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Tuesday  
September 5, 1995

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**Part IV**

**Department of the Treasury**  
Office of the Comptroller of the Currency  
12 CFR Part 3

**Federal Reserve System**  
12 CFR Parts 208 and 225

**Federal Deposit Insurance  
Corporation**  
12 CFR Part 325

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**Risk-Based Capital Standards: Derivative  
Transactions; Final Rule**

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

[Docket No. 95-20]

RIN 1557-AB14

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

[Regulations H and Y; Docket No. R-0845]

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

RIN 3064-AB43

**Risk-Based Capital Standards: Derivative Transactions**

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

**ACTION:** Final rule.

**SUMMARY:** The OCC, the Board, and the FDIC (the banking agencies) are amending their respective risk-based capital standards for banks and bank holding companies (banking organizations, institutions). This final rule implements a recent revision to the Basle Accord revising and expanding the set of conversion factors used to calculate the potential future exposure of derivative contracts and recognizing the effects of netting arrangements in the calculation of potential future exposure for derivative contracts subject to qualifying bilateral netting arrangements. The effect of this final rule is threefold. First, long-dated interest rate and exchange rate contracts are subject to higher conversion factors and new conversion factors are set forth that specifically apply to derivative contracts related to equities, precious metals, and other commodities. Second, institutions are permitted to recognize a reduction in potential future credit exposure for transactions subject to qualifying bilateral netting arrangements. Third, derivative contracts related to equities, precious metals and other commodities may be recognized in bilateral netting arrangements for risk-based capital purposes.

**EFFECTIVE DATE:** October 1, 1995.

**FOR FURTHER INFORMATION CONTACT:** OCC: For issues relating to netting and

the calculation of risk-based capital ratios, Roger Tufts, Senior Economic Advisor (202/874-5070), Office of the Chief National Bank Examiner. For legal issues, Eugene H. Cantor, Senior Attorney, Securities and Corporate Practices (202/874-5210), or Ronald Shimabukuro, Senior Attorney, Legislative and Regulatory Activities Division (202/874-5090), Office of the Comptroller of the Currency, 250 E Street, S.W., Washington, D.C. 20219.

**Board:** Roger Cole, Deputy Associate Director (202/452-2618), Norah Barger, Manager (202/452-2402), Robert Motyka, Supervisory Financial Analyst (202/452-3621), Barbara Bouchard, Supervisory Financial Analyst (202/452-3072), Division of Banking Supervision and Regulation; or Stephanie Martin, Senior Attorney (202/452-3198), Legal Division. For the Hearing Impaired only, Telecommunications Device for the Deaf, Dorothea Thompson (202/452-3544), 20th and C Streets, N.W., Washington, D.C. 20551.

**FDIC:** William A. Stark, Assistant Director, (202/898-6972), Curtis Wong, Capital Markets Specialist, (202/898-7327), Division of Supervision, or Jeffrey M. Kopchik, Counsel, (202/898-3872), Legal Division, FDIC, 550 17th St., N.W., Washington, D.C. 20429.

**SUPPLEMENTARY INFORMATION:****I. Background**

The Basle Accord<sup>1</sup> established a risk-based capital framework for assessing capital adequacy that was implemented in the United States by the banking agencies in 1989. Under this framework, off-balance-sheet transactions are incorporated into the risk-based structure by converting each item into a credit equivalent amount that is then assigned to the appropriate credit risk category according to the identity of the obligor or counterparty, or if relevant, the guarantor or the nature of collateral.

The credit equivalent amount of an off-balance-sheet interest rate or exchange rate contract (rate contract) is determined by adding together the current replacement cost (current exposure) of the contract and an estimate of the possible increase in future replacement cost (potential future

exposure, also referred to as the add-on) in view of the volatility of the current exposure of the contract. The maximum risk category for rate contracts is 50 percent.<sup>2</sup>

**Current Exposure**

For risk-based capital purposes, a rate contract with a positive mark-to-market value has a current exposure equal to that market value. If the mark-to-market value is zero or negative, then the current exposure is zero. The sum of current exposures for a defined set of contracts is sometimes referred to as the gross current exposure for that set of contracts. When they were initially issued, the Basle Accord and the banking agencies' risk-based capital standards provided, generally, that current exposure would be determined individually for each rate contract entered into by a banking organization.

