estimate of the average one-year default rate over the economic cycle for the segment and adjusted upward as appropriate for segments for which seasoning effects are material. For purposes of this definition, a segment for which seasoning effects are material is a segment where there is a material relationship between the time since origination of exposures within the segment and the bank's best estimate of the long-run average one-year default rate for the exposures in the segment.

(3) For a wholesale exposure to a defaulted obligor or segment of defaulted retail exposures, 100 percent.

Protection amount (P) means, with respect to an exposure hedged by an eligible guar-

antee or eligible credit derivative, the effective notional amount of the guarantee or credit derivative, reduced to reflect any currency mismatch, maturity mismatch, or lack of restructuring coverage (as provided in section 33 of this appendix).

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, meaning that there are enough independent bona fide offers to buy and sell so that a sales price reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined promptly and a trade can be settled at such a price within five business days.

Qualifying central counterparty means a counterparty (for example, a clearinghouse) that:

(1) Facilitates trades between counterparties in one or more financial markets by either guaranteeing trades or novating contracts;

(2) Requires all participants in its arrangements to be fully collateralized on a daily basis; and

(3) The bank demonstrates to the satisfaction of the Federal Reserve is in sound financial condition and is subject to effective oversight by a national supervisory authority.

Qualifying cross-product master netting agreement means a qualifying master netting agreement that provides for termination and close-out netting across multiple types of financial transactions or qualifying master netting agreements in the event of a counterparty's default, provided that:

(1) The underlying financial transactions are OTC derivative contracts, eligible margin loans, or repo-style transactions; and

(2) The bank obtains a written legal opinion verifying the validity and enforceability of the agreement under applicable law of the relevant jurisdictions if the counterparty fails to perform upon an event of default, including upon an event of bankruptcy, insolvency, or similar proceeding.

Qualifying master netting agreement means any written, legally enforceable bilateral agreement, provided that:

(1) The agreement creates a single legal obligation for all individual transactions covered by the agreement upon an event of default, including bankruptcy, insolvency, or similar proceeding, of the counterparty;

(2) The agreement provides the bank 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 default, including upon an event of 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;

(3) The bank has conducted sufficient legal review to conclude with a well-founded basis (and maintains sufficient written documentation of that legal review) that:

(i) The agreement meets the requirements of paragraph (2) of this definition; and

(ii) In the event of a legal challenge (including one resulting from default or from bankruptcy, insolvency, or similar proceeding) the relevant court and administrative authorities would find the agreement to be legal, valid, binding, and enforceable under the law of the relevant jurisdictions;

(4) The bank establishes and maintains procedures to monitor possible changes in relevant law and to ensure that the agreement continues to satisfy the requirements of this definition; and

(5) The agreement does not contain a walkaway clause (that is, a provision that permits a non-defaulting counterparty to make a lower payment than it would make otherwise under the agreement, or no payment at all, to a defaulter or the estate of a defaulter, even if the defaulter or the estate of the defaulter is a net creditor under the agreement).

Qualifying revolving exposure (QRE) means an exposure (other than a securitization exposure or equity exposure) to an individual that is managed as part of a segment of exposures with homogeneous risk characteristics, not on an individual-exposure basis, and:

(1) Is revolving (that is, the amount outstanding fluctuates, determined largely by the borrower's decision to borrow and repay, up to a pre-established maximum amount);

(2) Is unsecured and unconditionally cancelable by the bank to the fullest extent permitted by Federal law; and

(3) Has a maximum exposure amount (drawn plus undrawn) of up to \$100,000.

Repo-style transaction means 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, provided that:

(1) The transaction is based solely on liquid and readily marketable securities, cash, gold, or conforming residential mortgages;

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

(3)(i) The transaction is a "securities contract" or "repurchase agreement" under section 555 or 559, respectively, of the Bank-

ruptcy Code (11 U.S.C. 555 or 559), a qualified financial contract under 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 under sections 401-407 of the Federal Deposit Insurance Corporation Improvement Act of 1991 (12 U.S.C. 4401-4407) or the Federal Reserve Board's Regulation EE (12 CFR part 231); or

(ii) If the transaction does not meet the criteria set forth in paragraph (3)(i) of this definition, then either:

(A) The transaction is executed under an agreement that provides the bank 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 upon an event of 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; or

(B) The transaction is:

(1) Either overnight or unconditionally cancelable at any time by the bank; and

(2) Executed under an agreement that provides the bank 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 counterparty default; and

(4) The bank has conducted sufficient legal review to conclude with a well-founded basis (and maintains sufficient written documentation of that legal review) 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.

Residential mortgage exposure means an exposure (other than a securitization exposure, equity exposure, or excluded mortgage exposure) that is managed as part of a segment of exposures with homogeneous risk characteristics, not on an individual-exposure basis, and is:

(1) An exposure that is primarily secured by a first or subsequent lien on one- to four-family residential property; or

(2) An exposure with an original and outstanding amount of \$1 million or less that is primarily secured by a first or subsequent lien on residential property that is not one to four family.

Retail exposure means a residential mortgage exposure, a qualifying revolving exposure, or an other retail exposure.

Retail exposure subcategory means the residential mortgage exposure, qualifying revolving exposure, or other retail exposure subcategory.

Risk parameter means a variable used in determining risk-based capital requirements for wholesale and retail exposures, specifically probability of default (PD), loss given

default (LGD), exposure at default (EAD), or effective maturity (M).

Scenario analysis means a systematic process of obtaining expert opinions from business managers and risk management experts to derive reasoned assessments of the likelihood and loss impact of plausible high-severity operational losses. Scenario analysis may include the well-reasoned evaluation and use of external operational loss event data, adjusted as appropriate to ensure relevance to a bank's operational risk profile and control structure.

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

Securitization means a traditional securitization or a synthetic securitization.

Securitization exposure means an on-balance sheet or off-balance sheet credit exposure that arises from a traditional or synthetic securitization (including credit-enhancing representations and warranties).

Securitization special purpose entity (securitization SPE) means a corporation, trust, or other entity organized for the specific purpose of holding underlying exposures of a securitization, the activities of which are limited to those appropriate to accomplish this purpose, and the structure of which is intended to isolate the underlying exposures held by the entity from the credit risk of the seller of the underlying exposures to the entity.

Senior securitization exposure means a securitization exposure that has a first priority claim on the cash flows from the underlying exposures. When determining whether a securitization exposure has a first priority claim on the cash flows from the underlying exposures, a bank is not required to consider amounts due under interest rate or currency derivative contracts, fees due, or other similar payments. Both the most senior commercial paper issued by an ABCP program and a liquidity facility that supports the ABCP program may be senior securitization exposures if the liquidity facility provider's right to reimbursement of the drawn amounts is senior to all claims on the cash flows from the underlying exposures except amounts due under interest rate or currency derivative contracts, fees due, or other similar payments.

Servicer cash advance facility means a facility under which the servicer of the underlying exposures of a securitization may advance cash to ensure an uninterrupted flow of payments to investors in the securitization, including advances made to cover foreclosure costs or other expenses to facilitate the timely collection of the underlying exposures. See also *eligible servicer cash advance facility*.

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

Sovereign exposure means:

(1) A direct exposure to a sovereign entity; or

(2) An exposure directly and unconditionally backed by the full faith and credit of a sovereign entity.

Subsidiary means, with respect to a company, a company controlled by that company.

Synthetic 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 through the use of one or more credit derivatives or guarantees (other than a guarantee that transfers only the credit risk of an individual retail exposure);

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

(3) Performance of the securitization exposures depends upon the performance of the underlying exposures; and

(4) All or substantially all of the underlying exposures are financial exposures (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities).

Tier 1 capital is defined in 12 CFR part 208, appendix A, as modified in part II of this appendix.

Tier 2 capital is defined in 12 CFR part 208, appendix A, as modified in part II of this appendix.

Total qualifying capital means the sum of tier 1 capital and tier 2 capital, after all deductions required in this appendix.

Total risk-weighted assets means:

(1) The sum of:

(i) Credit risk-weighted assets; and

(ii) Risk-weighted assets for operational risk; minus

(2) Excess eligible credit reserves not included in tier 2 capital.

Total wholesale and retail risk-weighted assets means the sum of risk-weighted assets for wholesale exposures to non-defaulted obligors and segments of non-defaulted retail exposures; risk-weighted assets for wholesale exposures to defaulted obligors and segments of defaulted retail exposures; risk-weighted assets for assets not defined by an exposure category; and risk-weighted assets for non-material portfolios of exposures (all as determined in section 31 of this appendix) and risk-weighted assets for unsettled transactions (as determined in section 35 of this appendix) minus the amounts deducted from capital pursuant to 12 CFR part 208, appendix A (excluding those deductions reversed in section 12 of this appendix).

Traditional 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 other than through the use of credit derivatives or guarantees;

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

(3) Performance of the securitization exposures depends upon the performance of the underlying exposures;

(4) All or substantially all of the underlying exposures are financial exposures (such as loans, commitments, credit derivatives, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, or equity securities);

(5) The underlying exposures are not owned by an operating company;

(6) The underlying exposures are not owned by a small business investment company 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 Federal Reserve may determine that a transaction in which the underlying exposures are owned by an investment firm that exercises substantially unfettered control over the size and composition of its assets, liabilities, and off-balance sheet exposures is not a traditional securitization based on the transaction's leverage, risk profile, or economic substance.

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

Tranche means all securitization exposures associated with a securitization that have the same seniority level.

Underlying exposures means one or more exposures that have been securitized in a securitization transaction.

Unexpected operational loss (UOL) means the difference between the bank's operational risk exposure and the bank's expected operational loss.

Unit of measure means the level (for example, organizational unit or operational loss event type) at which the bank's operational risk quantification system generates a separate distribution of potential operational losses.

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

Wholesale exposure means a credit exposure to a company, natural person, sovereign entity, or governmental entity (other than a securitization exposure, retail exposure, excluded mortgage exposure, or equity exposure). Examples of a wholesale exposure include:

(1) A non-tranched guarantee issued by a bank on behalf of a company;

(2) A repo-style transaction entered into by a bank with a company and any other transaction in which a bank posts collateral to a company and faces counterparty credit risk;

(3) An exposure that a bank treats as a covered position under 12 CFR part 208, appendix E for which there is a counterparty credit risk capital requirement;

(4) A sale of corporate loans by a bank to a third party in which the bank retains full recourse;

(5) An OTC derivative contract entered into by a bank with a company;

(6) An exposure to an individual that is not managed by a bank as part of a segment of exposures with homogeneous risk characteristics; and

(7) A commercial lease.

Wholesale exposure subcategory means the HVCRE or non-HVCRE wholesale exposure subcategory.

Section 3. Minimum Risk-Based Capital Requirements

(a) Except as modified by paragraph (c) of this section or by section 23 of this appendix, each bank must meet a minimum ratio of:

(1) Total qualifying capital to total risk-weighted assets of 8.0 percent; and

(2) Tier 1 capital to total risk-weighted assets of 4.0 percent.

(b) Each bank must hold capital commensurate with the level and nature of all risks to which the bank is exposed.

(c) When a bank subject to 12 CFR part 208, appendix E calculates its risk-based capital requirements under this appendix, the bank must also refer to 12 CFR part 208, appendix E for supplemental rules to calculate risk-based capital requirements adjusted for market risk.

PART II. QUALIFYING CAPITAL

Section 11. Additional Deductions

(a) *General.* A bank that uses this appendix must make the same deductions from its tier 1 capital and tier 2 capital required in 12 CFR part 208, appendix A, except that:

(1) A bank is not required to deduct certain equity investments and CEIOs (as provided in section 12 of this appendix); and

(2) A bank also must make the deductions from capital required by paragraphs (b) and (c) of this section.

(b) *Deductions from tier 1 capital.* A bank must deduct from tier 1 capital any gain-on-

sale associated with a securitization exposure as provided in paragraph (a) of section 41 and paragraphs (a)(1), (c), (g)(1), and (h)(1) of section 42 of this appendix.

(c) *Deductions from tier 1 and tier 2 capital.* A bank must deduct the exposures specified in paragraphs (c)(1) through (c)(7) in this section 50 percent from tier 1 capital and 50 percent from tier 2 capital. If the amount deductible from tier 2 capital exceeds the bank's actual tier 2 capital, however, the bank must deduct the excess from tier 1 capital.

(1) *Credit-enhancing interest-only strips (CEIOS).* In accordance with paragraphs (a)(1) and (c) of section 42 of this appendix, any CEIO that does not constitute gain-on-sale.

(2) *Non-qualifying securitization exposures.* In accordance with paragraphs (a)(4) and (c) of section 42 of this appendix, any securitization exposure that does not qualify for the Ratings-Based Approach, the Internal Assessment Approach, or the Supervisory Formula Approach under sections 43, 44, and 45 of this appendix, respectively.

(3) *Securitized non-IRB exposures.* In accordance with paragraphs (c) and (g)(4) of section 42 of this appendix, certain exposures to a securitization any underlying exposure of which is not a wholesale exposure, retail exposure, securitization exposure, or equity exposure.

(4) *Low-rated securitization exposures.* In accordance with section 43 and paragraph (c) of section 42 of this appendix, any securitization exposure that qualifies for and must be deducted under the Ratings-Based Approach.

(5) *High-risk securitization exposures subject to the Supervisory Formula Approach.* In accordance with paragraphs (b) and (c) of section 45 of this appendix and paragraph (c) of section 42 of this appendix, certain high-risk securitization exposures (or portions thereof) that qualify for the Supervisory Formula Approach.

(6) *Eligible credit reserves shortfall.* In accordance with paragraph (a)(1) of section 13 of this appendix, any eligible credit reserves shortfall.

(7) *Certain failed capital markets transactions.* In accordance with paragraph (e)(3) of section 35 of this appendix, the bank's exposure on certain failed capital markets transactions.

Section 12. Deductions and Limitations Not Required

(a) *Deduction of CEIOs.* A bank is not required to make the deductions from capital for CEIOs in 12 CFR part 208, appendix A, section II.B.1.e.

(b) *Deduction of certain equity investments.* A bank is not required to make the deductions from capital for nonfinancial equity investments in 12 CFR part 208, appendix A, section II.B.5.

Section 13. Eligible Credit Reserves

(a) *Comparison of eligible credit reserves to expected credit losses—(1) Shortfall of eligible credit reserves.* If a bank's eligible credit reserves are less than the bank's total expected credit losses, the bank must deduct the shortfall amount 50 percent from tier 1 capital and 50 percent from tier 2 capital. If the amount deductible from tier 2 capital exceeds the bank's actual tier 2 capital, the bank must deduct the excess amount from tier 1 capital.

(2) *Excess eligible credit reserves.* If a bank's eligible credit reserves exceed the bank's total expected credit losses, the bank may include the excess amount in tier 2 capital to the extent that the excess amount does not exceed 0.6 percent of the bank's credit-risk-weighted assets.

(b) *Treatment of allowance for loan and lease losses.* Regardless of any provision in 12 CFR part 208, appendix A, the ALLL is included in tier 2 capital only to the extent provided in paragraph (a)(2) of this section and in section 24 of this appendix.

PART III. QUALIFICATION

Section 21. Qualification Process

(a) *Timing.* (1) A bank that is described in paragraph (b)(1) of section 1 of this appendix must adopt a written implementation plan no later than six months after the later of April 1, 2008, or the date the bank meets a criterion in that section. The implementation plan must incorporate an explicit first floor period start date no later than 36 months after the later of April 1, 2008, or the date the bank meets at least one criterion under paragraph (b)(1) of section 1 of this appendix. The Federal Reserve may extend the first floor period start date.

(2) A bank that elects to be subject to this appendix under paragraph (b)(2) of section 1 of this appendix must adopt a written implementation plan.

(b) *Implementation plan.* (1) The bank's implementation plan must address in detail how the bank complies, or plans to comply, with the qualification requirements in section 22 of this appendix. The bank also must maintain a comprehensive and sound planning and governance process to oversee the implementation efforts described in the plan. At a minimum, the plan must:

(i) Comprehensively address the qualification requirements in section 22 of this appendix for the bank and each consolidated subsidiary (U.S. and foreign-based) of the bank with respect to all portfolios and exposures of the bank and each of its consolidated subsidiaries;

(ii) Justify and support any proposed temporary or permanent exclusion of business

lines, portfolios, or exposures from application of the advanced approaches in this appendix (which business lines, portfolios, and exposures must be, in the aggregate, immaterial to the bank);

(iii) Include the bank's self-assessment of:

(A) The bank's current status in meeting the qualification requirements in section 22 of this appendix; and

(B) The consistency of the bank's current practices with the Federal Reserve's supervisory guidance on the qualification requirements;

(iv) Based on the bank's self-assessment, identify and describe the areas in which the bank proposes to undertake additional work to comply with the qualification requirements in section 22 of this appendix or to improve the consistency of the bank's current practices with the Federal Reserve's supervisory guidance on the qualification requirements (gap analysis);

(v) Describe what specific actions the bank will take to address the areas identified in the gap analysis required by paragraph (b)(1)(iv) of this section;

(vi) Identify objective, measurable milestones, including delivery dates and a date when the bank's implementation of the methodologies described in this appendix will be fully operational;

(vii) Describe resources that have been budgeted and are available to implement the plan; and

(viii) Receive approval of the bank's board of directors.

(2) The bank must submit the implementation plan, together with a copy of the minutes of the board of directors' approval, to the Federal Reserve at least 60 days before the bank proposes to begin its parallel run, unless the Federal Reserve waives prior notice.

(c) *Parallel run.* Before determining its risk-based capital requirements under this appendix and following adoption of the implementation plan, the bank must conduct a satisfactory parallel run. A satisfactory parallel run is a period of no less than four consecutive calendar quarters during which the bank complies with the qualification requirements in section 22 of this appendix to the satisfaction of the Federal Reserve. During the parallel run, the bank must report to the Federal Reserve on a calendar quarterly basis its risk-based capital ratios using 12 CFR part 208, appendix A and the risk-based capital requirements described in this appendix. During this period, the bank is subject to 12 CFR part 208, appendix A.

(d) *Approval to calculate risk-based capital requirements under this appendix.* The Federal Reserve will notify the bank of the date that the bank may begin its first floor period if the Federal Reserve determines that:

(1) The bank fully complies with all the qualification requirements in section 22 of this appendix;

(2) The bank has conducted a satisfactory parallel run under paragraph (c) of this section; and

(3) The bank has an adequate process to ensure ongoing compliance with the qualification requirements in section 22 of this appendix.

(e) *Transitional floor periods.* Following a satisfactory parallel run, a bank is subject to three transitional floor periods.

(1) *Risk-based capital ratios during the transitional floor periods—(i) Tier 1 risk-based capital ratio.* During a bank's transitional floor periods, the bank's tier 1 risk-based capital ratio is equal to the lower of:

(A) The bank's floor-adjusted tier 1 risk-based capital ratio; or

(B) The bank's advanced approaches tier 1 risk-based capital ratio.

(ii) *Total risk-based capital ratio.* During a bank's transitional floor periods, the bank's total risk-based capital ratio is equal to the lower of:

(A) The bank's floor-adjusted total risk-based capital ratio; or

(B) The bank's advanced approaches total risk-based capital ratio.