In July 1994 the Basle Accord was revised to permit institutions to net, that is, offset, positive and negative mark-to-market values of rate contracts entered into with a single counterparty subject to a qualifying, legally enforceable, bilateral netting arrangement. Effective at year-end 1994, the banking agencies each amended, in a uniform manner, their risk-based capital standards to implement the revision to the Accord.<sup>3</sup> Accordingly, U.S. banking organizations with qualifying, legally enforceable, bilateral netting arrangements may replace the gross current exposure of a set of contracts included in such an arrangement with a single net current exposure for purposes of determining the credit equivalent amount for the included contracts.

**Potential Future Exposure**

The potential future exposure portion of the credit equivalent amount for rate contracts is an estimate of the additional credit exposure that may arise as a result of fluctuations in prices or rates. The add-on for potential future exposure is estimated by multiplying the notional principal amount<sup>4</sup> of the contract by a credit conversion factor that is determined by the remaining maturity of the contract and the type of

<sup>2</sup> Exchange rate contracts with an original maturity of 14 calendar days or less and instruments traded on exchanges that require daily receipt and payment of cash variation margin are excluded from the risk-based capital ratio calculations.

<sup>3</sup> The Board issued its amendment on December 7, 1994 (59 FR 62987), the OCC and FDIC issued their amendments on December 28, 1994 (59 FR 66645 for the OCC final rule and 59 FR 66656 for the FDIC final rule).

<sup>4</sup> The notional principal amount is a reference amount of money used to calculate payment streams between counterparties.

<sup>1</sup> The Basle Accord is a risk-based framework that was proposed by the Basle Committee on Banking Supervision (Basle Supervisors Committee) and endorsed by the central bank governors of the Group of Ten (G-10) countries in July 1988. The Basle Supervisors Committee is comprised of representatives of the central banks and supervisory authorities from the G-10 countries (Belgium, Canada, France, Germany, Italy, Japan, Netherlands, Sweden, Switzerland, the United Kingdom, and the United States) and Luxembourg.

contract. The original conversion factors in the Basle Accord and the banking agencies' risk-based capital standards are set forth in the following matrix:

Remaining maturity	Interest rate (in percent)	Exchange rate (in percent)
One year or less .....	0	1.0
Over one year .....	0.5	5.0

An individual add-on for potential future exposure is calculated for all rate contracts regardless of whether the market value is zero, positive, or negative, or whether the current exposure is calculated on a gross or net basis. The banking agencies' recent amendments to expand the recognition of bilateral netting arrangements did not revise the calculation of the add-on for potential future exposure. Accordingly, an add-on is calculated separately for each individual contract subject to a qualifying bilateral netting arrangement. These individual potential future exposures are added together to arrive at a gross add-on amount. The gross add-on amount is added to the net current exposure to determine one credit

equivalent amount for the contracts subject to the qualifying bilateral netting arrangement.

Commenters to the Basle proposal to expand the recognition of bilateral netting arrangements urged regulators to also recognize reductions in potential future credit exposure arising from such arrangements. They also commented that commodity and equity derivative transactions should be eligible for netting for risk-based capital purposes. Accordingly, in July 1994 the Basle Supervisors Committee proposed revisions to the Basle Accord regarding the risk-based capital treatment of derivative transactions.<sup>5</sup> Under the proposed revision, the matrix of conversion factors used to calculate potential future exposure would be expanded to take into account innovations in the derivatives markets. Specifically, the Basle Committee proposed that higher conversion factors be added to address long-dated transactions (that is, contracts with remaining maturities over five years) and new conversion factors be added to explicitly cover certain types of derivatives transactions not directly

mentioned by the Accord when it was endorsed in 1988. These include commodity-, precious metal-, and equity-linked derivative transactions.<sup>6</sup> The proposed revision also would have formally extended the recognition of qualifying bilateral netting arrangements to commodity, precious metal, and equity derivative contracts so that these types of transactions could be netted when determining current exposure for the netting contract. In addition, the proposed revision set forth a formula for institutions to employ in recognizing reductions in the potential future exposure of derivatives contracts that can result from entering into qualifying bilateral netting arrangements.