(2) *Floor-adjusted risk-based capital ratios.* (i) A bank's floor-adjusted tier 1 risk-based capital ratio during a transitional floor period is equal to the bank's tier 1 capital as calculated under 12 CFR part 208, appendix A, divided by the product of:

(A) The bank's total risk-weighted assets as calculated under 12 CFR part 208, appendix A; and

(B) The appropriate transitional floor percentage in Table 1.

(ii) A bank's floor-adjusted total risk-based capital ratio during a transitional floor period is equal to the sum of the bank's tier 1 and tier 2 capital as calculated under 12 CFR part 208, appendix A, divided by the product of:

(A) The bank's total risk-weighted assets as calculated under 12 CFR part 208, appendix A; and

(B) The appropriate transitional floor percentage in Table 1.

(iii) A bank that meets the criteria in paragraph (b)(1) or (b)(2) of section 1 of this appendix as of April 1, 2008, must use 12 CFR part 208, appendix A during the parallel run and as the basis for its transitional floors.

TABLE 1.—TRANSITIONAL FLOORS

Transitional floor period	Transitional floor percentage
First floor period	95 percent.
Second floor period	90 percent.
Third floor period	85 percent.

(3) *Advanced approaches risk-based capital ratios.* (i) A bank's advanced approaches tier

1 risk-based capital ratio equals the bank's tier 1 risk-based capital ratio as calculated under this appendix (other than this section on transitional floor periods).

(ii) A bank's advanced approaches total risk-based capital ratio equals the bank's total risk-based capital ratio as calculated under this appendix (other than this section on transitional floor periods).

(4) *Reporting.* During the transitional floor periods, a bank must report to the Federal Reserve on a calendar quarterly basis both floor-adjusted risk-based capital ratios and both advanced approaches risk-based capital ratios.

(5) *Exiting a transitional floor period.* A bank may not exit a transitional floor period until the bank has spent a minimum of four consecutive calendar quarters in the period and the Federal Reserve has determined that the bank may exit the floor period. The Federal Reserve's determination will be based on an assessment of the bank's ongoing compliance with the qualification requirements in section 22 of this appendix.

(6) *Interagency study.* After the end of the second transition year (2010), the Federal banking agencies will publish a study that evaluates the advanced approaches to determine if there are any material deficiencies. For any primary Federal supervisor to authorize any institution to exit the third transitional floor period, the study must determine that there are no such material deficiencies that cannot be addressed by then-existing tools, or, if such deficiencies are found, they are first remedied by changes to this appendix. Notwithstanding the preceding sentence, a primary Federal supervisor that disagrees with the finding of material deficiency may not authorize any institution under its jurisdiction to exit the third transitional floor period unless it provides a public report explaining its reasoning.

Section 22. Qualification Requirements

(a) *Process and systems requirements.* (1) A bank must have a rigorous process for assessing its overall capital adequacy in relation to its risk profile and a comprehensive strategy for maintaining an appropriate level of capital.

(2) The systems and processes used by a bank for risk-based capital purposes under this appendix must be consistent with the bank's internal risk management processes and management information reporting systems.

(3) Each bank must have an appropriate infrastructure with risk measurement and management processes that meet the qualification requirements of this section and are appropriate given the bank's size and level of complexity. Regardless of whether the systems and models that generate the risk parameters necessary for calculating a bank's

risk-based capital requirements are located at any affiliate of the bank, the bank itself must ensure that the risk parameters and reference data used to determine its risk-based capital requirements are representative of its own credit risk and operational risk exposures.

(b) *Risk rating and segmentation systems for wholesale and retail exposures.* (1) A bank must have an internal risk rating and segmentation system that accurately and reliably differentiates among degrees of credit risk for the bank's wholesale and retail exposures.

(2) For wholesale exposures:

(i) A bank must have an internal risk rating system that accurately and reliably assigns each obligor to a single rating grade (reflecting the obligor's likelihood of default). A bank may elect, however, not to assign to a rating grade an obligor to whom the bank extends credit based solely on the financial strength of a guarantor, provided that all of the bank's exposures to the obligor are fully covered by eligible guarantees, the bank applies the PD substitution approach in paragraph (c)(1) of section 33 of this appendix to all exposures to that obligor, and the bank immediately assigns the obligor to a rating grade if a guarantee can no longer be recognized under this appendix. The bank's wholesale obligor rating system must have at least seven discrete rating grades for non-defaulted obligors and at least one rating grade for defaulted obligors.

(ii) Unless the bank has chosen to directly assign LGD estimates to each wholesale exposure, the bank must have an internal risk rating system that accurately and reliably assigns each wholesale exposure to a loss severity rating grade (reflecting the bank's estimate of the LGD of the exposure). A bank employing loss severity rating grades must have a sufficiently granular loss severity grading system to avoid grouping together exposures with widely ranging LGDs.

(3) For retail exposures, a bank must have an internal system that groups retail exposures into the appropriate retail exposure subcategory, groups the retail exposures in each retail exposure subcategory into separate segments with homogeneous risk characteristics, and assigns accurate and reliable PD and LGD estimates for each segment on a consistent basis. The bank's system must identify and group in separate segments by subcategories exposures identified in paragraphs (c)(2)(ii) and (iii) of section 31 of this appendix.

(4) The bank's internal risk rating policy for wholesale exposures must describe the bank's rating philosophy (that is, must describe how wholesale obligor rating assignments are affected by the bank's choice of the range of economic, business, and industry conditions that are considered in the obligor rating process).

(5) The bank's internal risk rating system for wholesale exposures must provide for the review and update (as appropriate) of each obligor rating and (if applicable) each loss severity rating whenever the bank receives new material information, but no less frequently than annually. The bank's retail exposure segmentation system must provide for the review and update (as appropriate) of assignments of retail exposures to segments whenever the bank receives new material information, but generally no less frequently than quarterly.

(c) *Quantification of risk parameters for wholesale and retail exposures.* (1) The bank must have a comprehensive risk parameter quantification process that produces accurate, timely, and reliable estimates of the risk parameters for the bank's wholesale and retail exposures.

(2) Data used to estimate the risk parameters must be relevant to the bank's actual wholesale and retail exposures, and of sufficient quality to support the determination of risk-based capital requirements for the exposures.

(3) The bank's risk parameter quantification process must produce appropriately conservative risk parameter estimates where the bank has limited relevant data, and any adjustments that are part of the quantification process must not result in a pattern of bias toward lower risk parameter estimates.

(4) The bank's risk parameter estimation process should not rely on the possibility of U.S. government financial assistance, except for the financial assistance that the U.S. government has a legally binding commitment to provide.

(5) Where the bank's quantifications of LGD directly or indirectly incorporate estimates of the effectiveness of its credit risk management practices in reducing its exposure to troubled obligors prior to default, the bank must support such estimates with empirical analysis showing that the estimates are consistent with its historical experience in dealing with such exposures during economic downturn conditions.

(6) PD estimates for wholesale obligors and retail segments must be based on at least five years of default data. LGD estimates for wholesale exposures must be based on at least seven years of loss severity data, and LGD estimates for retail segments must be based on at least five years of loss severity data. EAD estimates for wholesale exposures must be based on at least seven years of exposure amount data, and EAD estimates for retail segments must be based on at least five years of exposure amount data.

(7) Default, loss severity, and exposure amount data must include periods of economic downturn conditions, or the bank must adjust its estimates of risk parameters to compensate for the lack of data from periods of economic downturn conditions.

(8) The bank's PD, LGD, and EAD estimates must be based on the definition of default in this appendix.

(9) The bank must review and update (as appropriate) its risk parameters and its risk parameter quantification process at least annually.

(10) The bank must at least annually conduct a comprehensive review and analysis of reference data to determine relevance of reference data to the bank's exposures, quality of reference data to support PD, LGD, and EAD estimates, and consistency of reference data to the definition of default contained in this appendix.

(d) *Counterparty credit risk model.* A bank must obtain the prior written approval of the Federal Reserve under section 32 of this appendix to use the internal models methodology for counterparty credit risk.

(e) *Double default treatment.* A bank must obtain the prior written approval of the Federal Reserve under section 34 of this appendix to use the double default treatment.

(f) *Securitization exposures.* A bank must obtain the prior written approval of the Federal Reserve under section 44 of this appendix to use the Internal Assessment Approach for securitization exposures to ABCP programs.

(g) *Equity exposures model.* A bank must obtain the prior written approval of the Federal Reserve under section 53 of this appendix to use the Internal Models Approach for equity exposures.

(h) *Operational risk—(1) Operational risk management processes.* A bank must:

(i) Have an operational risk management function that:

(A) Is independent of business line management; and

(B) Is responsible for designing, implementing, and overseeing the bank's operational risk data and assessment systems, operational risk quantification systems, and related processes;

(ii) Have and document a process (which must capture business environment and internal control factors affecting the bank's operational risk profile) to identify, measure, monitor, and control operational risk in bank products, activities, processes, and systems; and

(iii) Report operational risk exposures, operational loss events, and other relevant operational risk information to business unit management, senior management, and the board of directors (or a designated committee of the board).

(2) *Operational risk data and assessment systems.* A bank must have operational risk data and assessment systems that capture operational risks to which the bank is exposed. The bank's operational risk data and assessment systems must:

(i) Be structured in a manner consistent with the bank's current business activities,

risk profile, technological processes, and risk management processes; and

(i) Include credible, transparent, systematic, and verifiable processes that incorporate the following elements on an ongoing basis:

(A) *Internal operational loss event data.* The bank must have a systematic process for capturing and using internal operational loss event data in its operational risk data and assessment systems.

(1) The bank's operational risk data and assessment systems must include a historical observation period of at least five years for internal operational loss event data (or such shorter period approved by the Federal Reserve to address transitional situations, such as integrating a new business line).

(2) The bank must be able to map its internal operational loss event data into the seven operational loss event type categories.

(3) The bank may refrain from collecting internal operational loss event data for individual operational losses below established dollar threshold amounts if the bank can demonstrate to the satisfaction of the Federal Reserve that the thresholds are reasonable, do not exclude important internal operational loss event data, and permit the bank to capture substantially all the dollar value of the bank's operational losses.

(B) *External operational loss event data.* The bank must have a systematic process for determining its methodologies for incorporating external operational loss event data into its operational risk data and assessment systems.

(C) *Scenario analysis.* The bank must have a systematic process for determining its methodologies for incorporating scenario analysis into its operational risk data and assessment systems.

(D) *Business environment and internal control factors.* The bank must incorporate business environment and internal control factors into its operational risk data and assessment systems. The bank must also periodically compare the results of its prior business environment and internal control factor assessments against its actual operational losses incurred in the intervening period.

(3) *Operational risk quantification systems.* (i) The bank's operational risk quantification systems:

(A) Must generate estimates of the bank's operational risk exposure using its operational risk data and assessment systems;

(B) Must employ a unit of measure that is appropriate for the bank's range of business activities and the variety of operational loss events to which it is exposed, and that does not combine business activities or operational loss events with demonstrably different risk profiles within the same loss distribution;

(C) Must include a credible, transparent, systematic, and verifiable approach for

weighting each of the four elements, described in paragraph (h)(2)(i) of this section, that a bank is required to incorporate into its operational risk data and assessment systems;

(D) May use internal estimates of dependence among operational losses across and within units of measure if the bank can demonstrate to the satisfaction of the Federal Reserve that its process for estimating dependence is sound, robust to a variety of scenarios, and implemented with integrity, and allows for the uncertainty surrounding the estimates. If the bank has not made such a demonstration, it must sum operational risk exposure estimates across units of measure to calculate its total operational risk exposure; and

(E) Must be reviewed and updated (as appropriate) whenever the bank becomes aware of information that may have a material effect on the bank's estimate of operational risk exposure, but the review and update must occur no less frequently than annually.

(i) With the prior written approval of the Federal Reserve, a bank may generate an estimate of its operational risk exposure using an alternative approach to that specified in paragraph (h)(3)(i) of this section. A bank proposing to use such an alternative operational risk quantification system must submit a proposal to the Federal Reserve. In determining whether to approve a bank's proposal to use an alternative operational risk quantification system, the Federal Reserve will consider the following principles:

(A) Use of the alternative operational risk quantification system will be allowed only on an exception basis, considering the size, complexity, and risk profile of the bank;

(B) The bank must demonstrate that its estimate of its operational risk exposure generated under the alternative operational risk quantification system is appropriate and can be supported empirically; and

(C) A bank must not use an allocation of operational risk capital requirements that includes entities other than depository institutions or the benefits of diversification across entities.

(i) *Data management and maintenance.* (1) A bank must have data management and maintenance systems that adequately support all aspects of its advanced systems and the timely and accurate reporting of risk-based capital requirements.

(2) A bank must retain data using an electronic format that allows timely retrieval of data for analysis, validation, reporting, and disclosure purposes.

(3) A bank must retain sufficient data elements related to key risk drivers to permit adequate monitoring, validation, and refinement of its advanced systems.

(j) *Control, oversight, and validation mechanisms.* (1) The bank's senior management must ensure that all components of the

Federal Reserve System

Pt. 208, App. F

bank's advanced systems function effectively and comply with the qualification requirements in this section.

(2) The bank's board of directors (or a designated committee of the board) must at least annually review the effectiveness of, and approve, the bank's advanced systems.

(3) A bank must have an effective system of controls and oversight that:

(i) Ensures ongoing compliance with the qualification requirements in this section;

(ii) Maintains the integrity, reliability, and accuracy of the bank's advanced systems; and

(iii) Includes adequate governance and project management processes.

(4) The bank must validate, on an ongoing basis, its advanced systems. The bank's validation process must be independent of the advanced systems' 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 advanced systems;

(ii) An ongoing monitoring process that includes verification of processes and benchmarking; and

(iii) An outcomes analysis process that includes back-testing.

(5) The bank must have an internal audit function independent of business-line management that at least annually assesses the effectiveness of the controls supporting the bank's advanced systems and reports its findings to the bank's board of directors (or a committee thereof).

(6) The bank must periodically stress test its advanced systems. The stress testing must include a consideration of how economic cycles, especially downturns, affect risk-based capital requirements (including migration across rating grades and segments and the credit risk mitigation benefits of double default treatment).

(k) *Documentation.* The bank must adequately document all material aspects of its advanced systems.

Section 23. Ongoing Qualification

(a) *Changes to advanced systems.* A bank must meet all the qualification requirements in section 22 of this appendix on an ongoing basis. A bank must notify the Federal Reserve when the bank makes any change to an advanced system that would result in a material change in the bank's risk-weighted asset amount for an exposure type, or when the bank makes any significant change to its modeling assumptions.

(b) *Failure to comply with qualification requirements.* (1) If the Federal Reserve determines that a bank that uses this appendix and has conducted a satisfactory parallel run fails to comply with the qualification re-

quirements in section 22 of this appendix, the Federal Reserve will notify the bank in writing of the bank's failure to comply.

(2) The bank must establish and submit a plan satisfactory to the Federal Reserve to return to compliance with the qualification requirements.

(3) In addition, if the Federal Reserve determines that the bank's risk-based capital requirements are not commensurate with the bank's credit, market, operational, or other risks, the Federal Reserve may require such a bank to calculate its risk-based capital requirements:

(i) Under 12 CFR part 208, appendix A; or

(ii) Under this appendix with any modifications provided by the Federal Reserve.

Section 24. Merger and Acquisition Transitional Arrangements

(a) *Mergers and acquisitions of companies without advanced systems.* If a bank merges with or acquires a company that does not calculate its risk-based capital requirements using advanced systems, the bank may use 12 CFR part 208, appendix A to determine the risk-weighted asset amounts for, and deductions from capital associated with, the merged or acquired company's exposures for up to 24 months after the calendar quarter during which the merger or acquisition consummates. The Federal Reserve may extend this transition period for up to an additional 12 months. Within 90 days of consummating the merger or acquisition, the bank must submit to the Federal Reserve an implementation plan for using its advanced systems for the acquired company. During the period when 12 CFR part 208, appendix A apply to the merged or acquired company, any ALLL, net of allocated transfer risk reserves established pursuant to 12 U.S.C. 3904, associated with the merged or acquired company's exposures may be included in the acquiring bank's tier 2 capital up to 1.25 percent of the acquired company's risk-weighted assets. All general allowances of the merged or acquired company must be excluded from the bank's eligible credit reserves. In addition, the risk-weighted assets of the merged or acquired company are not included in the bank's credit-risk-weighted assets but are included in total risk-weighted assets. If a bank relies on this paragraph, the bank must disclose publicly the amounts of risk-weighted assets and qualifying capital calculated under this appendix for the acquiring bank and under 12 CFR part 208, appendix A for the acquired company.

(b) *Mergers and acquisitions of companies with advanced systems*—(1) If a bank merges with or acquires a company that calculates its risk-based capital requirements using advanced systems, the bank may use the acquired company's advanced systems to determine the risk-weighted asset amounts for, and deductions from capital associated with,

the merged or acquired company's exposures for up to 24 months after the calendar quarter during which the acquisition or merger consummates. The Federal Reserve may extend this transition period for up to an additional 12 months. Within 90 days of consummating the merger or acquisition, the bank must submit to the Federal Reserve an implementation plan for using its advanced systems for the merged or acquired company.

(2) If the acquiring bank is not subject to the advanced approaches in this appendix at the time of acquisition or merger, during the period when 12 CFR part 208, appendix A apply to the acquiring bank, the ALLL associated with the exposures of the merged or acquired company may not be directly included in tier 2 capital. Rather, any excess eligible credit reserves associated with the merged or acquired company's exposures may be included in the bank's tier 2 capital up to 0.6 percent of the credit-risk-weighted assets associated with those exposures.

PART IV. RISK-WEIGHTED ASSETS FOR GENERAL CREDIT RISK

Section 31. Mechanics for Calculating Total Wholesale and Retail Risk-Weighted Assets

(a) *Overview.* A bank must calculate its total wholesale and retail risk-weighted asset amount in four distinct phases:

- (1) Phase 1—categorization of exposures;
- (2) Phase 2—assignment of wholesale obligors and exposures to rating grades and segmentation of retail exposures;
- (3) Phase 3—assignment of risk parameters to wholesale exposures and segments of retail exposures; and
- (4) Phase 4—calculation of risk-weighted asset amounts.

(b) *Phase 1—Categorization.* The bank must determine which of its exposures are wholesale exposures, retail exposures, securitization exposures, or equity exposures. The bank must categorize each retail exposure as a residential mortgage exposure, a QRE, or an other retail exposure. The bank must identify which wholesale exposures are HVCRE exposures, sovereign exposures, OTC derivative contracts, repo-style transactions, eligible margin loans, eligible purchased wholesale exposures, unsettled transactions to which section 35 of this appendix applies, and eligible guarantees or eligible credit derivatives that are used as credit risk mitigants. The bank must identify any on-balance sheet asset that does not meet the definition of a wholesale, retail, equity, or securitization exposure, as well as any non-material portfolio of exposures described in paragraph (e)(4) of this section.

(c) *Phase 2—Assignment of wholesale obligors and exposures to rating grades and retail exposures to segments—*(1) Assignment of wholesale obligors and exposures to rating grades.

(i) The bank must assign each obligor of a wholesale exposure to a single obligor rating grade and must assign each wholesale exposure to which it does not directly assign an LGD estimate to a loss severity rating grade.

(ii) The bank must identify which of its wholesale obligors are in default.

(2) *Segmentation of retail exposures.* (i) The bank must group the retail exposures in each retail subcategory into segments that have homogeneous risk characteristics.

(ii) The bank must identify which of its retail exposures are in default. The bank must segment defaulted retail exposures separately from non-defaulted retail exposures.

(iii) If the bank determines the EAD for eligible margin loans using the approach in paragraph (b) of section 32 of this appendix, the bank must identify which of its retail exposures are eligible margin loans for which the bank uses this EAD approach and must segment such eligible margin loans separately from other retail exposures.

(3) *Eligible purchased wholesale exposures.* A bank may group its eligible purchased wholesale exposures into segments that have homogeneous risk characteristics. A bank must use the wholesale exposure formula in Table 2 in this section to determine the risk-based capital requirement for each segment of eligible purchased wholesale exposures.

(d) *Phase 3—Assignment of risk parameters to wholesale exposures and segments of retail exposures—*(1) *Quantification process.* Subject to the limitations in this paragraph (d), the bank must:

- (i) Associate a PD with each wholesale obligor rating grade;
- (ii) Associate an LGD with each wholesale loss severity rating grade or assign an LGD to each wholesale exposure;
- (iii) Assign an EAD and M to each wholesale exposure; and
- (iv) Assign a PD, LGD, and EAD to each segment of retail exposures.

(2) *Floor on PD assignment.* The PD for each wholesale obligor or retail segment may not be less than 0.03 percent, except for exposures to or directly and unconditionally guaranteed by a sovereign entity, the Bank for International Settlements, the International Monetary Fund, the European Commission, the European Central Bank, or a multilateral development bank, to which the bank assigns a rating grade associated with a PD of less than 0.03 percent.

(3) *Floor on LGD estimation.* The LGD for each segment of residential mortgage exposures (other than segments of residential mortgage exposures for which all or substantially all of the principal of each exposure is directly and unconditionally guaranteed by the full faith and credit of a sovereign entity) may not be less than 10 percent.

(4) *Eligible purchased wholesale exposures.* A bank must assign a PD, LGD, EAD, and M to each segment of eligible purchased wholesale

exposures. If the bank can estimate ECL (but not PD or LGD) for a segment of eligible purchased wholesale exposures, the bank must assume that the LGD of the segment equals 100 percent and that the PD of the segment equals ECL divided by EAD. The estimated ECL must be calculated for the exposures without regard to any assumption of recourse or guarantees from the seller or other parties.

(5) *Credit risk mitigation—credit derivatives, guarantees, and collateral.* (i) A bank may take into account the risk reducing effects of eligible guarantees and eligible credit derivatives in support of a wholesale exposure by applying the PD substitution or LGD adjustment treatment to the exposure as provided in section 33 of this appendix or, if applicable, applying double default treatment to the exposure as provided in section 34 of this appendix. A bank may decide separately for each wholesale exposure that qualifies for the double default treatment under section 34 of this appendix whether to apply the double default treatment or to use the PD substitution or LGD adjustment treatment without recognizing double default effects.

(ii) A bank may take into account the risk reducing effects of guarantees and credit derivatives in support of retail exposures in a segment when quantifying the PD and LGD of the segment.

(iii) Except as provided in paragraph (d)(6) of this section, a bank may take into account the risk reducing effects of collateral in support of a wholesale exposure when quantifying the LGD of the exposure and may take into account the risk reducing effects of collateral in support of retail exposures when quantifying the PD and LGD of the segment.

(6) *EAD for OTC derivative contracts, repo-style transactions, and eligible margin loans.* (i) A bank must calculate its EAD for an OTC derivative contract as provided in paragraphs (c) and (d) of section 32 of this appendix. A bank may take into account the risk-reducing effects of financial collateral in support of a repo-style transaction or eligible margin loan and of any collateral in support of a repo-style transaction that is included in the bank's VaR-based measure under 12 CFR part 208, appendix E through an adjustment to EAD as provided in paragraphs (b) and (d) of section 32 of this appendix. A bank that takes collateral into account through such an adjustment to EAD

under section 32 of this appendix may not reflect such collateral in LGD.

(ii) A bank may attribute an EAD of zero to:

(A) Derivative contracts that are publicly traded on an exchange that requires the daily receipt and payment of cash-variation margin;

(B) Derivative contracts and repo-style transactions that are outstanding with a qualifying central counterparty (but not for those transactions that a qualifying central counterparty has rejected); and

(C) Credit risk exposures to a qualifying central counterparty in the form of clearing deposits and posted collateral that arise from transactions described in paragraph (d)(6)(ii)(B) of this section.

(7) *Effective maturity.* An exposure's M must be no greater than five years and no less than one year, except that an exposure's M must be no less than one day if the exposure has an original maturity of less than one year and is not part of a bank's ongoing financing of the obligor. An exposure is not part of a bank's ongoing financing of the obligor if the bank:

(i) Has a legal and practical ability not to renew or roll over the exposure in the event of credit deterioration of the obligor;

(ii) Makes an independent credit decision at the inception of the exposure and at every renewal or roll over; and

(iii) Has no substantial commercial incentive to continue its credit relationship with the obligor in the event of credit deterioration of the obligor.

(e) *Phase 4—Calculation of risk-weighted assets—(1) Non-defaulted exposures.* (i) A bank must calculate the dollar risk-based capital requirement for each of its wholesale exposures to a non-defaulted obligor (except eligible guarantees and eligible credit derivatives that hedge another wholesale exposure and exposures to which the bank applies the double default treatment in section 34 of this appendix) and segments of non-defaulted retail exposures by inserting the assigned risk parameters for the wholesale obligor and exposure or retail segment into the appropriate risk-based capital formula specified in Table 2 and multiplying the output of the formula (K) by the EAD of the exposure or segment. Alternatively, a bank may apply a 300 percent risk weight to the EAD of an eligible margin loan if the bank is not able to meet the agencies' requirements for estimation of PD and LGD for the margin loan.

Table 2 – IRB Risk-Based Capital Formulas for Wholesale Exposures to Non-Defaulted Obligor and Segments of Non-Defaulted Retail Exposures¹

Retail	Capital Requirement (K) Non-Defaulted Exposures	$K = \left[LGD \times N \left(\frac{N^{-1}(PD) + \sqrt{R} \times N^{-1}(0.999)}{\sqrt{1-R}} \right) - (LGD \times PD) \right]$
	Correlation Factor (R)	For residential mortgage exposures: $R = 0.15$
		For qualifying revolving exposures: $R = 0.04$
		For other retail exposures: $R = 0.03 + 0.13 \times e^{-35 \times PD}$
Wholesale	Capital Requirement (K) Non-Defaulted Exposures	$K = \left[LGD \times N \left(\frac{N^{-1}(PD) + \sqrt{R} \times N^{-1}(0.999)}{\sqrt{1-R}} \right) - (LGD \times PD) \right] \times \left(\frac{1 + (M - 2.5) \times b}{1 - 1.5 \times b} \right)$
	Correlation Factor (R)	For HVCRE exposures: $R = 0.12 + 0.18 \times e^{-50 \times PD}$
		For wholesale exposures other than HVCRE exposures: $R = 0.12 + 0.12 \times e^{-50 \times PD}$
	Maturity Adjustment (b)	$b = (0.11852 - 0.05478 \times \ln(PD))^2$

¹N(.) means the cumulative distribution function for a standard normal random variable. N⁻¹(.) means the inverse cumulative distribution function for a standard normal random variable. The symbol e refers to the base of the natural logarithms, and the function ln(.) refers to the natural logarithm of the expression within parentheses. The formulas apply when PD is greater than zero. If PD equals zero, the capital requirement K is set equal to zero.

(ii) The sum of all the dollar risk-based capital requirements for each wholesale exposure to a non-defaulted obligor and segment of non-defaulted retail exposures calculated in paragraph (e)(1)(i) of this section and in paragraph (e) of section 34 of this appendix equals the total dollar risk-based capital requirement for those exposures and segments.

(iii) The aggregate risk-weighted asset amount for wholesale exposures to non-defaulted obligors and segments of non-defaulted retail exposures equals the total dollar risk-based capital requirement calculated in paragraph (e)(1)(ii) of this section multiplied by 12.5.

(2) *Wholesale exposures to defaulted obligors and segments of defaulted retail exposures.* (i) The dollar risk-based capital requirement for each wholesale exposure to a defaulted obligor equals 0.08 multiplied by the EAD of the exposure.

(ii) The dollar risk-based capital requirement for a segment of defaulted retail exposures equals 0.08 multiplied by the EAD of the segment.

(iii) The sum of all the dollar risk-based capital requirements for each wholesale exposure to a defaulted obligor calculated in paragraph (e)(2)(i) of this section plus the dollar risk-based capital requirements for each segment of defaulted retail exposures

calculated in paragraph (e)(2)(ii) of this section equals the total dollar risk-based capital requirement for those exposures and segments.

(iv) The aggregate risk-weighted asset amount for wholesale exposures to defaulted obligors and segments of defaulted retail exposures equals the total dollar risk-based capital requirement calculated in paragraph (e)(2)(iii) of this section multiplied by 12.5.

(3) *Assets not included in a defined exposure category.* (i) A bank may assign a risk-weighted asset amount of zero to cash owned and held in all offices of the bank or in transit and for gold bullion held in the bank's own vaults, or held in another bank's vaults on an allocated basis, to the extent the gold bullion assets are offset by gold bullion liabilities.

(ii) The risk-weighted asset amount for the residual value of a retail lease exposure equals such residual value.

(iii) The risk-weighted asset amount for any other on-balance-sheet asset that does not meet the definition of a wholesale, retail, securitization, or equity exposure equals the carrying value of the asset.

(4) *Non-material portfolios of exposures.* The risk-weighted asset amount of a portfolio of exposures for which the bank has demonstrated to the Federal Reserve's satisfaction that the portfolio (when combined with all other portfolios of exposures that the bank seeks to treat under this paragraph) is not material to the bank is the sum of the carrying values of on-balance sheet exposures plus the notional amounts of off-balance sheet exposures in the portfolio. For purposes of this paragraph (e)(4), the notional amount of an OTC derivative contract that is not a credit derivative is the EAD of the derivative as calculated in section 32 of this appendix.

Section 32. Counterparty Credit Risk of Repo-Style Transactions, Eligible Margin Loans, and OTC Derivative Contracts

(a) *In General.* (1) This section describes two methodologies—a collateral haircut approach and an internal models methodology—that a bank may use instead of an LGD estimation methodology to recognize the benefits of financial collateral in mitigating the counterparty credit risk of repo-style transactions, eligible margin loans, collateralized OTC derivative contracts, and single product netting sets of such transactions and to recognize the benefits of any collateral in mitigating the counterparty credit risk of repo-style transactions that are included in a bank's VaR-based measure under 12 CFR part 208, appendix E. A third methodology, the simple VaR methodology, is available for single product netting sets of repo-style transactions and eligible margin loans.

(2) This section also describes the methodology for calculating EAD for an OTC derivative contract or a set of OTC derivative contracts subject to a qualifying master netting agreement. A bank also may use the internal models methodology to estimate EAD for qualifying cross-product master netting agreements.

(3) A bank may only use the standard supervisory haircut approach with a minimum 10-business-day holding period to recognize in EAD the benefits of conforming residential mortgage collateral that secures repo-style transactions (other than repo-style transactions included in the bank's VaR-based measure under 12 CFR part 208, appendix E), eligible margin loans, and OTC derivative contracts.

(4) A bank may use any combination of the three methodologies for collateral recognition; however, it must use the same methodology for similar exposures.

(b) *EAD for eligible margin loans and repo-style transactions—(1) General.* A bank may recognize the credit risk mitigation benefits of financial collateral that secures an eligible margin loan, repo-style transaction, or single-product netting set of such transactions by factoring the collateral into its LGD estimates for the exposure. Alternatively, a bank may estimate an unsecured LGD for the exposure, as well as for any repo-style transaction that is included in the bank's VaR-based measure under 12 CFR part 208, appendix E, and determine the EAD of the exposure using:

(i) The collateral haircut approach described in paragraph (b)(2) of this section;

(ii) For netting sets only, the simple VaR methodology described in paragraph (b)(3) of this section; or

(iii) The internal models methodology described in paragraph (d) of this section.

(2) *Collateral haircut approach—(i) EAD equation.* A bank may determine EAD for an eligible margin loan, repo-style transaction, or netting set by setting EAD equal to $\max\{0, [(\Sigma E - \Sigma C) + \Sigma(Es \times Hs) + \Sigma(Efx \times Hfx)]\}$, where:

(A) ΣE equals the value of the exposure (the sum of the current market values of all instruments, gold, and cash the bank has lent, sold subject to repurchase, or posted as collateral to the counterparty under the transaction (or netting set));

(B) ΣC equals the value of the collateral (the sum of the current market values of all instruments, gold, and cash the bank has borrowed, purchased subject to resale, or taken as collateral from the counterparty under the transaction (or netting set));

(C) Es equals the absolute value of the net position in a given instrument or in gold (where the net position in a given instrument or in gold equals the sum of the current market values of the instrument or gold

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

(D) Hs equals the market price volatility haircut appropriate to the instrument or gold referenced in Es;

(E) Efx equals the absolute value of the net position of instruments and cash in a currency that is different from the settlement currency (where the net position in a given currency equals the sum of the current market values of any instruments or cash in the currency the bank has lent, sold subject to

repurchase, or posted as collateral to the counterparty minus the sum of the current market values of any instruments or cash in the currency the bank has borrowed, purchased subject to resale, or taken as collateral from the counterparty); and

(F) Hfx equals the haircut appropriate to the mismatch between the currency referenced in Efx and the settlement currency.

(ii) *Standard supervisory haircuts.* (A) Under the standard supervisory haircuts approach:

(1) A bank must use the haircuts for market price volatility (Hs) in Table 3, as adjusted in certain circumstances as provided in paragraph (b)(2)(ii)(A)(3) and (4) of this section;

TABLE 3.—STANDARD SUPERVISORY MARKET PRICE VOLATILITY HAIRCUTS ¹

Applicable external rating grade category for debt securities	Residual maturity for debt securities	Issuers exempt from the 3 basis point floor	Other issuers
Two highest investment-grade rating categories for long-term ratings/highest investment-grade rating category for short-term ratings.	≤ 1 year	0.005	0.01
	>1 year, ≤ 5 years	0.02	0.04
	> 5 years	0.04	0.08
Two lowest investment-grade rating categories for both short- and long-term ratings.	≤ 1 year	0.01	0.02
	> 1 year, ≤ 5 years	0.03	0.06
	> 5 years	0.06	0.12
One rating category below investment grade	All	0.15	0.25
Main index equities (including convertible bonds) and gold		0.15	
Other publicly traded equities (including convertible bonds), conforming residential mortgages, and nonfinancial collateral.		0.25	
Mutual funds		Highest haircut applicable to any security in which the fund can invest.	
Cash on deposit with the bank (including a certificate of deposit issued by the bank) ...		0	

¹ The market price volatility haircuts in Table 3 are based on a ten-business-day holding period.

(2) For currency mismatches, a bank must use a haircut for foreign exchange rate volatility (Hfx) of 8 percent, as adjusted in certain circumstances as provided in paragraph (b)(2)(ii)(A)(3) and (4) of this section.

(3) For repo-style transactions, a bank may multiply the supervisory haircuts provided in paragraphs (b)(2)(ii)(A)(1) and (2) of this section by the square root of ½ (which equals 0.707107).

(4) A bank must adjust the supervisory haircuts upward on the basis of a holding period longer than ten business days (for eligible margin loans) or five business days (for repo-style transactions) where and as appropriate to take into account the illiquidity of an instrument.

(iii) *Own internal estimates for haircuts.* With the prior written approval of the Federal Reserve, a bank may calculate haircuts (Hs and Hfx) using its own internal estimates of the volatilities of market prices and foreign exchange rates.

(A) To receive Federal Reserve approval to use its own internal estimates, a bank must satisfy the following minimum quantitative standards:

(1) A bank must use a 99th percentile one-tailed confidence interval.

(2) The minimum holding period for a repo-style transaction is five business days and for an eligible margin loan is ten business days. When a bank calculates an own-estimates haircut on a T_N-day holding period, which is different from the minimum holding period for the transaction type, the applicable haircut (H_M) is calculated using the following square root of time formula:

$$H_M = H_N \sqrt{\frac{T_M}{T_N}}, \text{ where}$$

- (i) T_M equals 5 for repo-style transactions and 10 for eligible margin loans;
- (ii) T_N equals the holding period used by the bank to derive H_N; and

(iii) H_N equals the haircut based on the holding period T_N .

(3) A bank must adjust holding periods upwards where and as appropriate to take into account the illiquidity of an instrument.

(4) The historical observation period must be at least one year.

(5) A bank must update its data sets and recompute haircuts no less frequently than quarterly and must also reassess data sets and haircuts whenever market prices change materially.

(B) With respect to debt securities that have an applicable external rating of investment grade, a bank may calculate haircuts for categories of securities. For a category of securities, the bank must calculate the haircut on the basis of internal volatility estimates for securities in that category that are representative of the securities in that category that the bank has lent, sold subject to repurchase, posted as collateral, borrowed, purchased subject to resale, or taken as collateral. In determining relevant categories, the bank must at a minimum take into account:

(1) The type of issuer of the security;

(2) The applicable external rating of the security;

(3) The maturity of the security; and

(4) The interest rate sensitivity of the security.

(C) With respect to debt securities that have an applicable external rating of below investment grade and equity securities, a bank must calculate a separate haircut for each individual security.

(D) Where an exposure or collateral (whether in the form of cash or securities) is denominated in a currency that differs from the settlement currency, the bank must calculate a separate currency mismatch haircut for its net position in each mismatched currency based on estimated volatilities of foreign exchange rates between the mismatched currency and the settlement currency.

(E) A bank's own estimates of market price and foreign exchange rate volatilities may not take into account the correlations among securities and foreign exchange rates on either the exposure or collateral side of a transaction (or netting set) or the correlations among securities and foreign exchange rates between the exposure and collateral sides of the transaction (or netting set).

(3) *Simple VaR methodology.* With the prior written approval of the Federal Reserve, a bank may estimate EAD for a netting set using a VaR model that meets the requirements in paragraph (b)(3)(iii) of this section. In such event, the bank must set EAD equal to $\max\{0, [(\Sigma E - \Sigma C) + PFE]\}$, where:

(i) ΣE equals the value of the exposure (the sum of the current market values of all instruments, gold, and cash the bank has lent, sold subject to repurchase, or posted as col-

lateral to the counterparty under the netting set);

(ii) ΣC equals the value of the collateral (the sum of the current market values of all instruments, gold, and cash the bank has borrowed, purchased subject to resale, or taken as collateral from the counterparty under the netting set); and

(iii) PFE (potential future exposure) equals the bank's empirically based best estimate of the 99th percentile, one-tailed confidence interval for an increase in the value of $(\Sigma E - \Sigma C)$ over a five-business-day holding period for repo-style transactions or over a ten-business-day holding period for eligible margin loans using a minimum one-year historical observation period of price data representing the instruments that the bank has lent, sold subject to repurchase, posted as collateral, borrowed, purchased subject to resale, or taken as collateral. The bank must validate its VaR model, including by establishing and maintaining a rigorous and regular back-testing regime.