**II. The Agencies' Proposals**

After the Basle Supervisors Committee issued its proposed revisions to the Basle Accord, the banking agencies each issued for public comment proposals to amend their respective risk-based capital standards based on the international proposal.<sup>7</sup> The agencies' proposed conversion factor matrix is set forth below:

CONVERSION FACTOR MATRIX <sup>1</sup>  
[Amounts in percent]

Residual maturity	Interest rate	Foreign exchange and gold	Equity <sup>2</sup>	Precious metals, except gold	Other commodities
Less than one year .....	0.0	1.0	6.0	7.0	12.0
One to five years .....	0.5	5.0	8.0	7.0	12.0
Five years or more .....	1.5	7.5	10.0	8.0	15.0

<sup>1</sup> For contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract.  
<sup>2</sup> For contracts that automatically reset to zero value following a payment, the remaining maturity is set equal to the time remaining until the next payment.

The proposed matrix was designed to accommodate a variety of contracts and was intended to provide a reasonable balance between precision, on the one hand, and complexity and burden, on the other.

The agencies also proposed the same methodology as the Basle Supervisors Committee to calculate a reduction in the add-on amount for contracts subject to qualifying bilateral netting arrangements. Under the agencies' proposals, institutions would apply the

following formula<sup>8</sup> to adjust the amount of the add-on for potential future exposure:

$$A_{net} = 0.5(A_{gross} + (NGR \times A_{gross}))$$

Where  $A_{net}$  is the adjusted add-on for all contracts subject to the netting arrangement,  $A_{gross}$  is the amount of the add-on as calculated under the current agency standards, and NGR is the ratio of the net current exposure of the set of contracts included in the netting arrangement to the gross current exposure of those contracts. The proposals would have given partial credit to the effect of the NGR by

applying a weighted averaging factor of 0.5.

Under the proposals, institutions would calculate a separate NGR for each counterparty with which it has a qualifying bilateral netting contract. The proposals requested general comments as well as specific comment as to whether the NGR should be calculated on a counterparty-by-counterparty basis or on an aggregate basis for all contracts subject to qualifying bilateral netting arrangements.

<sup>5</sup> The proposed revisions are contained in a document entitled "The capital adequacy treatment of the credit risk associated with certain off-balance-sheet items" that is available upon request from the Board's or OCC's Freedom of Information Offices or the FDIC's Office of the Executive Secretary.

<sup>6</sup> In general terms, these are off-balance-sheet derivative contracts that have a return, or a portion of their return, linked to the price or an index of prices for a particular commodity, precious metal, or equity. These types of transactions were not specifically addressed in the 1988 Accord (or in the banking agencies' original risk-based capital standards) because they were not prevalent in the derivatives markets at that time.

<sup>7</sup> The Board issued its proposal on August 24, 1994 (59 FR 43508), the OCC issued its proposal on September 1, 1994 (59 FR 45243), and the FDIC issued its proposal on October 19, 1994 (59 FR 52714).

<sup>8</sup> This formula may also be expressed as:  $A_{net} = (1-P)A_{gross} + P(NGR \times A_{gross})$  [P or policy factor = 0.5].

### III. Comments Received

The banking agencies together received nineteen public comments on their proposed amendments. Fifteen of the commenters were banks and bank holding companies and four were industry trade associations and other organizations. Commenters generally supported the proposed amendments, in particular the recognition of the effects of bilateral netting arrangements in the calculation of potential future exposure, and several urged adoption of the amendments as soon as possible. Commenters offered suggestions and opinions on several aspects of the proposals including the conversion factors, the formula for recognizing potential future exposure, ways of calculating the NGR, and recognizing additional risk-reducing techniques.

#### *Expanded Matrix*

Over one half of the commenters addressed the proposed expanded conversion factor matrix. Of these commenters, most indicated the proposed factors were generally reasonable and acceptable. Several commenters discussed the underlying assumptions used in the simulation models for arriving at the proposed factors for commodity transactions and expressed concern that the conversion factors for certain commodity derivative transactions were too high. One commenter suggested the conversion factor for commodity contracts across all time bands should be twelve percent. Another commenter expressed the view that the proposed conversion factor for interest rate contracts with remaining maturities greater than five years (1.5 percent) was an excessive increment over the current 0.5 percent conversion factor for interest rate contracts with remaining maturities greater than one year. This commenter suggested an additional time band for interest rate contracts with five to eight years remaining maturity and a corresponding conversion factor of 1.0 percent. Another commenter suggested there should be no capital charge for potential future exposure for commodity contracts based on two floating indices.