(c) *EAD for OTC derivative contracts.* (1) A bank must determine the EAD for an OTC derivative contract that is not subject to a qualifying master netting agreement using the current exposure methodology in paragraph (c)(5) of this section or using the internal models methodology described in paragraph (d) of this section.

(2) A bank must determine the EAD for multiple OTC derivative contracts that are subject to a qualifying master netting agreement using the current exposure methodology in paragraph (c)(6) of this section or using the internal models methodology described in paragraph (d) of this section.

(3) *Counterparty credit risk for credit derivatives.* Notwithstanding the above, (i) A bank that purchases a credit derivative that is recognized under section 33 or 34 of this appendix as a credit risk mitigant for an exposure that is not a covered position under 12 CFR part 208, appendix E need not compute a separate counterparty credit risk capital requirement under this section so long as the bank does so consistently for all such credit derivatives and either includes all or excludes all such credit derivatives that are subject to a master netting agreement from any measure used to determine counterparty credit risk exposure to all relevant counterparties for risk-based capital purposes.

(ii) A bank that is the protection provider in a credit derivative must treat the credit derivative as a wholesale exposure to the reference obligor and need not compute a counterparty credit risk capital requirement for the credit derivative under this section, so long as it does so consistently for all such credit derivatives and either includes all or excludes all such credit derivatives that are subject to a master netting agreement from any measure used to determine counterparty

credit risk exposure to all relevant counterparties for risk-based capital purposes (unless the bank is treating the credit derivative as a covered position under 12 CFR part 208, appendix E, in which case the bank must compute a supplemental counterparty credit risk capital requirement under this section).

(4) *Counterparty credit risk for equity derivatives.* A bank must treat an equity derivative contract as an equity exposure and compute a risk-weighted asset amount for the equity derivative contract under part VI (unless the bank is treating the contract as a covered position under 12 CFR part 208, appendix E). In addition, if the bank is treating the contract as a covered position under 12 CFR part 208, appendix E and in certain other cases described in section 55 of this appendix, the bank must also calculate a risk-based capital requirement for the counterparty credit risk of an equity derivative contract under this part.

(5) *Single OTC derivative contract.* Except as modified by paragraph (c)(7) of this section, the EAD for a single OTC derivative contract that is not subject to a qualifying master netting agreement is equal to the sum of the bank's current credit exposure and potential future credit exposure (PFE) on the derivative contract.

(i) *Current credit exposure.* The current credit exposure for a single OTC derivative contract is the greater of the mark-to-market value of the derivative contract or zero.

(ii) *PFE.* The PFE for a single OTC derivative contract, including an OTC derivative contract with a negative mark-to-market value, is calculated by multiplying the notional principal amount of the derivative contract by the appropriate conversion factor in Table 4. For purposes of calculating either the PFE under this paragraph or the gross PFE under paragraph (c)(6) of this section for exchange rate contracts and other similar contracts in which the notional principal amount is equivalent to the cash flows, notional principal amount is the net receipts to each party falling due on each value date in each currency. For any OTC derivative contract that does not fall within one of the specified categories in Table 4, the PFE must be calculated using the "other" conversion factors. A bank must use an OTC derivative contract's effective notional principal amount (that is, its apparent or stated notional principal amount multiplied by any multiplier in the OTC derivative contract) rather than its apparent or stated notional principal amount in calculating PFE. PFE of the protection provider of a credit derivative is capped at the net present value of the amount of unpaid premiums.

TABLE 4.—CONVERSION FACTOR MATRIX FOR OTC DERIVATIVE CONTRACTS¹

Remaining maturity ²	Interest rate	Foreign exchange rate and gold	Credit (investment-grade reference obligor) ³	Credit (non-investment-grade reference obligor)	Equity	Precious metals (except gold)	Other
One year or less	0.00	0.01	0.05	0.10	0.06	0.07	0.10
Over one to five years	0.005	0.05	0.05	0.10	0.08	0.07	0.12
Over five years	0.015	0.075	0.05	0.10	0.10	0.08	0.15

¹ For an OTC derivative contract with multiple exchanges of principal, the conversion factor is multiplied by the number of remaining payments in the derivative contract.
² For an OTC derivative contract that is structured such that on specified dates any outstanding exposure is settled and the terms are reset so that the market value of the contract is zero, the remaining maturity equals the time until the next reset date. For an interest rate derivative contract with a remaining maturity of greater than one year that meets these criteria, the minimum conversion factor is 0.005.
³ A bank must use the column labeled "Credit (investment-grade reference obligor)" for a credit derivative whose reference obligor has an outstanding unsecured long-term debt security without credit enhancement that has a long-term applicable external rating of at least investment grade. A bank must use the column labeled "Credit (non-investment-grade reference obligor)" for all other credit derivatives.

(6) *Multiple OTC derivative contracts subject to a qualifying master netting agreement.* Except as modified by paragraph (c)(7) of this section, the EAD for multiple OTC derivative contracts subject to a qualifying master netting agreement is equal to the sum of the net current credit exposure and the adjusted sum of the PFE exposure for all OTC derivative contracts subject to the qualifying master netting agreement.

(i) *Net current credit exposure.* The net current credit exposure is the greater of:

(A) The net sum of all positive and negative mark-to-market values of the individual OTC derivative contracts subject to the qualifying master netting agreement; or

(B) zero.

(ii) *Adjusted sum of the PFE.* The adjusted sum of the PFE, A_{net} , is calculated as $A_{net} = (0.4 \times A_{gross}) + (0.6 \times NGR \times A_{gross})$, where:

(A) A_{gross} = the gross PFE (that is, the sum of the PFE amounts (as determined under paragraph (c)(5)(ii) of this section) for each individual OTC derivative contract subject to the qualifying master netting agreement); and

(B) NGR = the net to gross ratio (that is, the ratio of the net current credit exposure to the gross current credit exposure). In calculating the NGR , the gross current credit exposure equals the sum of the positive current credit exposures (as determined under paragraph (c)(5)(i) of this section) of all individual OTC derivative contracts subject to the qualifying master netting agreement.

(7) *Collateralized OTC derivative contracts.* A bank may recognize the credit risk mitigation benefits of financial collateral that secures an OTC derivative contract or single-product netting set of OTC derivatives by factoring the collateral into its LGD estimates for the contract or netting set. Alternatively, a bank may recognize the credit risk mitigation benefits of financial collateral that secures such a contract or netting set that is marked to market on a daily basis and subject to a daily margin maintenance requirement by estimating an unsecured LGD for the contract or netting set and adjusting the EAD calculated under paragraph (c)(5) or (c)(6) of this section using the collateral haircut approach in paragraph (b)(2) of this section. The bank must substitute the EAD calculated under paragraph (c)(5) or (c)(6) of this section for ΣEE in the equation in paragraph (b)(2)(i) of this section and must use a ten-business-day minimum holding period ($T_M = 10$).

(d) *Internal models methodology.* (1) With prior written approval from the Federal Reserve, a bank may use the internal models methodology in this paragraph (d) to determine EAD for counterparty credit risk for OTC derivative contracts (collateralized or uncollateralized) and single-product netting sets thereof, for eligible margin loans and single-product netting sets thereof, and for

repo-style transactions and single-product netting sets thereof. A bank that uses the internal models methodology for a particular transaction type (OTC derivative contracts, eligible margin loans, or repo-style transactions) must use the internal models methodology for all transactions of that transaction type. A bank may choose to use the internal models methodology for one or two of these three types of exposures and not the other types. A bank may also use the internal models methodology for OTC derivative contracts, eligible margin loans, and repo-style transactions subject to a qualifying cross-product netting agreement if:

(i) The bank effectively integrates the risk mitigating effects of cross-product netting into its risk management and other information technology systems; and

(ii) The bank obtains the prior written approval of the Federal Reserve. A bank that uses the internal models methodology for a transaction type must receive approval from the Federal Reserve to cease using the methodology for that transaction type or to make a material change to its internal model.

(2) Under the internal models methodology, a bank uses an internal model to estimate the expected exposure (EE) for a netting set and then calculates EAD based on that EE.

(i) The bank must use its internal model's probability distribution for changes in the market value of a netting set that are attributable to changes in market variables to determine EE.

(ii) Under the internal models methodology, $EAD = \alpha \times \text{effective EPE}$, or, subject to Federal Reserve approval as provided in paragraph (d)(7), a more conservative measure of EAD.

$$(A) \text{ Effective EPE}_{t_k} = \sum_{k=1}^n \text{Effective EE}_{t_k} \times \Delta t_k$$

(that is, effective EPE is the time-weighted average of effective EE where the weights are the proportion that an individual effective EE represents in a one-year time interval) where:

(1) $\text{Effective EE}_{t_k} = \max(\text{Effective EE}_{t_{k-1}}, \text{EE}_{t_k})$ (that is, for a specific date t_k , effective EE is the greater of EE at that date or the effective EE at the previous date); and

(2) t_k represents the k th future time period in the model and there are n time periods represented in the model over the first year; and

(B) $\alpha = 1.4$ except as provided in paragraph (d)(6), or when the Federal Reserve has determined that the bank must set α higher based on the bank's specific characteristics of counterparty credit risk.

(iii) A bank may include financial collateral currently posted by the counterparty as collateral (but may not include other forms of collateral) when calculating EE.

(iv) If a bank hedges some or all of the counterparty credit risk associated with a netting set using an eligible credit derivative, the bank may take the reduction in exposure to the counterparty into account when estimating EE. If the bank recognizes this reduction in exposure to the counterparty in its estimate of EE, it must also use its internal model to estimate a separate EAD for the bank's exposure to the protection provider of the credit derivative.

(3) To obtain Federal Reserve approval to calculate the distributions of exposures upon which the EAD calculation is based, the bank must demonstrate to the satisfaction of the Federal Reserve that it has been using for at least one year an internal model that broadly meets the following minimum standards, with which the bank must maintain compliance:

(i) The model must have the systems capability to estimate the expected exposure to the counterparty on a daily basis (but is not expected to estimate or report expected exposure on a daily basis).

(ii) The model must estimate expected exposure at enough future dates to reflect accurately all the future cash flows of contracts in the netting set.

(iii) The model must account for the possible non-normality of the exposure distribution, where appropriate.

(iv) The bank must measure, monitor, and control current counterparty exposure and the exposure to the counterparty over the whole life of all contracts in the netting set.

(v) The bank must be able to measure and manage current exposures gross and net of collateral held, where appropriate. The bank must estimate expected exposures for OTC derivative contracts both with and without the effect of collateral agreements.

(vi) The bank must have procedures to identify, monitor, and control specific wrong-way risk throughout the life of an exposure. Wrong-way risk in this context is the risk that future exposure to a counterparty will be high when the counterparty's probability of default is also high.

(vii) The model must use current market data to compute current exposures. When estimating model parameters based on historical data, at least three years of historical data that cover a wide range of economic conditions must be used and must be updated quarterly or more frequently if market conditions warrant. The bank should consider using model parameters based on forward-looking measures, where appropriate.

(viii) A bank must subject its internal model to an initial validation and annual model review process. The model review should consider whether the inputs and risk factors, as well as the model outputs, are appropriate.

(4) *Maturity.* (i) If the remaining maturity of the exposure or the longest-dated contract in the netting set is greater than one year, the bank must set M for the exposure or netting set equal to the lower of five years or M(EPE),³ where:

$$(A) \quad M(EPE) = 1 + \frac{\sum_{t_k > 1 \text{ year}}^{maturity} EE_k \times \Delta t_k \times df_k}{\sum_{k=1}^{t_k \leq 1 \text{ year}} effective EE_k \times \Delta t_k \times df_k}$$

(B) df_k is the risk-free discount factor for future time period t_k ; and

(C) $\Delta t_k = t_k - t_{k-1}$.

(ii) If the remaining maturity of the exposure or the longest-dated contract in the netting set is one year or less, the bank must set M for the exposure or netting set equal to one year, except as provided in paragraph (d)(7) of section 31 of this appendix.

(5) *Collateral agreements.* A bank may capture the effect on EAD of a collateral agreement that requires receipt of collateral when exposure to the counterparty increases but

may not capture the effect on EAD of a collateral agreement that requires receipt of collateral when counterparty credit quality deteriorates. For this purpose, a collateral agreement means a legal contract that specifies the time when, and circumstances under which, the counterparty is required to pledge collateral to the bank for a single financial contract or for all financial contracts in a netting set and confers upon the bank a perfected, first priority security interest (notwithstanding the prior security interest of any custodial agent), or the legal equivalent

³Alternatively, a bank that uses an internal model to calculate a one-sided credit valuation adjustment may use the effective

credit duration estimated by the model as M(EPE) in place of the formula in paragraph (d)(4).

thereof, in the collateral posted by the counterparty under the agreement. This security interest must provide the bank with a right to close out the financial positions and liquidate the collateral upon an event of default of, or failure to perform by, the counterparty under the collateral agreement. A contract would not satisfy this requirement if the bank's exercise of rights under the agreement may be stayed or avoided under applicable law in the relevant jurisdictions. Two methods are available to capture the effect of a collateral agreement:

(i) With prior written approval from the Federal Reserve, a bank may include the effect of a collateral agreement within its internal model used to calculate EAD. The bank may set EAD equal to the expected exposure at the end of the margin period of risk. The margin period of risk means, with respect to a netting set subject to a collateral agreement, the time period from the most recent exchange of collateral with a counterparty until the next required exchange of collateral plus the period of time required to sell and realize the proceeds of the least liquid collateral that can be delivered under the terms of the collateral agreement and, where applicable, the period of time required to re-hedge the resulting market risk, upon the default of the counterparty. The minimum margin period of risk is five business days for repo-style transactions and ten business days for other transactions when liquid financial collateral is posted under a daily margin maintenance requirement. This period should be extended to cover any additional time between margin calls; any potential closeout difficulties; any delays in selling collateral, particularly if the collateral is illiquid; and any impediments to prompt re-hedging of any market risk.

(ii) A bank that can model EPE without collateral agreements but cannot achieve the higher level of modeling sophistication to model EPE with collateral agreements can set effective EPE for a collateralized netting set equal to the lesser of:

(A) The threshold, defined as the exposure amount at which the counterparty is required to post collateral under the collateral agreement, if the threshold is positive, plus an add-on that reflects the potential increase in exposure of the netting set over the margin period of risk. The add-on is computed as the expected increase in the netting set's exposure beginning from current exposure of zero over the margin period of risk. The margin period of risk must be at least five business days for netting sets consisting only of repo-style transactions subject to daily re-margining and daily marking-to-market, and ten business days for all other netting sets; or

(B) Effective EPE without a collateral agreement.

(6) *Own estimate of alpha.* With prior written approval of the Federal Reserve, a bank may calculate alpha as the ratio of economic capital from a full simulation of counterparty exposure across counterparties that incorporates a joint simulation of market and credit risk factors (numerator) and economic capital based on EPE (denominator), subject to a floor of 1.2. For purposes of this calculation, economic capital is the unexpected losses for all counterparty credit risks measured at a 99.9 percent confidence level over a one-year horizon. To receive approval, the bank must meet the following minimum standards to the satisfaction of the Federal Reserve:

(i) The bank's own estimate of alpha must capture in the numerator the effects of:

(A) The material sources of stochastic dependency of distributions of market values of transactions or portfolios of transactions across counterparties;

(B) Volatilities and correlations of market risk factors used in the joint simulation, which must be related to the credit risk factor used in the simulation to reflect potential increases in volatility or correlation in an economic downturn, where appropriate; and

(C) The granularity of exposures (that is, the effect of a concentration in the proportion of each counterparty's exposure that is driven by a particular risk factor).

(ii) The bank must assess the potential model uncertainty in its estimates of alpha.

(iii) The bank must calculate the numerator and denominator of alpha in a consistent fashion with respect to modeling methodology, parameter specifications, and portfolio composition.

(iv) The bank must review and adjust as appropriate its estimates of the numerator and denominator of alpha on at least a quarterly basis and more frequently when the composition of the portfolio varies over time.

(7) *Other measures of counterparty exposure.* With prior written approval of the Federal Reserve, a bank may set EAD equal to a measure of counterparty credit risk exposure, such as peak EAD, that is more conservative than an alpha of 1.4 (or higher under the terms of paragraph (d)(2)(ii)(B) of this section) times EPE for every counterparty whose EAD will be measured under the alternative measure of counterparty exposure. The bank must demonstrate the conservatism of the measure of counterparty credit risk exposure used for EAD. For material portfolios of new OTC derivative products, the bank may assume that the current exposure methodology in paragraphs (c)(5) and (c)(6) of this section meets the conservatism requirement of this paragraph for a period not to exceed 180 days. For immaterial portfolios of OTC derivative contracts, the bank generally may assume that

the current exposure methodology in paragraphs (c)(5) and (c)(6) of this section meets the conservatism requirement of this paragraph.

Section 33. Guarantees and Credit Derivatives: PD Substitution and LGD Adjustment Approaches

(a) *Scope.* (1) This section applies to wholesale exposures for which:

- (i) Credit risk is fully covered by an eligible guarantee or eligible credit derivative; or
- (ii) Credit risk is covered on a pro rata basis (that is, on a basis in which the bank and the protection provider share losses proportionately) by an eligible guarantee or eligible credit derivative.

(2) Wholesale exposures on which there is a tranching of credit risk (reflecting at least two different levels of seniority) are securitization exposures subject to the securitization framework in part V.

(3) A bank may elect to recognize the credit risk mitigation benefits of an eligible guarantee or eligible credit derivative covering an exposure described in paragraph (a)(1) of this section by using the PD substitution approach or the LGD adjustment approach in paragraph (c) of this section or, if the transaction qualifies, using the double default treatment in section 34 of this appendix. A bank's PD and LGD for the hedged exposure may not be lower than the PD and LGD floors described in paragraphs (d)(2) and (d)(3) of section 31 of this appendix.

(4) If multiple eligible guarantees or eligible credit derivatives cover a single exposure described in paragraph (a)(1) of this section, a bank may treat the hedged exposure as multiple separate exposures each covered by a single eligible guarantee or eligible credit derivative and may calculate a separate risk-based capital requirement for each separate exposure as described in paragraph (a)(3) of this section.

(5) If a single eligible guarantee or eligible credit derivative covers multiple hedged wholesale exposures described in paragraph (a)(1) of this section, a bank must treat each hedged exposure as covered by a separate eligible guarantee or eligible credit derivative and must calculate a separate risk-based capital requirement for each exposure as described in paragraph (a)(3) of this section.

(6) A bank must use the same risk parameters for calculating ECL as it uses for calculating the risk-based capital requirement for the exposure.

(b) *Rules of recognition.* (1) A bank may only recognize the credit risk mitigation benefits of eligible guarantees and eligible credit derivatives.

(2) A bank may only recognize the credit risk mitigation benefits of an eligible credit derivative to hedge an exposure that is different from the credit derivative's reference exposure used for determining the deriva-

tive's cash settlement value, deliverable obligation, or occurrence of a credit event if:

(i) The reference exposure ranks *pari passu* (that is, equally) with or is junior to the hedged exposure; and

(ii) The reference exposure and the hedged exposure are exposures to the same legal entity, and legally enforceable cross-default or cross-acceleration clauses are in place to assure payments under the credit derivative are triggered when the obligor fails to pay under the terms of the hedged exposure.

(c) *Risk parameters for hedged exposures—(1) PD substitution approach—(i) Full coverage.* If an eligible guarantee or eligible credit derivative meets the conditions in paragraphs (a) and (b) of this section and the protection amount (P) of the guarantee or credit derivative is greater than or equal to the EAD of the hedged exposure, a bank may recognize the guarantee or credit derivative in determining the bank's risk-based capital requirement for the hedged exposure by substituting the PD associated with the rating grade of the protection provider for the PD associated with the rating grade of the obligor in the risk-based capital formula applicable to the guarantee or credit derivative in Table 2 and using the appropriate LGD as described in paragraph (c)(1)(iii) of this section. If the bank determines that full substitution of the protection provider's PD leads to an inappropriate degree of risk mitigation, the bank may substitute a higher PD than that of the protection provider.

(ii) *Partial coverage.* If an eligible guarantee or eligible credit derivative meets the conditions in paragraphs (a) and (b) of this section and the protection amount (P) of the guarantee or credit derivative is less than the EAD of the hedged exposure, the bank must treat the hedged exposure as two separate exposures (protected and unprotected) in order to recognize the credit risk mitigation benefit of the guarantee or credit derivative.

(A) The bank must calculate its risk-based capital requirement for the protected exposure under section 31 of this appendix, where PD is the protection provider's PD, LGD is determined under paragraph (c)(1)(iii) of this section, and EAD is P. If the bank determines that full substitution leads to an inappropriate degree of risk mitigation, the bank may use a higher PD than that of the protection provider.

(B) The bank must calculate its risk-based capital requirement for the unprotected exposure under section 31 of this appendix, where PD is the obligor's PD, LGD is the hedged exposure's LGD (not adjusted to reflect the guarantee or credit derivative), and EAD is the EAD of the original hedged exposure minus P.

(C) The treatment in this paragraph (c)(1)(ii) is applicable when the credit risk of a wholesale exposure is covered on a partial pro rata basis or when an adjustment is

made to the effective notional amount of the guarantee or credit derivative under paragraph (d), (e), or (f) of this section.

(iii) *LGD of hedged exposures.* The LGD of a hedged exposure under the PD substitution approach is equal to:

(A) The lower of the LGD of the hedged exposure (not adjusted to reflect the guarantee or credit derivative) and the LGD of the guarantee or credit derivative, if the guarantee or credit derivative provides the bank with the option to receive immediate payout upon triggering the protection; or

(B) The LGD of the guarantee or credit derivative, if the guarantee or credit derivative does not provide the bank with the option to receive immediate payout upon triggering the protection.

(2) *LGD adjustment approach—(i) Full coverage.* If an eligible guarantee or eligible credit derivative meets the conditions in paragraphs (a) and (b) of this section and the protection amount (P) of the guarantee or credit derivative is greater than or equal to the EAD of the hedged exposure, the bank's risk-based capital requirement for the hedged exposure is the greater of:

(A) The risk-based capital requirement for the exposure as calculated under section 31 of this appendix, with the LGD of the exposure adjusted to reflect the guarantee or credit derivative; or

(B) The risk-based capital requirement for a direct exposure to the protection provider as calculated under section 31 of this appendix, using the PD for the protection provider, the LGD for the guarantee or credit derivative, and an EAD equal to the EAD of the hedged exposure.

(ii) *Partial coverage.* If an eligible guarantee or eligible credit derivative meets the conditions in paragraphs (a) and (b) of this section and the protection amount (P) of the guarantee or credit derivative is less than the EAD of the hedged exposure, the bank must treat the hedged exposure as two separate exposures (protected and unprotected) in order to recognize the credit risk mitigation benefit of the guarantee or credit derivative.

(A) The bank's risk-based capital requirement for the protected exposure would be the greater of:

(1) The risk-based capital requirement for the protected exposure as calculated under section 31 of this appendix, with the LGD of the exposure adjusted to reflect the guarantee or credit derivative and EAD set equal to P; or

(2) The risk-based capital requirement for a direct exposure to the guarantor as calculated under section 31 of this appendix, using the PD for the protection provider, the LGD for the guarantee or credit derivative, and an EAD set equal to P.

(B) The bank must calculate its risk-based capital requirement for the unprotected exposure under section 31 of this appendix,

where PD is the obligor's PD, LGD is the hedged exposure's LGD (not adjusted to reflect the guarantee or credit derivative), and EAD is the EAD of the original hedged exposure minus P.

(3) *M of hedged exposures.* The M of the hedged exposure is the same as the M of the exposure if it were unhedged.

(d) *Maturity mismatch.* (1) A bank that recognizes an eligible guarantee or eligible credit derivative in determining its risk-based capital requirement for a hedged exposure must adjust the effective notional amount of the credit risk mitigant to reflect any maturity mismatch between the hedged exposure and the credit risk mitigant.

(2) A maturity mismatch occurs when the residual maturity of a credit risk mitigant is less than that of the hedged exposure(s).

(3) The residual maturity of a hedged exposure is the longest possible remaining time before the obligor is scheduled to fulfill its obligation on the exposure. If a credit risk mitigant has embedded options that may reduce its term, the bank (protection purchaser) must use the shortest possible residual maturity for the credit risk mitigant. If a call is at the discretion of the protection provider, the residual maturity of the credit risk mitigant is at the first call date. If the call is at the discretion of the bank (protection purchaser), but the terms of the arrangement at origination of the credit risk mitigant contain a positive incentive for the bank to call the transaction before contractual maturity, the remaining time to the first call date is the residual maturity of the credit risk mitigant. For example, where there is a step-up in cost in conjunction with a call feature or where the effective cost of protection increases over time even if credit quality remains the same or improves, the residual maturity of the credit risk mitigant will be the remaining time to the first call.

(4) A credit risk mitigant with a maturity mismatch may be recognized only if its original maturity is greater than or equal to one year and its residual maturity is greater than three months.

(5) When a maturity mismatch exists, the bank must apply the following adjustment to the effective notional amount of the credit risk mitigant: $P_m = E \times (t - 0.25)/(T - 0.25)$, where:

(i) P_m = effective notional amount of the credit risk mitigant, adjusted for maturity mismatch;

(ii) E = effective notional amount of the credit risk mitigant;

(iii) t = the lesser of T or the residual maturity of the credit risk mitigant, expressed in years; and

(iv) T = the lesser of five or the residual maturity of the hedged exposure, expressed in years.

(e) *Credit derivatives without restructuring as a credit event.* If a bank recognizes an eligible

credit derivative that does not include as a credit event a restructuring of the hedged exposure involving forgiveness or postponement of principal, interest, or fees that results in a credit loss event (that is, a charge-off, specific provision, or other similar debit to the profit and loss account), the bank must apply the following adjustment to the effective notional amount of the credit derivative: $Pr = Pm \times 0.60$, where:

(1) Pr = effective notional amount of the credit risk mitigant, adjusted for lack of restructuring event (and maturity mismatch, if applicable); and

(2) Pm = effective notional amount of the credit risk mitigant adjusted for maturity mismatch (if applicable).

(f) *Currency mismatch.* (1) If a bank recognizes an eligible guarantee or eligible credit derivative that is denominated in a currency different from that in which the hedged exposure is denominated, the bank must apply the following formula to the effective notional amount of the guarantee or credit derivative: $Pc = Pr \times (1 - H_{FX})$, where:

(i) Pc = effective notional amount of the credit risk mitigant, adjusted for currency mismatch (and maturity mismatch and lack of restructuring event, if applicable);

(ii) Pr = effective notional amount of the credit risk mitigant (adjusted for maturity mismatch and lack of restructuring event, if applicable); and

(iii) H_{FX} = haircut appropriate for the currency mismatch between the credit risk mitigant and the hedged exposure.

(2) A bank must set H_{FX} equal to 8 percent unless it qualifies for the use of and uses its own internal estimates of foreign exchange volatility based on a ten-business-day holding period and daily marking-to-market and remargining. A bank qualifies for the use of its own internal estimates of foreign exchange volatility if it qualifies for:

(i) The own-estimates haircuts in paragraph (b)(2)(iii) of section 32 of this appendix;

(ii) The simple VaR methodology in paragraph (b)(3) of section 32 of this appendix; or

(iii) The internal models methodology in paragraph (d) of section 32 of this appendix.

(3) A bank must adjust H_{FX} calculated in paragraph (f)(2) of this section upward if the bank revalues the guarantee or credit derivative less frequently than once every ten business days using the square root of time formula provided in paragraph (b)(2)(iii)(A)(2) of section 32 of this appendix.

*Section 34. Guarantees and Credit Derivatives:
Double Default Treatment*

(a) *Eligibility and operational criteria for double default treatment.* A bank may recognize the credit risk mitigation benefits of a guarantee or credit derivative covering an exposure described in paragraph (a)(1) of section 33 of this appendix by applying the double

default treatment in this section if all the following criteria are satisfied.

(1) The hedged exposure is fully covered or covered on a pro rata basis by:

(i) An eligible guarantee issued by an eligible double default guarantor; or

(ii) An eligible credit derivative that meets the requirements of paragraph (b)(2) of section 33 of this appendix and is issued by an eligible double default guarantor.

(2) The guarantee or credit derivative is:

(i) An uncollateralized guarantee or uncollateralized credit derivative (for example, a credit default swap) that provides protection with respect to a single reference obligor; or

(ii) An nth-to-default credit derivative (subject to the requirements of paragraph (m) of section 42 of this appendix).

(3) The hedged exposure is a wholesale exposure (other than a sovereign exposure).

(4) The obligor of the hedged exposure is not:

(i) An eligible double default guarantor or an affiliate of an eligible double default guarantor; or

(ii) An affiliate of the guarantor.

(5) The bank does not recognize any credit risk mitigation benefits of the guarantee or credit derivative for the hedged exposure other than through application of the double default treatment as provided in this section.

(6) The bank has implemented a process (which has received the prior, written approval of the Federal Reserve) to detect excessive correlation between the credit-worthiness of the obligor of the hedged exposure and the protection provider. If excessive correlation is present, the bank may not use the double default treatment for the hedged exposure.

(b) *Full coverage.* If the transaction meets the criteria in paragraph (a) of this section and the protection amount (P) of the guarantee or credit derivative is at least equal to the EAD of the hedged exposure, the bank may determine its risk-weighted asset amount for the hedged exposure under paragraph (e) of this section.

(c) *Partial coverage.* If the transaction meets the criteria in paragraph (a) of this section and the protection amount (P) of the guarantee or credit derivative is less than the EAD of the hedged exposure, the bank must treat the hedged exposure as two separate exposures (protected and unprotected) in order to recognize double default treatment on the protected portion of the exposure.

(1) For the protected exposure, the bank must set EAD equal to P and calculate its risk-weighted asset amount as provided in paragraph (e) of this section.

(2) For the unprotected exposure, the bank must set EAD equal to the EAD of the original exposure minus P and then calculate its

risk-weighted asset amount as provided in section 31 of this appendix.

(d) *Mismatches.* For any hedged exposure to which a bank applies double default treatment, the bank must make applicable adjustments to the protection amount as required in paragraphs (d), (e), and (f) of section 33 of this appendix.

(e) *The double default dollar risk-based capital requirement.* The dollar risk-based capital requirement for a hedged exposure to which a bank has applied double default treatment is K_{DD} multiplied by the EAD of the exposure. K_{DD} is calculated according to the following formula: $K_{DD} = K_o \times (0.15 + 160 \times PD_g)$,

Where:

(1)

$$K_o = LGD_g \times \left[N \left(\frac{N^{-1}(PD_o) + N^{-1}(0.999)\sqrt{\rho_{os}}}{\sqrt{1 - \rho_{os}}} \right) - PD_o \right] \times \left[\frac{1 + (M - 2.5) \times b}{1 - 1.5 \times b} \right]$$

(2) PD_g = PD of the protection provider.

(3) PD_o = PD of the obligor of the hedged exposure.

(4) LGD_g = (i) The lower of the LGD of the hedged exposure (not adjusted to reflect the guarantee or credit derivative) and the LGD of the guarantee or credit derivative, if the guarantee or credit derivative provides the bank with the option to receive immediate payout on triggering the protection; or

(ii) The LGD of the guarantee or credit derivative, if the guarantee or credit derivative does not provide the bank with the option to receive immediate payout on triggering the protection.

(5) ρ_{os} (asset value correlation of the obligor) is calculated according to the appropriate formula for (R) provided in Table 2 in section 31 of this appendix, with PD equal to PD_o .

(6) b (maturity adjustment coefficient) is calculated according to the formula for b provided in Table 2 in section 31 of this appendix, with PD equal to the lesser of PD_o and PD_g .

(7) M (maturity) is the effective maturity of the guarantee or credit derivative, which may not be less than one year or greater than five years.

Section 35. Risk-Based Capital Requirement for Unsettled Transactions

(a) *Definitions.* For purposes of this section:

(1) *Delivery-versus-payment (DvP) transaction* means a securities or commodities transaction in which the buyer is obligated to make payment only if the seller has made delivery of the securities or commodities and the seller is obligated to deliver the securities or commodities only if the buyer has made payment.

(2) *Payment-versus-payment (PvP) transaction* means a foreign exchange transaction in which each counterparty is obligated to make a final transfer of one or more currencies only if the other counterparty has

made a final transfer of one or more currencies.

(3) *Normal settlement period.* A transaction has a *normal settlement period* if the contractual settlement period for the transaction is equal to or less than the market standard for the instrument underlying the transaction and equal to or less than five business days.

(4) *Positive current exposure.* The positive current exposure of a bank for a transaction is the difference between the transaction value at the agreed settlement price and the current market price of the transaction, if the difference results in a credit exposure of the bank to the counterparty.

(b) *Scope.* This section applies to all transactions involving securities, foreign exchange instruments, and commodities that have a risk of delayed settlement or delivery. This section does not apply to:

(1) Transactions accepted by a qualifying central counterparty that are subject to daily marking-to-market and daily receipt and payment of variation margin;

(2) Repo-style transactions, including unsettled repo-style transactions (which are addressed in sections 31 and 32 of this appendix);

(3) One-way cash payments on OTC derivative contracts (which are addressed in sections 31 and 32 of this appendix); or

(4) Transactions with a contractual settlement period that is longer than the normal settlement period (which are treated as OTC derivative contracts and addressed in sections 31 and 32 of this appendix).

(c) *System-wide failures.* In the case of a system-wide failure of a settlement or clearing system, the Federal Reserve may waive risk-based capital requirements for unsettled and failed transactions until the situation is rectified.

(d) *Delivery-versus-payment (DvP) and payment-versus-payment (PvP) transactions.* A bank must hold risk-based capital against any DvP or PvP transaction with a normal settlement period if the bank's counterparty

has not made delivery or payment within five business days after the settlement date. The bank must determine its risk-weighted asset amount for such a transaction by multiplying the positive current exposure of the transaction for the bank by the appropriate risk weight in Table 5.

TABLE 5.—RISK WEIGHTS FOR UNSETTLED DVP AND PVP TRANSACTIONS

Number of business days after contractual settlement date	Risk weight to be applied to positive current exposure (percent)
From 5 to 15	100
From 16 to 30	625
From 31 to 45	937.5
46 or more	1,250

(e) *Non-DvP/non-PvP (non-delivery-versus-payment/non-payment-versus-payment) transactions.* (1) A bank must hold risk-based capital against any non-DvP/non-PvP transaction with a normal settlement period if the bank has delivered cash, securities, commodities, or currencies to its counterparty but has not received its corresponding deliverables by the end of the same business day. The bank must continue to hold risk-based capital against the transaction until the bank has received its corresponding deliverables.

(2) From the business day after the bank has made its delivery until five business days after the counterparty delivery is due, the bank must calculate its risk-based capital requirement for the transaction by treating the current market value of the deliverables owed to the bank as a wholesale exposure.

(i) A bank may assign an obligor rating to a counterparty for which it is not otherwise required under this appendix to assign an obligor rating on the basis of the applicable external rating of any outstanding unsecured long-term debt security without credit enhancement issued by the counterparty.

(ii) A bank may use a 45 percent LGD for the transaction rather than estimating LGD for the transaction provided the bank uses the 45 percent LGD for all transactions described in paragraphs (e)(1) and (e)(2) of this section.

(iii) A bank may use a 100 percent risk weight for the transaction provided the bank uses this risk weight for all transactions described in paragraphs (e)(1) and (e)(2) of this section.

(3) If the bank has not received its deliverables by the fifth business day after the counterparty delivery was due, the bank must deduct the current market value of the deliverables owed to the bank 50 percent from tier 1 capital and 50 percent from tier 2 capital.

(f) *Total risk-weighted assets for unsettled transactions.* Total risk-weighted assets for

unsettled transactions is the sum of the risk-weighted asset amounts of all DvP, PvP, and non-DvP/non-PvP transactions.

PART V. RISK-WEIGHTED ASSETS FOR SECURITIZATION EXPOSURES

Section 41. Operational Criteria for Recognizing the Transfer of Risk

(a) *Operational criteria for traditional securitizations.* A bank that transfers exposures it has originated or purchased to a securitization SPE or other third party in connection with a traditional securitization may exclude the exposures from the calculation of its risk-weighted assets only if each of the conditions in this paragraph (a) is satisfied. A bank that meets these conditions must hold risk-based capital against any securitization exposures it retains in connection with the securitization. A bank that fails to meet these conditions must hold risk-based capital against the transferred exposures as if they had not been securitized and must deduct from tier 1 capital any after-tax gain-on-sale resulting from the transaction. The conditions are:

(1) The transfer is considered a sale under GAAP;

(2) The bank has transferred to third parties credit risk associated with the underlying exposures; and

(3) Any clean-up calls relating to the securitization are eligible clean-up calls.

(b) *Operational criteria for synthetic securitizations.* For synthetic securitizations, a bank may recognize for risk-based capital purposes the use of a credit risk mitigant to hedge underlying exposures only if each of the conditions in this paragraph (b) is satisfied. A bank that fails to meet these conditions must hold risk-based capital against the underlying exposures as if they had not been synthetically securitized. The conditions are:

(1) The credit risk mitigant is financial collateral, an eligible credit derivative from an eligible securitization guarantor or an eligible guarantee from an eligible securitization guarantor;

(2) The bank transfers credit risk associated with the underlying exposures to third parties, and the terms and conditions in the credit risk mitigants employed do not include provisions that:

(i) Allow for the termination of the credit protection due to deterioration in the credit quality of the underlying exposures;

(ii) Require the bank to alter or replace the underlying exposures to improve the credit quality of the pool of underlying exposures;

(iii) Increase the bank's cost of credit protection in response to deterioration in the credit quality of the underlying exposures;

(iv) Increase the yield payable to parties other than the bank in response to a deterioration in the credit quality of the underlying exposures; or

(v) Provide for increases in a retained first loss position or credit enhancement provided by the bank after the inception of the securitization;

(3) The bank obtains a well-reasoned opinion from legal counsel that confirms the enforceability of the credit risk mitigant in all relevant jurisdictions; and

(4) Any clean-up calls relating to the securitization are eligible clean-up calls.