One commenter supported continuing the existing time band of "one year or less" as opposed to the proposed time band of "less than one year." Two commenters expressed the view that the proposed time band for contracts with remaining maturities greater than five years was unnecessary. One commenter suggested adding a time band and appropriate conversion factors for contracts with remaining maturities between one and two years.

Several commenters discussed the matrix footnotes. One suggested extending the footnote applicable to equity contracts with automatic reset features following a payment to any derivative contract with effective early termination or periodic reset features. With regard to the footnote pertaining to contracts with multiple exchanges of principal, one commenter requested further clarification on the types of contracts included, while another expressed the view that multiplying the conversion factor by the number of remaining payments in a contract was too conservative. A few commenters recommended clarification as to the appropriate capital treatment when transactions are leveraged or enhanced by a stated multiple.

#### *Netting and Potential Future Exposure*

A number of commenters discussed the proposed formula for recognizing the effects of bilateral netting arrangements in the calculation of potential future exposure. Most of these commenters supported the use of the NGR as a reasonable proxy to estimate the risk-reducing benefits of netting arrangements. Several commenters supported giving full weight to the NGR or, alternatively, weighting the NGR with a higher averaging factor than the proposed 0.5 factor. Another commenter offered a revised formula that would weight the netting portion of the formula by two and divide the entire formula by three. This commenter stated the revised formula would effectively reduce the credit equivalent amount and place greater emphasis on the portion of the formula affected by a netting arrangement. One commenter suggested that net credit risk should be the basis for the add-on amount.

Several commenters addressed the proposal's specific request for comment on whether the NGR should be calculated on a counterparty-by-counterparty basis or on an aggregate basis across all portfolios eligible for capital netting treatment. A few commenters supported a counterparty-by-counterparty NGR as providing a more accurate indication of credit risks. Other commenters preferred an aggregate NGR, characterizing an aggregate NGR as less burdensome to calculate. Two commenters suggested applying a single NGR to all counterparties within each risk weight classification.

#### *Other Comments*

Several commenters encouraged recognizing other risk reducing techniques such as margin and collateral agreements, frequent

settlement of mark-to-market values, and periodic resetting of terms and early termination agreements. One commenter suggested there should be no capital charge for potential future exposure when current exposure is less than a certain level (e.g., negative \$1 million). One commenter suggested using negative net mark-to-market values to offset potential future exposure. A few commenters supported the use of internal systems to calculate capital requirements and recommended continued monitoring of developments in the banking industry.

### IV. Final Rule

After consideration of the comments received and further deliberation on the issues involved, the banking agencies have determined to adopt a final rule that is substantially the same as proposed. The final rule amends the matrix of conversion factors used to calculate potential future exposure and permits institutions to recognize the effects of qualifying bilateral netting arrangements in the calculation of potential future exposure. The final rule is consistent with a revision to the Basle Accord announced by the Basle Supervisors Committee in April 1995.<sup>9</sup>

#### *Expanded Matrix*

The banking agencies believe that the proposed conversion factors generally provide a reasonable measure of potential future exposure for long-dated interest rate and exchange rate contracts and for other derivative instruments not addressed in the original Accord. In addition, the banking agencies believe that the proposed matrix adequately accommodates a variety of contracts and appropriately provides a reasonable balance between precision, and complexity and burden. The agencies, however, have taken into consideration issues raised by commenters regarding the simulation methods used to arrive at the conversion factors for other commodities. After additional simulation analysis, the agencies have concluded that the conversion factor for other commodity transactions with maturities of one year or less should be lowered from 12 percent to 10 percent. Any off-balance-sheet derivative contract not explicitly covered by the expanded matrix is subject to the add-on conversion factors for other

<sup>9</sup>The revision to the Basle Accord is in an annex with the heading "Forwards, swaps, purchased options and similar derivative contracts" that was issued along with the Basle Supervisors Committee's consultative proposal on Market Risk on April 12, 1995. This document is available upon request from the Board's and OCC's Freedom of Information Offices and the FDIC's Office of the Executive Secretary.

commodities. Furthermore, in response to commenters' concerns, the banking agencies have revised the proposed time band of "less than one year" to "one year or less" to maintain consistency with the existing time bands for remaining maturity.