Section 42. Risk-Based Capital Requirement for Securitization Exposures

(a) *Hierarchy of approaches.* Except as provided elsewhere in this section:

(1) A bank must deduct from tier 1 capital any after-tax gain-on-sale resulting from a securitization and must deduct from total capital in accordance with paragraph (c) of this section the portion of any CEIO that does not constitute gain-on-sale.

(2) If a securitization exposure does not require deduction under paragraph (a)(1) of this section and qualifies for the Ratings-Based Approach in section 43 of this appendix, a bank must apply the Ratings-Based Approach to the exposure.

(3) If a securitization exposure does not require deduction under paragraph (a)(1) of this section and does not qualify for the Ratings-Based Approach, the bank may either apply the Internal Assessment Approach in section 44 of this appendix to the exposure (if the bank, the exposure, and the relevant ABCP program qualify for the Internal Assessment Approach) or the Supervisory Formula Approach in section 45 of this appendix to the exposure (if the bank and the exposure qualify for the Supervisory Formula Approach).

(4) If a securitization exposure does not require deduction under paragraph (a)(1) of this section and does not qualify for the Ratings-Based Approach, the Internal Assessment Approach, or the Supervisory Formula Approach, the bank must deduct the exposure from total capital in accordance with paragraph (c) of this section.

(5) If a securitization exposure is an OTC derivative contract (other than a credit derivative) that has a first priority claim on the cash flows from the underlying exposures (notwithstanding amounts due under interest rate or currency derivative contracts, fees due, or other similar payments), with approval of the Federal Reserve, a bank may choose to set the risk-weighted asset amount of the exposure equal to the amount of the exposure as determined in paragraph (e) of this section rather than apply the hierarchy of approaches described in paragraphs (a) (1) through (4) of this section.

(b) *Total risk-weighted assets for securitization exposures.* A bank's total risk-weighted assets for securitization exposures is equal to the sum of its risk-weighted assets calculated using the Ratings-Based Approach in section 43 of this appendix, the Internal Assessment Approach in section 44 of this appendix, and the Supervisory Formula Approach in section 45 of this appendix, and its risk-weighted assets amount for early amortization provisions calculated in section 47 of this appendix.

(c) *Deductions.* (1) If a bank must deduct a securitization exposure from total capital, the bank must take the deduction 50 percent from tier 1 capital and 50 percent from tier 2 capital. If the amount deductible from tier 2 capital exceeds the bank's tier 2 capital, the bank must deduct the excess from tier 1 capital.

(2) A bank may calculate any deduction from tier 1 capital and tier 2 capital for a securitization exposure net of any deferred tax liabilities associated with the securitization exposure.

(d) *Maximum risk-based capital requirement.* Regardless of any other provisions of this part, unless one or more underlying exposures does not meet the definition of a wholesale, retail, securitization, or equity exposure, the total risk-based capital requirement for all securitization exposures held by a single bank associated with a single securitization (including any risk-based capital requirements that relate to an early amortization provision of the securitization but excluding any risk-based capital requirements that relate to the bank's gain-on-sale or CEIOs associated with the securitization) may not exceed the sum of:

(1) The bank's total risk-based capital requirement for the underlying exposures as if the bank directly held the underlying exposures; and

(2) The total ECL of the underlying exposures.

(e) *Amount of a securitization exposure.* (1) The amount of an on-balance sheet securitization exposure that is not a repo-style transaction, eligible margin loan, or OTC derivative contract (other than a credit derivative) is:

(i) The bank's carrying value minus any unrealized gains and plus any unrealized losses on the exposure, if the exposure is a security classified as available-for-sale; or

(ii) The bank's carrying value, if the exposure is not a security classified as available-for-sale.

(2) The amount of an off-balance sheet securitization exposure that is not an OTC derivative contract (other than a credit derivative) is the notional amount of the exposure. For an off-balance-sheet securitization exposure to an ABCP program, such as a liquidity facility, the notional amount may be reduced to the maximum potential amount

that the bank could be required to fund given the ABCP program's current underlying assets (calculated without regard to the current credit quality of those assets).

(3) The amount of a securitization exposure that is a repo-style transaction, eligible margin loan, or OTC derivative contract (other than a credit derivative) is the EAD of the exposure as calculated in section 32 of this appendix.

(f) *Overlapping exposures.* If a bank has multiple securitization exposures that provide duplicative coverage of the underlying exposures of a securitization (such as when a bank provides a program-wide credit enhancement and multiple pool-specific liquidity facilities to an ABCP program), the bank is not required to hold duplicative risk-based capital against the overlapping position. Instead, the bank may apply to the overlapping position the applicable risk-based capital treatment that results in the highest risk-based capital requirement.

(g) *Securitized non-IRB exposures.* If a bank has a securitization exposure where any underlying exposure is not a wholesale exposure, retail exposure, securitization exposure, or equity exposure, the bank must:

(1) If the bank is an originating bank, deduct from tier 1 capital any after-tax gain-on-sale resulting from the securitization and deduct from total capital in accordance with paragraph (c) of this section the portion of any CEO that does not constitute gain-on-sale;

(2) If the securitization exposure does not require deduction under paragraph (g)(1), apply the RBA in section 43 of this appendix to the securitization exposure if the exposure qualifies for the RBA;

(3) If the securitization exposure does not require deduction under paragraph (g)(1) and does not qualify for the RBA, apply the IAA in section 44 of this appendix to the exposure (if the bank, the exposure, and the relevant ABCP program qualify for the IAA); and

(4) If the securitization exposure does not require deduction under paragraph (g)(1) and does not qualify for the RBA or the IAA, deduct the exposure from total capital in accordance with paragraph (c) of this section.

(h) *Implicit support.* If a bank provides support to a securitization in excess of the bank's contractual obligation to provide credit support to the securitization (implicit support):

(1) The bank must hold regulatory capital against all of the underlying exposures associated with the securitization as if the exposures had not been securitized and must deduct from tier 1 capital any after-tax gain-on-sale resulting from the securitization; and

(2) The bank must disclose publicly:

(i) That it has provided implicit support to the securitization; and

(ii) The regulatory capital impact to the bank of providing such implicit support.

(i) *Eligible servicer cash advance facilities.* Regardless of any other provisions of this part, a bank is not required to hold risk-based capital against the undrawn portion of an eligible servicer cash advance facility.

(j) *Interest-only mortgage-backed securities.* Regardless of any other provisions of this part, the risk weight for a non-credit-enhancing interest-only mortgage-backed security may not be less than 100 percent.

(k) *Small-business loans and leases on personal property transferred with recourse.* (1) Regardless of any other provisions of this appendix, a bank that has transferred small-business loans and leases on personal property (small-business obligations) with recourse must include in risk-weighted assets only the contractual amount of retained recourse if all the following conditions are met:

(i) The transaction is a sale under GAAP.

(ii) The bank establishes and maintains, pursuant to GAAP, a non-capital reserve sufficient to meet the bank's reasonably estimated liability under the recourse arrangement.

(iii) The loans and leases are to businesses that meet the criteria for a small-business concern established by the Small Business Administration under section 3(a) of the Small Business Act (15 U.S.C. 632).

(iv) The bank is well capitalized, as defined in the Federal Reserve's prompt corrective action regulation at 12 CFR part 208, subpart D. For purposes of determining whether a bank is well capitalized for purposes of this paragraph, the bank's capital ratios must be calculated without regard to the capital treatment for transfers of small-business obligations with recourse specified in paragraph (k)(1) of this section.

(2) The total outstanding amount of recourse retained by a bank on transfers of small-business obligations receiving the capital treatment specified in paragraph (k)(1) of this section cannot exceed 15 percent of the bank's total qualifying capital.

(3) If a bank ceases to be well capitalized or exceeds the 15 percent capital limitation, the preferential capital treatment specified in paragraph (k)(1) of this section will continue to apply to any transfers of small-business obligations with recourse that occurred during the time that the bank was well capitalized and did not exceed the capital limit.

(4) The risk-based capital ratios of the bank must be calculated without regard to the capital treatment for transfers of small-business obligations with recourse specified in paragraph (k)(1) of this section as provided in 12 CFR part 208, appendix A.

(1) *Consolidated ABCP programs.* (1) A bank that qualifies as a primary beneficiary and must consolidate an ABCP program as a

variable interest entity under GAAP may exclude the consolidated ABCP program assets from risk-weighted assets if the bank is the sponsor of the ABCP program. If a bank excludes such consolidated ABCP program assets from risk-weighted assets, the bank must hold risk-based capital against any securitization exposures of the bank to the ABCP program in accordance with this part.

(2) If a bank either is not permitted, or elects not, to exclude consolidated ABCP program assets from its risk-weighted assets, the bank must hold risk-based capital against the consolidated ABCP program assets in accordance with this appendix but is not required to hold risk-based capital against any securitization exposures of the bank to the ABCP program.

(m) *Nth-to-default credit derivatives*—(1) *First-to-default credit derivatives*—(i) *Protection purchaser*. A bank that obtains credit protection on a group of underlying exposures through a first-to-default credit derivative must determine its risk-based capital requirement for the underlying exposures as if the bank synthetically securitized the underlying exposure with the lowest risk-based capital requirement and had obtained no credit risk mitigant on the other underlying exposures.

(ii) *Protection provider*. A bank that provides credit protection on a group of underlying exposures through a first-to-default credit derivative must determine its risk-weighted asset amount for the derivative by applying the RBA in section 43 of this appendix (if the derivative qualifies for the RBA) or, if the derivative does not qualify for the RBA, by setting its risk-weighted asset amount for the derivative equal to the product of:

(A) The protection amount of the derivative;

(B) 12.5; and

(C) The sum of the risk-based capital requirements of the individual underlying exposures, up to a maximum of 100 percent.

(2) *Second-or-subsequent-to-default credit derivatives*—(i) *Protection purchaser*. (A) A bank that obtains credit protection on a group of underlying exposures through a *nth-to-default credit derivative* (other than a first-to-default credit derivative) may recognize the credit risk mitigation benefits of the derivative only if:

(1) The bank also has obtained credit protection on the same underlying exposures in the form of first-through-(*n*-1)-to-default credit derivatives; or

(2) If *n*-1 of the underlying exposures have already defaulted.

(B) If a bank satisfies the requirements of paragraph (m)(2)(i)(A) of this section, the bank must determine its risk-based capital requirement for the underlying exposures as if the bank had only synthetically securitized the underlying exposure with the

nth lowest risk-based capital requirement and had obtained no credit risk mitigant on the other underlying exposures.

(ii) *Protection provider*. A bank that provides credit protection on a group of underlying exposures through a *nth-to-default credit derivative* (other than a first-to-default credit derivative) must determine its risk-weighted asset amount for the derivative by applying the RBA in section 43 of this appendix (if the derivative qualifies for the RBA) or, if the derivative does not qualify for the RBA, by setting its risk-weighted asset amount for the derivative equal to the product of:

(A) The protection amount of the derivative;

(B) 12.5; and

(C) The sum of the risk-based capital requirements of the individual underlying exposures (excluding the *n*-1 underlying exposures with the lowest risk-based capital requirements), up to a maximum of 100 percent.

Section 43. Ratings-Based Approach (RBA)

(a) *Eligibility requirements for use of the RBA*—(1) *Originating bank*. An originating bank must use the RBA to calculate its risk-based capital requirement for a securitization exposure if the exposure has two or more external ratings or inferred ratings (and may not use the RBA if the exposure has fewer than two external ratings or inferred ratings).

(2) *Investing bank*. An investing bank must use the RBA to calculate its risk-based capital requirement for a securitization exposure if the exposure has one or more external or inferred ratings (and may not use the RBA if the exposure has no external or inferred rating).

(b) *Ratings-based approach*. (1) A bank must determine the risk-weighted asset amount for a securitization exposure by multiplying the amount of the exposure (as defined in paragraph (e) of section 42 of this appendix) by the appropriate risk weight provided in Table 6 and Table 7.

(2) A bank must apply the risk weights in Table 6 when the securitization exposure's applicable external or applicable inferred rating represents a long-term credit rating, and must apply the risk weights in Table 7 when the securitization exposure's applicable external or applicable inferred rating represents a short-term credit rating.

(i) A bank must apply the risk weights in column 1 of Table 6 or Table 7 to the securitization exposure if:

(A) *N* (as calculated under paragraph (e)(6) of section 45 of this appendix) is six or more (for purposes of this section only, if the notional number of underlying exposures is 25 or more or if all of the underlying exposures are retail exposures, a bank may assume that *N* is six or more unless the bank knows

Federal Reserve System

Pt. 208, App. F

or has reason to know that N is less than six); and

(B) The securitization exposure is a senior securitization exposure.

(ii) A bank must apply the risk weights in column 3 of Table 6 or Table 7 to the

securitization exposure if N is less than six, regardless of the seniority of the securitization exposure.

(iii) Otherwise, a bank must apply the risk weights in column 2 of Table 6 or Table 7.

TABLE 6.—LONG-TERM CREDIT RATING RISK WEIGHTS UNDER RBA AND IAA

Applicable external or inferred rating (Illustrative rating example)	Column 1	Column 2	Column 3
	Risk weights for senior securitization exposures backed by granular pools	Risk weights for non-senior securitization exposures backed by granular pools	Risk weights for securitization exposures backed by non-granular pools
Highest investment grade (for example, AAA)	7%	12%	20%
Second highest investment grade (for example, AA)	8%	15%	25%
Third-highest investment grade—positive designation (for example, A+)	10%	18%	35%
Third-highest investment grade (for example, A)	12%	20%	
Third-highest investment grade—negative designation (for example, A-)	20%	35%	
Lowest investment grade—positive designation (for example, BBB+)	35%	50%	
Lowest investment grade (for example, BBB)	60%	75%	
Lowest investment grade—negative designation (for example, BBB-)	100%		
One category below investment grade—positive designation (for example, BB+)	250%		
One category below investment grade (for example, BB)	425%		
One category below investment grade—negative designation (for example, BB-)	650%		
More than one category below investment grade	Deduction from tier 1 and tier 2 capital.		

TABLE 7.—SHORT-TERM CREDIT RATING RISK WEIGHTS UNDER RBA AND IAA

Applicable external or inferred rating (Illustrative rating example)	Column 1	Column 2	Column 3
	Risk weights for senior securitization exposures backed by granular pools	Risk weights for non-senior securitization exposures backed by granular pools	Risk weights for securitization exposures backed by non-granular pools
Highest investment grade (for example, A1)	7%	12%	20%
Second highest investment grade (for example, A2)	12%	20%	35%
Third highest investment grade (for example, A3)	60%	75%	75%
All other ratings	Deduction from tier 1 and tier 2 capital.		

Section 44. Internal Assessment Approach (IAA)

(a) *Eligibility requirements.* A bank may apply the IAA to calculate the risk-weighted asset amount for a securitization exposure that the bank has to an ABCP program (such as a liquidity facility or credit enhancement) if the bank, the ABCP program, and the exposure qualify for use of the IAA.

(1) *Bank qualification criteria.* A bank qualifies for use of the IAA if the bank has received the prior written approval of the Federal Reserve. To receive such approval, the bank must demonstrate to the Federal Reserve's satisfaction that the bank's internal assessment process meets the following criteria:

(i) The bank's internal credit assessments of securitization exposures must be based on

publicly available rating criteria used by an NRSRO.

(ii) The bank's internal credit assessments of securitization exposures used for risk-based capital purposes must be consistent with those used in the bank's internal risk management process, management information reporting systems, and capital adequacy assessment process.

(iii) The bank's internal credit assessment process must have sufficient granularity to identify gradations of risk. Each of the bank's internal credit assessment categories must correspond to an external rating of an NRSRO.

(iv) The bank's internal credit assessment process, particularly the stress test factors for determining credit enhancement requirements, must be at least as conservative as

the most conservative of the publicly available rating criteria of the NRSROs that have provided external ratings to the commercial paper issued by the ABCP program.

(A) Where the commercial paper issued by an ABCP program has an external rating from two or more NRSROs and the different NRSROs' benchmark stress factors require different levels of credit enhancement to achieve the same external rating equivalent, the bank must apply the NRSRO stress factor that requires the highest level of credit enhancement.

(B) If any NRSRO that provides an external rating to the ABCP program's commercial paper changes its methodology (including stress factors), the bank must evaluate whether to revise its internal assessment process.

(v) The bank must have an effective system of controls and oversight that ensures compliance with these operational requirements and maintains the integrity and accuracy of the internal credit assessments. The bank must have an internal audit function independent from the ABCP program business line and internal credit assessment process that assesses at least annually whether the controls over the internal credit assessment process function as intended.

(vi) The bank must review and update each internal credit assessment whenever new material information is available, but no less frequently than annually.

(vii) The bank must validate its internal credit assessment process on an ongoing basis and at least annually.

(2) *ABCP-program qualification criteria.* An ABCP program qualifies for use of the IAA if all commercial paper issued by the ABCP program has an external rating.

(3) *Exposure qualification criteria.* A securitization exposure qualifies for use of the IAA if the exposure meets the following criteria:

(i) The bank initially rated the exposure at least the equivalent of investment grade.

(ii) The ABCP program has robust credit and investment guidelines (that is, underwriting standards) for the exposures underlying the securitization exposure.

(iii) The ABCP program performs a detailed credit analysis of the sellers of the exposures underlying the securitization exposure.

(iv) The ABCP program's underwriting policy for the exposures underlying the securitization exposure establishes minimum asset eligibility criteria that include the prohibition of the purchase of assets that are significantly past due or of assets that are defaulted (that is, assets that have been charged off or written down by the seller prior to being placed into the ABCP program or assets that would be charged off or written down under the program's governing contracts), as well as limitations on concentra-

tion to individual obligors or geographic areas and the tenor of the assets to be purchased.

(v) The aggregate estimate of loss on the exposures underlying the securitization exposure considers all sources of potential risk, such as credit and dilution risk.

(vi) Where relevant, the ABCP program incorporates structural features into each purchase of exposures underlying the securitization exposure to mitigate potential credit deterioration of the underlying exposures. Such features may include wind-down triggers specific to a pool of underlying exposures.

(b) *Mechanics.* A bank that elects to use the IAA to calculate the risk-based capital requirement for any securitization exposure must use the IAA to calculate the risk-based capital requirements for all securitization exposures that qualify for the IAA approach. Under the IAA, a bank must map its internal assessment of such a securitization exposure to an equivalent external rating from an NRSRO. Under the IAA, a bank must determine the risk-weighted asset amount for such a securitization exposure by multiplying the amount of the exposure (as defined in paragraph (e) of section 42 of this appendix) by the appropriate risk weight in Table 6 and Table 7 in paragraph (b) of section 43 of this appendix.

Section 45. Supervisory Formula Approach (SFA)

(a) *Eligibility requirements.* A bank may use the SFA to determine its risk-based capital requirement for a securitization exposure only if the bank can calculate on an ongoing basis each of the SFA parameters in paragraph (e) of this section.

(b) *Mechanics.* Under the SFA, a securitization exposure incurs a deduction from total capital (as described in paragraph (c) of section 42 of this appendix) and/or an SFA risk-based capital requirement, as determined in paragraph (c) of this section. The risk-weighted asset amount for the securitization exposure equals the SFA risk-based capital requirement for the exposure multiplied by 12.5.