The proposed matrix included a footnote applicable to equity contracts that automatically reset market value to zero following a payment. Under the proposal, the remaining maturity of such contracts would be the time until the next payment. Several commenters asserted this treatment should extend to a wider range of contracts. The agencies have determined that for contracts structured to settle outstanding exposure to zero following specified payment dates and where the terms of the contract are reset so that the market value of the contract is zero on these dates, the remaining maturity may be set equal to the time until the next reset date. However, the agencies believe that a long-dated interest rate swap, with, for example, a six-month zero reset provision, represents a greater risk than an interest rate swap that terminates after six months. The final rule provides that the minimum add-on conversion factor for interest rate contracts with remaining maturities of greater than one year is 0.5 percent.

Under the final rule, which is identical to the proposal in this regard, gold derivative contracts are accorded the same conversion factors as exchange rate contracts. However, while exchange rate contracts with original maturities of fourteen calendar days or less may be excluded from the risk-based ratio calculation,<sup>10</sup> gold contracts with such original maturities are to be included.

Finally, the agencies note that the conversion factors are to be regarded as provisional and may be subject to amendment as a result of changes in the volatility of rates and prices.

#### *Netting and Potential Future Exposure*

The final rule adopts, in substantially the same form, the proposed methodology for reducing potential future exposure for contracts subject to qualifying bilateral netting arrangements. The agencies have considered the argument presented by several commenters that the proposed formula did not give sufficient

recognition to reductions in credit risk resulting from participating in qualifying netting arrangements. These commenters suggested giving full weight to the NGR or, alternatively, that it be weighted at 90 percent. The agencies believe that only partial weight should be given to the NGR as it is neither a precise, nor a stable indicator of future changes in net exposure relative to changes in gross exposure. The agencies agree, to a limited extent, with commenters that a 0.5 averaging factor (referred to as the policy or P factor) may not sufficiently recognize reductions in potential future exposure resulting from qualifying bilateral netting arrangements and have determined that the P factor should be raised to 0.6. This weight represents an appropriate compromise between recognizing effects of bilateral netting arrangements in calculating the add-on and providing a cushion against additional exposure that may arise as a result of fluctuations in prices or rates. The formula adopted by the agencies is expressed as:

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

The agencies have also considered comments discussing whether the NGR should be calculated on a counterparty-by-counterparty basis (that is, an individual NGR for each bilateral netting contract) or on an aggregate basis for all contracts subject to legally enforceable netting arrangements. The agencies have determined that an institution may elect to calculate separate NGRs for each of its bilateral netting arrangements or an aggregate NGR so long as the method chosen is used consistently and is subject to examiner review.

Regardless of the method employed by an institution to calculate its NGR(s), the NGR should be applied separately and individually to each of the institution's bilateral netting arrangements. If an institution calculates an NGR for each bilateral netting arrangement, then it should use a different NGR when determining the potential future exposure for each bilateral netting arrangement. If an institution aggregates its net and gross replacement costs across all bilateral netting contracts to determine a single NGR, then it should use the same NGR when determining the potential future exposure for each bilateral netting arrangement.

Institutions with equity, precious metal, and other commodity contracts included in bilateral netting contracts should now include those types of transactions when determining the net current exposure for the bilateral netting

contract and when determining potential future exposure in accordance with this final rule.

The final rule permits, subject to certain conditions, institutions to take into account qualifying collateral when assigning the credit equivalent amount of a netting arrangement to the appropriate risk category in accordance with the procedures and requirements currently set forth in each agency's risk-based capital standards.

Finally, the agencies note that the methodology for recognizing the effects of qualifying bilateral netting arrangements is subject to review and revision as determined to be appropriate.

#### **V. Regulatory Flexibility Act Analysis**

Pursuant to section 605(b) of the Regulatory Flexibility Act, the agencies do not believe that this final rule will have a significant impact on a substantial number of small business entities in accord with the spirit and purposes of the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). In this regard, while some institutions with limited derivative portfolios may experience an increase in capital charges, for most of these institutions the final rule will have no effect. For institutions with more developed derivative portfolios, the overall effect of the rule will likely be to reduce regulatory burden and decrease the capital charge for certain derivative transactions. In addition, because the risk-based capital standards generally do not apply to bank holding companies with consolidated assets of less than \$150 million, this final rule will not affect such companies.