(c) *The SFA risk-based capital requirement.* (1) If K_{IRB} is greater than or equal to $L + T$, the entire exposure must be deducted from total capital.

(2) If K_{IRB} is less than or equal to L , the exposure's SFA risk-based capital requirement is UE multiplied by TP multiplied by the greater of:

(i) $0.0056 * T$; or

(ii) $S[L + T] - S[L]$.

(3) If K_{IRB} is greater than L and less than $L + T$, the bank must deduct from total capital an amount equal to $UE * TP * (K_{IRB} - L)$, and the exposure's SFA risk-based capital requirement is UE multiplied by TP multiplied by the greater of:

Federal Reserve System

Pt. 208, App. F

- (i) $0.0056 \cdot (T - (K_{IRB} - L))$; or
- (ii) $S[L + T] - S[K_{IRB}]$.

(d) *The supervisory formula:*

$$(1) S[Y] = \left\{ \begin{array}{ll} Y & \text{when } Y \leq K_{IRB} \\ K_{IRB} + K[Y] - K[K_{IRB}] + \frac{d \cdot K_{IRB}}{20} \left(1 - e^{-\frac{20 \cdot (K_{IRB} - Y)}{K_{IRB}}} \right) & \text{when } Y > K_{IRB} \end{array} \right\}$$

$$(2) K[Y] = (1 - h) \cdot [(1 - \beta[Y; a, b]) \cdot Y + \beta[Y; a + 1, b] \cdot c]$$

$$(3) h = \left(1 - \frac{K_{IRB}}{EWALGD}\right)^N$$

$$(4) a = g \cdot c$$

$$(5) b = g \cdot (1 - c)$$

$$(6) c = \frac{K_{IRB}}{1 - h}$$

$$(7) g = \frac{(1 - c) \cdot c}{f} - 1$$

$$(8) f = \frac{v + K_{IRB}^2}{1 - h} - c^2 + \frac{(1 - K_{IRB}) \cdot K_{IRB} - v}{(1 - h) \cdot 1000}$$

$$(9) v = K_{IRB} \cdot \frac{(EWALGD - K_{IRB}) + .25 \cdot (1 - EWALGD)}{N}$$

$$(10) d = 1 - (1 - h) \cdot (1 - \beta[K_{IRB}; a, b]).$$

(11) In these expressions, $\beta[Y; a, b]$ refers to the cumulative beta distribution with parameters a and b evaluated at Y . In the case where $N = 1$ and $EWALGD = 100$ percent, $S[Y]$ in formula (1) must be calculated with $K[Y]$

set equal to the product of K_{IRB} and Y , and d set equal to $1 - K_{IRB}$.

(e) *SFA parameters*—(1) *Amount of the underlying exposures (UE)*. UE is the EAD of any underlying exposures that are wholesale and retail exposures (including the amount of

any funded spread accounts, cash collateral accounts, and other similar funded credit enhancements) plus the amount of any underlying exposures that are securitization exposures (as defined in paragraph (e) of section 42 of this appendix) plus the adjusted carrying value of any underlying exposures that are equity exposures (as defined in paragraph (b) of section 51 of this appendix).

(2) *Tranche percentage (TP)*. TP is the ratio of the amount of the bank's securitization exposure to the amount of the tranche that contains the securitization exposure.

(3) *Capital requirement on underlying exposures (K_{IRB})*. (i) K_{IRB} is the ratio of:

(A) The sum of the risk-based capital requirements for the underlying exposures plus the expected credit losses of the underlying exposures (as determined under this appendix as if the underlying exposures were directly held by the bank); to

(B) UE.

(ii) The calculation of K_{IRB} must reflect the effects of any credit risk mitigant applied to the underlying exposures (either to an individual underlying exposure, to a group of underlying exposures, or to the entire pool of underlying exposures).

(iii) All assets related to the securitization are treated as underlying exposures, including assets in a reserve account (such as a cash collateral account).

(4) *Credit enhancement level (L)*. (i) L is the ratio of:

(A) The amount of all securitization exposures subordinated to the tranche that contains the bank's securitization exposure; to

(B) UE.

(ii) A bank must determine L before considering the effects of any tranche-specific credit enhancements.

(iii) Any gain-on-sale or CEIO associated with the securitization may not be included in L.

(iv) Any reserve account funded by accumulated cash flows from the underlying exposures that is subordinated to the tranche that contains the bank's securitization exposure may be included in the numerator and denominator of L to the extent cash has accumulated in the account. Unfunded reserve accounts (that is, reserve accounts that are to be funded from future cash flows from the underlying exposures) may not be included in the calculation of L.

(v) In some cases, the purchase price of receivables will reflect a discount that provides credit enhancement (for example, first loss protection) for all or certain tranches of the securitization. When this arises, L should be calculated inclusive of this discount if the discount provides credit enhancement for the securitization exposure.

(5) *Thickness of tranche (T)*. T is the ratio of:

(i) The amount of the tranche that contains the bank's securitization exposure; to

(ii) UE.

(6) *Effective number of exposures (N)*. (i) Unless the bank elects to use the formula provided in paragraph (f) of this section,

$$N = \frac{(\sum_i EAD_i)^2}{\sum_i EAD_i^2}$$

where EAD_i represents the EAD associated with the *i*th instrument in the pool of underlying exposures.

(ii) Multiple exposures to one obligor must be treated as a single underlying exposure.

(iii) In the case of a re-securitization (that is, a securitization in which some or all of the underlying exposures are themselves securitization exposures), the bank must treat each underlying exposure as a single underlying exposure and must not look through to the originally securitized underlying exposures.

(7) *Exposure-weighted average loss given default (EWALGD)*. EWALGD is calculated as:

$$EWALGD = \frac{\sum_i LGD_i \cdot EAD_i}{\sum_i EAD_i}$$

where LGD_i represents the average LGD associated with all exposures to the *i*th obligor. In the case of a re-securitization, an LGD of 100 percent must be assumed for the underlying exposures that are themselves securitization exposures.

(f) *Simplified method for computing N and EWALGD*. (1) If all underlying exposures of a securitization are retail exposures, a bank may apply the SFA using the following simplifications:

(i) h = 0; and

(ii) v = 0.

(2) Under the conditions in paragraphs (f)(3) and (f)(4) of this section, a bank may employ a simplified method for calculating N and EWALGD.

(3) If C_i is no more than 0.03, a bank may set EWALGD = 0.50 if none of the underlying exposures is a securitization exposure or EWALGD = 1 if one or more of the underlying exposures is a securitization exposure, and may set N equal to the following amount:

$$N = \frac{1}{C_1 C_m + \left(\frac{C_m - C_1}{m - 1} \right) \max(1 - m C_1, 0)}$$

where:

(i) C_m is the ratio of the sum of the amounts of the 'm' largest underlying exposures to UE; and

(ii) The level of m is to be selected by the bank.

(4) Alternatively, if only C_1 is available and C_1 is no more than 0.03, the bank may set EWALGD = 0.50 if none of the underlying exposures is a securitization exposure or EWALGD = 1 if one or more of the underlying exposures is a securitization exposure and may set $N = 1/C_1$.

Section 46. Recognition of Credit Risk Mitigants for Securitization Exposures

(a) *General.* An originating bank that has obtained a credit risk mitigant to hedge its securitization exposure to a synthetic or traditional securitization that satisfies the operational criteria in section 41 of this appendix may recognize the credit risk mitigant, but only as provided in this section. An investing bank that has obtained a credit risk mitigant to hedge a securitization exposure may recognize the credit risk mitigant, but only as provided in this section. A bank that has used the RBA in section 43 of this appendix or the IAA in section 44 of this appendix to calculate its risk-based capital requirement for a securitization exposure whose external or inferred rating (or equivalent internal rating under the IAA) reflects the benefits of a credit risk mitigant provided to the associated securitization or that supports some or all of the underlying exposures may not use the credit risk mitigation rules in this section to further reduce its risk-based capital requirement for the exposure to reflect that credit risk mitigant.

(b) *Collateral—(1) Rules of recognition.* A bank may recognize financial collateral in determining the bank's risk-based capital requirement for a securitization exposure (other than a repo-style transaction, an eligible margin loan, or an OTC derivative contract for which the bank has reflected collateral in its determination of exposure amount under section 32 of this appendix) as follows. The bank's risk-based capital requirement for the collateralized securitization exposure is equal to the risk-based capital requirement for the securitization exposure as calculated under the RBA in section 43 of this appendix or under the SFA in section 45 of this appendix multiplied by the ratio of ad-

justed exposure amount (SE*) to original exposure amount (SE), where:

(i) $SE^* = \max\{0, [SE - C \times (1 - H_s - H_{fx})]\}$;

(ii) SE = the amount of the securitization exposure calculated under paragraph (e) of section 42 of this appendix;

(iii) C = the current market value of the collateral;

(iv) H_s = the haircut appropriate to the collateral type; and

(v) H_{fx} = the haircut appropriate for any currency mismatch between the collateral and the exposure.

(2) *Mixed collateral.* Where the collateral is a basket of different asset types or a basket of assets denominated in different currencies, the haircut on the basket will be

$$H = \sum_i a_i H_i,$$

where a_i is the current market value of the asset in the basket divided by the current market value of all assets in the basket and H_i is the haircut applicable to that asset.

(3) *Standard supervisory haircuts.* Unless a bank qualifies for use of and uses own-estimates haircuts in paragraph (b)(4) of this section:

(i) A bank must use the collateral type haircuts (H_s) in Table 3;

(ii) A bank must use a currency mismatch haircut (H_{fx}) of 8 percent if the exposure and the collateral are denominated in different currencies;

(iii) A bank must multiply the supervisory haircuts obtained in paragraphs (b)(3)(i) and (ii) by the square root of 6.5 (which equals 2.549510); and

(iv) A bank must adjust the supervisory haircuts upward on the basis of a holding period longer than 65 business days where and as appropriate to take into account the illiquidity of the collateral.

(4) *Own estimates for haircuts.* With the prior written approval of the Federal Reserve, a bank may calculate haircuts using its own internal estimates of market price volatility and foreign exchange volatility, subject to paragraph (b)(2)(iii) of section 32 of this appendix. The minimum holding period (TM) for securitization exposures is 65 business days.

(c) *Guarantees and credit derivatives—(1) Limitations on recognition.* A bank may only recognize an eligible guarantee or eligible credit derivative provided by an eligible securitization guarantor in determining the

bank's risk-based capital requirement for a securitization exposure.

(2) *ECL for securitization exposures.* When a bank recognizes an eligible guarantee or eligible credit derivative provided by an eligible securitization guarantor in determining the bank's risk-based capital requirement for a securitization exposure, the bank must also:

(i) Calculate ECL for the protected portion of the exposure using the same risk parameters that it uses for calculating the risk-weighted asset amount of the exposure as described in paragraph (c)(3) of this section; and

(ii) Add the exposure's ECL to the bank's total ECL.

(3) *Rules of recognition.* A bank may recognize an eligible guarantee or eligible credit derivative provided by an eligible securitization guarantor in determining the bank's risk-based capital requirement for the securitization exposure as follows:

(i) *Full coverage.* If the protection amount of the eligible guarantee or eligible credit derivative equals or exceeds the amount of the securitization exposure, the bank may set the risk-weighted asset amount for the securitization exposure equal to the risk-weighted asset amount for a direct exposure to the eligible securitization guarantor (as determined in the wholesale risk weight function described in section 31 of this appendix), using the bank's PD for the guarantor, the bank's LGD for the guarantee or credit derivative, and an EAD equal to the amount of the securitization exposure (as determined in paragraph (e) of section 42 of this appendix).

(ii) *Partial coverage.* If the protection amount of the eligible guarantee or eligible credit derivative is less than the amount of the securitization exposure, the bank may set the risk-weighted asset amount for the securitization exposure equal to the sum of:

(A) *Covered portion.* The risk-weighted asset amount for a direct exposure to the eligible securitization guarantor (as determined in the wholesale risk weight function described in section 31 of this appendix), using the bank's PD for the guarantor, the bank's LGD for the guarantee or credit derivative, and an EAD equal to the protection amount of the credit risk mitigant; and

(B) *Uncovered portion.* (1) 1.0 minus the ratio of the protection amount of the eligible guarantee or eligible credit derivative to the amount of the securitization exposure; multiplied by

(2) The risk-weighted asset amount for the securitization exposure without the credit risk mitigant (as determined in sections 42–45 of this appendix).

(4) *Mismatches.* The bank must make applicable adjustments to the protection amount as required in paragraphs (d), (e), and (f) of section 33 of this appendix for any hedged

securitization exposure and any more senior securitization exposure that benefits from the hedge. In the context of a synthetic securitization, when an eligible guarantee or eligible credit derivative covers multiple hedged exposures that have different residual maturities, the bank must use the longest residual maturity of any of the hedged exposures as the residual maturity of all the hedged exposures.

Section 47. Risk-Based Capital Requirement for Early Amortization Provisions

(a) *General.* (1) An originating bank must hold risk-based capital against the sum of the originating bank's interest and the investors' interest in a securitization that:

(i) Includes one or more underlying exposures in which the borrower is permitted to vary the drawn amount within an agreed limit under a line of credit; and

(ii) Contains an early amortization provision.

(2) For securitizations described in paragraph (a)(1) of this section, an originating bank must calculate the risk-based capital requirement for the originating bank's interest under sections 42–45 of this appendix, and the risk-based capital requirement for the investors' interest under paragraph (b) of this section.

(b) *Risk-weighted asset amount for investors' interest.* The originating bank's risk-weighted asset amount for the investors' interest in the securitization is equal to the product of the following 5 quantities:

(1) The investors' interest EAD;

(2) The appropriate conversion factor in paragraph (c) of this section;

(3) K_{IRB} (as defined in paragraph (e)(3) of section 45 of this appendix);

(4) 12.5; and

(5) The proportion of the underlying exposures in which the borrower is permitted to vary the drawn amount within an agreed limit under a line of credit.

(c) *Conversion factor.* (1) (i) Except as provided in paragraph (c)(2) of this section, to calculate the appropriate conversion factor, a bank must use Table 8 for a securitization that contains a controlled early amortization provision and must use Table 9 for a securitization that contains a non-controlled early amortization provision. In circumstances where a securitization contains a mix of retail and nonretail exposures or a mix of committed and uncommitted exposures, a bank may take a pro rata approach to determining the conversion factor for the securitization's early amortization provision. If a pro rata approach is not feasible, a bank must treat the mixed securitization as a securitization of nonretail exposures if a single underlying exposure is a nonretail exposure and must treat the mixed

securitization as a securitization of committed exposures if a single underlying exposure is a committed exposure.

(ii) To find the appropriate conversion factor in the tables, a bank must divide the three-month average annualized excess spread of the securitization by the excess

spread trapping point in the securitization structure. In securitizations that do not require excess spread to be trapped, or that specify trapping points based primarily on performance measures other than the three-month average annualized excess spread, the excess spread trapping point is 4.5 percent.

TABLE 8.—CONTROLLED EARLY AMORTIZATION PROVISIONS

	Uncommitted	Committed
Retail Credit Lines	Three-month average annualized excess spread Conversion Factor (CF). 133.33% of trapping point or more, 0% CF. less than 133.33% to 100% of trapping point, 1% CF. less than 100% to 75% of trapping point, 2% CF. less than 75% to 50% of trapping point, 10% CF. less than 50% to 25% of trapping point, 20% CF. less than 25% of trapping point, 40% CF.	90% CF
Non-retail Credit Lines	90% CF	90% CF

TABLE 9.—NON-CONTROLLED EARLY AMORTIZATION PROVISIONS

	Uncommitted	Committed
Retail Credit Lines	Three-month average annualized excess spread Conversion Factor (CF). 133.33% of trapping point or more, 0% CF. less than 133.33% to 100% of trapping point, 5% CF. less than 100% to 75% of trapping point, 15% CF. less than 75% to 50% of trapping point, 50% CF. less than 50% of trapping point, 100% CF.	100% CF
Non-retail Credit Lines	100% CF	100% CF

(2) For a securitization for which all or substantially all of the underlying exposures are residential mortgage exposures, a bank may calculate the appropriate conversion factor using paragraph (c)(1) of this section or may use a conversion factor of 10 percent. If the bank chooses to use a conversion factor of 10 percent, it must use that conversion factor for all securitizations for which all or substantially all of the underlying exposures are residential mortgage exposures.

PART VI. RISK-WEIGHTED ASSETS FOR EQUITY EXPOSURES

Section 51. Introduction and Exposure Measurement

(a) *General.* To calculate its risk-weighted asset amounts for equity exposures that are not equity exposures to investment funds, a bank may apply either the Simple Risk Weight Approach (SRWA) in section 52 of this appendix or, if it qualifies to do so, the Internal Models Approach (IMA) in section 53 of this appendix. A bank must use the look-through approaches in section 54 of this appendix to calculate its risk-weighted asset amounts for equity exposures to investment funds.

(b) *Adjusted carrying value.* For purposes of this part, the adjusted carrying value of an equity exposure is:

(1) For the on-balance sheet component of an equity exposure, the bank's carrying value of the exposure reduced by any unrealized gains on the exposure that are reflected in such carrying value but excluded from the bank's tier 1 and tier 2 capital; and

(2) For the off-balance sheet component of an equity exposure, the effective notional principal amount of the exposure, the size of which is equivalent to a hypothetical on-balance sheet position in the underlying equity instrument that would evidence the same change in fair value (measured in dollars) for a given small change in the price of the underlying equity instrument, minus the adjusted carrying value of the on-balance sheet component of the exposure as calculated in paragraph (b)(1) of this section. For unfunded equity commitments that are unconditional, the effective notional principal amount is the notional amount of the commitment. For unfunded equity commitments that are conditional, the effective notional principal amount is the bank's best estimate of the amount that would be funded under economic downturn conditions.

Section 52. Simple Risk Weight Approach (SRWA)

(a) *General.* Under the SRWA, a bank's aggregate risk-weighted asset amount for its equity exposures is equal to the sum of the

risk-weighted asset amounts for each of the bank's individual equity exposures (other than equity exposures to an investment fund) as determined in this section and the risk-weighted asset amounts for each of the bank's individual equity exposures to an investment fund as determined in section 54 of this appendix.

(b) *SRWA computation for individual equity exposures.* A bank must determine the risk-weighted asset amount for an individual equity exposure (other than an equity exposure to an investment fund) by multiplying the adjusted carrying value of the equity exposure or the effective portion and ineffective portion of a hedge pair (as defined in paragraph (c) of this section) by the lowest applicable risk weight in this paragraph (b).

(1) *0 percent risk weight equity exposures.* An equity exposure to an entity whose credit exposures are exempt from the 0.03 percent PD floor in paragraph (d)(2) of section 31 of this appendix is assigned a 0 percent risk weight.

(2) *20 percent risk weight equity exposures.* An equity exposure to a Federal Home Loan Bank or Farmer Mac is assigned a 20 percent risk weight.

(3) *100 percent risk weight equity exposures.* The following equity exposures are assigned a 100 percent risk weight:

(i) *Community development equity exposures.* An equity exposure that qualifies as a community development investment under 12 U.S.C. 24 (Eleventh), excluding equity exposures to an unconsolidated small business investment company and equity exposures held through a consolidated small business investment company described in section 302 of the Small Business Investment Act of 1958 (15 U.S.C. 682).

(ii) *Effective portion of hedge pairs.* The effective portion of a hedge pair.

(iii) *Non-significant equity exposures.* Equity exposures, excluding exposures to an investment firm that would meet the definition of a traditional securitization were it not for the Federal Reserve's application of paragraph (8) of that definition and has greater than immaterial leverage, to the extent that the aggregate adjusted carrying value of the exposures does not exceed 10 percent of the bank's tier 1 capital plus tier 2 capital.

(A) To compute the aggregate adjusted carrying value of a bank's equity exposures for purposes of this paragraph (b)(3)(iii), the bank may exclude equity exposures described in paragraphs (b)(1), (b)(2), (b)(3)(i), and (b)(3)(ii) of this section, the equity exposure in a hedge pair with the smaller adjusted carrying value, and a proportion of each equity exposure to an investment fund equal to the proportion of the assets of the investment fund that are not equity exposures or that meet the criterion of paragraph (b)(3)(i) of this section. If a bank does not know the actual holdings of the investment fund, the bank may calculate the proportion

of the assets of the fund that are not equity exposures based on the terms of the prospectus, partnership agreement, or similar contract that defines the fund's permissible investments. If the sum of the investment limits for all exposure classes within the fund exceeds 100 percent, the bank must assume for purposes of this paragraph (b)(3)(iii) that the investment fund invests to the maximum extent possible in equity exposures.

(B) When determining which of a bank's equity exposures qualify for a 100 percent risk weight under this paragraph, a bank first must include equity exposures to unconsolidated small business investment companies or held through consolidated small business investment companies described in section 302 of the Small Business Investment Act of 1958 (15 U.S.C. 682), then must include publicly traded equity exposures (including those held indirectly through investment funds), and then must include non-publicly traded equity exposures (including those held indirectly through investment funds).

(4) *300 percent risk weight equity exposures.* A publicly traded equity exposure (other than an equity exposure described in paragraph (b)(6) of this section and including the ineffective portion of a hedge pair) is assigned a 300 percent risk weight.

(5) *400 percent risk weight equity exposures.* An equity exposure (other than an equity exposure described in paragraph (b)(6) of this section) that is not publicly traded is assigned a 400 percent risk weight.

(6) *600 percent risk weight equity exposures.* An equity exposure to an investment firm that:

(i) Would meet the definition of a traditional securitization were it not for the Federal Reserve's application of paragraph (8) of that definition; and

(ii) Has greater than immaterial leverage is assigned a 600 percent risk weight.

(c) *Hedge transactions—(1) Hedge pair.* A hedge pair is two equity exposures that form an effective hedge so long as each equity exposure is publicly traded or has a return that is primarily based on a publicly traded equity exposure.

(2) *Effective hedge.* Two equity exposures form an effective hedge if the exposures either have the same remaining maturity or each has a remaining maturity of at least three months; the hedge relationship is formally documented in a prospective manner (that is, before the bank acquires at least one of the equity exposures); the documentation specifies the measure of effectiveness (E) the bank will use for the hedge relationship throughout the life of the transaction; and the hedge relationship has an E greater than or equal to 0.8. A bank must measure E at least quarterly and must use one of three alternative measures of E:

(i) Under the dollar-offset method of measuring effectiveness, the bank must determine the ratio of value change (RVC). The RVC is the ratio of the cumulative sum of the periodic changes in value of one equity exposure to the cumulative sum of the periodic changes in the value of the other equity exposure. If RVC is positive, the hedge is not

effective and E equals 0. If RVC is negative and greater than or equal to -1 (that is, between zero and -1), then E equals the absolute value of RVC. If RVC is negative and less than -1 , then E equals 2 plus RVC.

(ii) Under the variability-reduction method of measuring effectiveness:

$$E = 1 - \frac{\sum_{t=1}^T (X_t - X_{t-1})^2}{\sum_{t=1}^T (A_t - A_{t-1})^2}, \text{ where}$$

(A) $X_t = A_t - B_t$;

(B) A_t = the value at time t of one exposure in a hedge pair; and

(C) B_t = the value at time t of the other exposure in a hedge pair.

(iii) Under the regression method of measuring effectiveness, E equals the coefficient of determination of a regression in which the change in value of one exposure in a hedge pair is the dependent variable and the change in value of the other exposure in a hedge pair is the independent variable. However, if the estimated regression coefficient is positive, then the value of E is zero.

(3) The effective portion of a hedge pair is E multiplied by the greater of the adjusted carrying values of the equity exposures forming a hedge pair.

(4) The ineffective portion of a hedge pair is $(1-E)$ multiplied by the greater of the adjusted carrying values of the equity exposures forming a hedge pair.

Section 53. Internal Models Approach (IMA)

(a) *General.* A bank may calculate its risk-weighted asset amount for equity exposures using the IMA by modeling publicly traded and non-publicly traded equity exposures (in accordance with paragraph (c) of this section) or by modeling only publicly traded equity exposures (in accordance with paragraph (d) of this section).

(b) *Qualifying criteria.* To qualify to use the IMA to calculate risk-based capital requirements for equity exposures, a bank must receive prior written approval from the Federal Reserve. To receive such approval, the bank must demonstrate to the Federal Reserve's satisfaction that the bank meets the following criteria:

(1) The bank must have one or more models that:

(i) Assess the potential decline in value of its modeled equity exposures;

(ii) Are commensurate with the size, complexity, and composition of the bank's modeled equity exposures; and

(iii) Adequately capture both general market risk and idiosyncratic risk.

(2) The bank's model must produce an estimate of potential losses for its modeled equity exposures that is no less than the estimate of potential losses produced by a VaR methodology employing a 99.0 percent, one-tailed confidence interval of the distribution of quarterly returns for a benchmark portfolio of equity exposures comparable to the bank's modeled equity exposures using a long-term sample period.

(3) The number of risk factors and exposures in the sample and the data period used for quantification in the bank's model and benchmarking exercise must be sufficient to provide confidence in the accuracy and robustness of the bank's estimates.

(4) The bank's model and benchmarking process must incorporate data that are relevant in representing the risk profile of the bank's modeled equity exposures, and must include data from at least one equity market cycle containing adverse market movements relevant to the risk profile of the bank's modeled equity exposures. In addition, the bank's benchmarking exercise must be based on daily market prices for the benchmark portfolio. If the bank's model uses a scenario methodology, the bank must demonstrate that the model produces a conservative estimate of potential losses on the bank's modeled equity exposures over a relevant long-term market cycle. If the bank employs risk factor models, the bank must demonstrate through empirical analysis the appropriateness of the risk factors used.

(5) The bank must be able to demonstrate, using theoretical arguments and empirical evidence, that any proxies used in the modeling process are comparable to the bank's modeled equity exposures and that the bank

has made appropriate adjustments for differences. The bank must derive any proxies for its modeled equity exposures and benchmark portfolio using historical market data that are relevant to the bank's modeled equity exposures and benchmark portfolio (or, where not, must use appropriately adjusted data), and such proxies must be robust estimates of the risk of the bank's modeled equity exposures.

(c) *Risk-weighted assets calculation for a bank modeling publicly traded and non-publicly traded equity exposures.* If a bank models publicly traded and non-publicly traded equity exposures, the bank's aggregate risk-weighted asset amount for its equity exposures is equal to the sum of:

(1) The risk-weighted asset amount of each equity exposure that qualifies for a 0 percent, 20 percent, or 100 percent risk weight under paragraphs (b)(1) through (b)(3)(i) of section 52 (as determined under section 52 of this appendix) and each equity exposure to an investment fund (as determined under section 54 of this appendix); and

(2) The greater of:

(i) The estimate of potential losses on the bank's equity exposures (other than equity exposures referenced in paragraph (c)(1) of this section) generated by the bank's internal equity exposure model multiplied by 12.5; or

(ii) The sum of:

(A) 200 percent multiplied by the aggregate adjusted carrying value of the bank's publicly traded equity exposures that do not belong to a hedge pair, do not qualify for a 0 percent, 20 percent, or 100 percent risk weight under paragraphs (b)(1) through (b)(3)(i) of section 52 of this appendix, and are not equity exposures to an investment fund;

(B) 200 percent multiplied by the aggregate ineffective portion of all hedge pairs; and

(C) 300 percent multiplied by the aggregate adjusted carrying value of the bank's equity exposures that are not publicly traded, do not qualify for a 0 percent, 20 percent, or 100 percent risk weight under paragraphs (b)(1) through (b)(3)(i) of section 52 of this appendix, and are not equity exposures to an investment fund.

(d) *Risk-weighted assets calculation for a bank using the IMA only for publicly traded equity exposures.* If a bank models only publicly traded equity exposures, the bank's aggregate risk-weighted asset amount for its equity exposures is equal to the sum of:

(1) The risk-weighted asset amount of each equity exposure that qualifies for a 0 percent, 20 percent, or 100 percent risk weight under paragraphs (b)(1) through (b)(3)(i) of section 52 (as determined under section 52 of this appendix), each equity exposure that qualifies for a 400 percent risk weight under paragraph (b)(5) of section 52 or a 600 percent risk weight under paragraph (b)(6) of section 52 (as determined under section 52 of this ap-

pendix), and each equity exposure to an investment fund (as determined under section 54 of this appendix); and

(2) The greater of:

(i) The estimate of potential losses on the bank's equity exposures (other than equity exposures referenced in paragraph (d)(1) of this section) generated by the bank's internal equity exposure model multiplied by 12.5; or

(ii) The sum of:

(A) 200 percent multiplied by the aggregate adjusted carrying value of the bank's publicly traded equity exposures that do not belong to a hedge pair, do not qualify for a 0 percent, 20 percent, or 100 percent risk weight under paragraphs (b)(1) through (b)(3)(i) of section 52 of this appendix, and are not equity exposures to an investment fund; and

(B) 200 percent multiplied by the aggregate ineffective portion of all hedge pairs.

Section 54. Equity Exposures to Investment Funds

(a) *Available approaches.* (1) Unless the exposure meets the requirements for a community development equity exposure in paragraph (b)(3)(i) of section 52 of this appendix, a bank must determine the risk-weighted asset amount of an equity exposure to an investment fund under the Full Look-Through Approach in paragraph (b) of this section, the Simple Modified Look-Through Approach in paragraph (c) of this section, the Alternative Modified Look-Through Approach in paragraph (d) of this section, or, if the investment fund qualifies for the Money Market Fund Approach, the Money Market Fund Approach in paragraph (e) of this section.

(2) The risk-weighted asset amount of an equity exposure to an investment fund that meets the requirements for a community development equity exposure in paragraph (b)(3)(i) of section 52 of this appendix is its adjusted carrying value.

(3) If an equity exposure to an investment fund is part of a hedge pair and the bank does not use the Full Look-Through Approach, the bank may use the ineffective portion of the hedge pair as determined under paragraph (c) of section 52 of this appendix as the adjusted carrying value for the equity exposure to the investment fund. The risk-weighted asset amount of the effective portion of the hedge pair is equal to its adjusted carrying value.

(b) *Full Look-Through Approach.* A bank that is able to calculate a risk-weighted asset amount for its proportional ownership share of each exposure held by the investment fund (as calculated under this appendix as if the proportional ownership share of each exposure were held directly by the bank) may either:

Federal Reserve System

Pt. 208, App. F

(1) Set the risk-weighted asset amount of the bank's exposure to the fund equal to the product of:

- (i) The aggregate risk-weighted asset amounts of the exposures held by the fund as if they were held directly by the bank; and
- (ii) The bank's proportional ownership share of the fund; or

(2) Include the bank's proportional ownership share of each exposure held by the fund in the bank's IMA.

(c) *Simple Modified Look-Through Approach.* Under this approach, the risk-weighted asset

amount for a bank's equity exposure to an investment fund equals the adjusted carrying value of the equity exposure multiplied by the highest risk weight in Table 10 that applies to any exposure the fund is permitted to hold under its prospectus, partnership agreement, or similar contract that defines the fund's permissible investments (excluding derivative contracts that are used for hedging rather than speculative purposes and that do not constitute a material portion of the fund's exposures).

TABLE 10.—MODIFIED LOOK-THROUGH APPROACHES FOR EQUITY EXPOSURES TO INVESTMENT FUNDS

Risk weight	Exposure class
0 percent	Sovereign exposures with a long-term applicable external rating in the highest investment-grade rating category and sovereign exposures of the United States.
20 percent	Non-sovereign exposures with a long-term applicable external rating in the highest or second-highest investment-grade rating category; exposures with a short-term applicable external rating in the highest investment-grade rating category; and exposures to, or guaranteed by, depository institutions, foreign banks (as defined in 12 CFR 211.2), or securities firms subject to consolidated supervision and regulation comparable to that imposed on U.S. securities broker-dealers that are repo-style transactions or bankers' acceptances.
50 percent	Exposures with a long-term applicable external rating in the third-highest investment-grade rating category or a short-term applicable external rating in the second-highest investment-grade rating category.
100 percent	Exposures with a long-term or short-term applicable external rating in the lowest investment-grade rating category.
200 percent	Exposures with a long-term applicable external rating one rating category below investment grade.
300 percent	Publicly traded equity exposures.
400 percent	Non-publicly traded equity exposures; exposures with a long-term applicable external rating two rating categories or more below investment grade; and exposures without an external rating (excluding publicly traded equity exposures).
1,250 percent	OTC derivative contracts and exposures that must be deducted from regulatory capital or receive a risk weight greater than 400 percent under this appendix.

(d) *Alternative Modified Look-Through Approach.* Under this approach, a bank may assign the adjusted carrying value of an equity exposure to an investment fund on a pro rata basis to different risk weight categories in Table 10 based on the investment limits in the fund's prospectus, partnership agreement, or similar contract that defines the fund's permissible investments. The risk-weighted asset amount for the bank's equity exposure to the investment fund equals the sum of each portion of the adjusted carrying value assigned to an exposure class multiplied by the applicable risk weight. If the sum of the investment limits for exposure classes within the fund exceeds 100 percent, the bank must assume that the fund invests to the maximum extent permitted under its investment limits in the exposure class with the highest risk weight under Table 10, and continues to make investments in order of the exposure class with the next highest risk weight under Table 10 until the maximum total investment level is reached. If more than one exposure class applies to an exposure, the bank must use the highest applica-

ble risk weight. A bank may exclude derivative contracts held by the fund that are used for hedging rather than for speculative purposes and do not constitute a material portion of the fund's exposures.

(e) *Money Market Fund Approach.* The risk-weighted asset amount for a bank's equity exposure to an investment fund that is a money market fund subject to 17 CFR 270.2a-7 and that has an applicable external rating in the highest investment-grade rating category equals the adjusted carrying value of the equity exposure multiplied by 7 percent.

Section 55. Equity Derivative Contracts

Under the IMA, in addition to holding risk-based capital against an equity derivative contract under this part, a bank must hold risk-based capital against the counterparty credit risk in the equity derivative contract by also treating the equity derivative contract as a wholesale exposure and computing a supplemental risk-weighted asset amount for the contract under part IV. Under the SRWA, a bank may choose not to hold risk-based capital against the counterparty credit

risk of equity derivative contracts, as long as it does so for all such contracts. Where the equity derivative contracts are subject to a qualified master netting agreement, a bank using the SRWA must either include all or exclude all of the contracts from any measure used to determine counterparty credit risk exposure.

PART VII. RISK-WEIGHTED ASSETS FOR OPERATIONAL RISK

Section 61. Qualification Requirements for Incorporation of Operational Risk Mitigants

(a) *Qualification to use operational risk mitigants.* A bank may adjust its estimate of operational risk exposure to reflect qualifying operational risk mitigants if:

(1) The bank's operational risk quantification system is able to generate an estimate of the bank's operational risk exposure (which does not incorporate qualifying operational risk mitigants) and an estimate of the bank's operational risk exposure adjusted to incorporate qualifying operational risk mitigants; and

(2) The bank's methodology for incorporating the effects of insurance, if the bank uses insurance as an operational risk mitigant, captures through appropriate discounts to the amount of risk mitigation:

(i) The residual term of the policy, where less than one year;

(ii) The cancellation terms of the policy, where less than one year;

(iii) The policy's timeliness of payment;

(iv) The uncertainty of payment by the provider of the policy; and

(v) Mismatches in coverage between the policy and the hedged operational loss event.

(b) *Qualifying operational risk mitigants.* Qualifying operational risk mitigants are:

(1) Insurance that:

(i) Is provided by an unaffiliated company that has a claims payment ability that is rated in one of the three highest rating categories by a NRSRO;

(ii) Has an initial term of at least one year and a residual term of more than 90 days;

(iii) Has a minimum notice period for cancellation by the provider of 90 days;

(iv) Has no exclusions or limitations based upon regulatory action or for the receiver or liquidator of a failed depository institution; and

(v) Is explicitly mapped to a potential operational loss event; and

(2) Operational risk mitigants other than insurance for which the Federal Reserve has given prior written approval. In evaluating an operational risk mitigant other than insurance, the Federal Reserve will consider whether the operational risk mitigant covers potential operational losses in a manner equivalent to holding regulatory capital.

Section 62. Mechanics of Risk-Weighted Asset Calculation

(a) If a bank does not qualify to use or does not have qualifying operational risk mitigants, the bank's dollar risk-based capital requirement for operational risk is its operational risk exposure minus eligible operational risk offsets (if any).

(b) If a bank qualifies to use operational risk mitigants and has qualifying operational risk mitigants, the bank's dollar risk-based capital requirement for operational risk is the greater of:

(1) The bank's operational risk exposure adjusted for qualifying operational risk mitigants minus eligible operational risk offsets (if any); or

(2) 0.8 multiplied by the difference between:

(i) The bank's operational risk exposure; and

(ii) Eligible operational risk offsets (if any).

(c) The bank's risk-weighted asset amount for operational risk equals the bank's dollar risk-based capital requirement for operational risk determined under paragraph (a) or (b) of this section multiplied by 12.5.

PART VIII. DISCLOSURE

Section 71. Disclosure Requirements

(a) Each bank must publicly disclose each quarter its total and tier 1 risk-based capital ratios and their components (that is, tier 1 capital, tier 2 capital, total qualifying capital, and total risk-weighted assets).⁴

(b) A bank must comply with paragraph (b) of section 71 of appendix G to the Federal Reserve Board's Regulation (12 CFR part 225, appendix G) unless it is a consolidated subsidiary of a bank holding company or depository institution that is subject to these requirements.

[Reg. H, 72 FR 69396, 69430, Dec. 7, 2007]

EFFECTIVE DATE NOTE: By Reg. H, 72 FR 69396 and 69430, Dec. 7, 2007, part 208 was amended by adding appendix F, effective Apr. 1, 2008.

PART 209—ISSUE AND CANCELLATION OF FEDERAL RESERVE BANK CAPITAL STOCK (REGULATION I)

Sec.

209.1 Authority, purpose, and scope.

209.2 Banks desiring to become member banks.

209.3 Cancellation of Reserve Bank stock.

⁴Other public disclosure requirements continue to apply—for example, Federal securities law and regulatory reporting requirements.