#### **VI. Paperwork Reduction Act and Regulatory Burden**

The agencies have determined that this final rule will not increase the regulatory paperwork burden of banking organizations pursuant to the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*).

Section 302 of the Riegle Community Development and Regulatory Improvement Act of 1994 (Pub. L. 103-325, 108 Stat. 2160) provides that the federal banking agencies must consider the administrative burdens and benefits of any new regulation that imposes additional requirements on insured depository institutions. As noted above, the rule may result in higher capital charges for some institutions and lower charges for others, but any additional paperwork or recordkeeping burden should be minimal. The rule provides a more accurate measure of risks related to derivative contracts and the capital required to cover those risks.

<sup>10</sup> Exchange rate contracts with original maturities of 14 calendar days or less are normally excluded from the risk-based capital ratio. When such contracts are included in a bilateral netting arrangement, however, the institution may elect consistently either to include or exclude all market-to-market values of those contracts when determining net current exposure. These contracts should continue to be excluded when determining potential future exposure.

Section 302 also requires such a rule to become effective on the first day of the calendar quarter following publication of the rule, unless the agency, for good cause, determines an earlier effective date is appropriate. Accordingly, the agencies have determined that an effective date of October 1, 1995 is appropriate.

**VII. OCC Executive Order 12866**

It has been determined that this final rule is not a significant regulatory action as defined in Executive Order 12866.

**VIII. OCC Unfunded Mandates Act of 1995**

Section 202 of the Unfunded Mandates Act of 1995 (Unfunded Mandates Act) (signed into law on March 22, 1995) requires that certain agencies prepare a budgetary impact statement before promulgating a rule that includes a federal mandate that may result in the expenditure by state, local, and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any one year. If a budgetary impact statement is required, section 205 of the Unfunded Mandates Act also requires the agency to identify and consider a reasonable number of regulatory alternatives before promulgating a rule. The OCC has determined that this joint agency final rule will not result in expenditures by state, local and tribal governments, or by the private sector, of more than \$100 million in any one year. Accordingly, the OCC has not prepared a budgetary impact statement or specifically addressed the regulatory alternatives considered.

As discussed in the preamble, this joint agency final rule amends the risk-based capital guidelines to (1) revise and expand the credit conversion factors used to calculate the potential future credit exposure for derivative contracts and long-dated interest rate and foreign exchange rate contracts and (2) permit banks to net multiple derivative contracts subject to a qualifying bilateral netting contract when calculating the potential future credit exposure. While the impact of this final rule on any particular national bank will depend on the composition of its derivatives portfolio, the OCC believes that this final rule generally will have little or no impact on most banks since most banks have limited derivative portfolios. For those banks with more developed derivatives portfolios, the OCC believes that the effect of this final rule will likely be a decrease in the capital requirements for certain derivative contracts.

**List of Subjects**

*12 CFR Part 3*

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

*12 CFR Part 208*

Accounting, Agriculture, Banks, banking, Confidential business information, Crime, Currency, Federal Reserve System, Flood insurance, Mortgages, Reporting and recordkeeping requirements, Securities.

*12 CFR Part 225*

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

*12 CFR Part 325*

Bank deposit insurance, Banks, banking, Capital adequacy, Reporting and recordkeeping requirements, Savings associations, State nonmember banks.

**Authority and Issuance**

**OFFICE OF THE COMPTROLLER OF THE CURRENCY**

**12 CFR CHAPTER I**

For the reasons set out in the joint preamble, appendix A to part 3 of title 12, chapter 1 of the Code of Federal Regulations is amended as set forth below.

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

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

**Authority:** 12 U.S.C. 93a, 161, 1818, 1828(n), 1828 note, 1831n note, 1835, 3907, and 3909.

2. In appendix A, to part 3, section 1 is revised by redesignating paragraphs (c)(10) through (c)(30) as paragraphs (c)(11) through (c)(31) and adding new paragraph (c)(10) to read as follows:

**Appendix A to Part 3—Risk-Based Capital Guidelines**

*Section 1. Purpose, Applicability of Guidelines, and Definitions.*

\* \* \* \* \*

(c) \* \* \*

(10) *Derivative contract* means generally a financial contract whose value is derived from the values of one or more underlying assets, reference rates or indexes of asset values. Derivative contracts include interest rate, foreign exchange rate, equity, precious metals and commodity contracts, or any other instrument that poses similar credit risks.

\* \* \* \* \*

3. In appendix A, to part 3, section 3 is amended:

- a. By revising paragraph (a)(1)(viii);
- b. In paragraph (a)(3)(ii) by removing the words "interest rate and exchange rate contracts," and adding in their place the words "derivative contracts,"; and
- c. In paragraph (b) by revising the introductory text and paragraph (b)(5).

The revisions read as follows:

\* \* \* \* \*

*Section 3. Risk Categories/Weights for On-Balance Sheet Assets and Off-Balance Sheet Items.*

\* \* \* \* \*

- (a) \* \* \*
- (1) \* \* \*

(viii) That portion of assets and off-balance sheet transactions<sup>9a</sup> collateralized by cash or securities issued or directly and unconditionally guaranteed by the United States Government or its agencies, or the central government of an OECD country, provided that:<sup>9b</sup>

\* \* \* \* \*

(b) *Off-Balance Sheet Activities.* The risk weight assigned to an off-balance sheet item is determined by a two-step process. First, the face amount of the off-balance sheet item is multiplied by the appropriate credit conversion factor specified in this section. This calculation translates the face amount of an off-balance sheet item into an on-balance sheet credit equivalent amount. Second, the resulting credit equivalent amount is then assigned to the proper risk category using the criteria regarding obligors, guarantors, and collateral listed in section 3(a) of this appendix A. Collateral and guarantees are applied to the face amount of an off-balance sheet item; however, with respect to derivative contracts under section 3(b)(5) of this appendix A, collateral and guarantees are applied to the credit equivalent amounts of such derivative contracts. The following are the credit conversion factors and the off-balance sheet items to which they apply.

\* \* \* \* \*

(5) *Derivative contracts.* (i) *Calculation of credit equivalent amounts.* The credit equivalent amount of a derivative contract equals the sum of the current credit exposure and the potential future credit exposure of the derivative contract. The calculation of credit equivalent amounts must be measured in U.S. dollars, regardless of the currency or currencies specified in the derivative contract.

<sup>9a</sup> See footnote 22 in section 3(b)(5)(iii) of this appendix A (collateral held against derivative contracts).

<sup>9b</sup> Assets and off-balance sheet transactions collateralized by securities issued or guaranteed by the United States Government or its agencies, or the central government of an OECD country include, but are not limited to, securities lending transactions, repurchase agreements, collateralized letters of credit, such as reinsurance letters of credit, and other similar financial guarantees. Swaps, forwards, futures, and options transactions are also eligible, if they meet the collateral requirements. However, the OCC may at its discretion require that certain collateralized transactions be risk weighted at 20 percent if they involve more than a minimal risk.

(A) *Current credit exposure.* The current credit exposure for a single derivative contract is determined by the mark-to-market value of the derivative contract. If the mark-to-market value is positive, then the current credit exposure equals that mark-to-market value. If the mark-to-market is zero or negative, then the current credit exposure is zero. The current credit exposure for multiple derivative contracts executed with a single counterparty and subject to a qualifying bilateral netting contract is determined as provided by section 3(b)(5)(ii)(A) of this appendix A.

(B) *Potential future credit exposure.* The potential future credit exposure for a single derivative contract, including a derivative contract with negative mark-to-market value, is calculated by multiplying the notional principal<sup>19</sup> of the derivative contract by one of the credit conversion factors in Table A—Conversion Factor Matrix of this appendix A, for the appropriate category.<sup>20</sup> The potential future credit exposure for gold contracts shall be calculated using the foreign exchange rate conversion factors. For any derivative contract that does not fall within one of the specified categories in Table A—Conversion

Factor Matrix of this appendix A, the potential future credit exposure shall be calculated using the other commodity conversion factors. Subject to examiner review, banks should use the effective rather than the apparent or stated notional amount in calculating the potential future credit exposure. The potential future credit exposure for multiple derivatives contracts executed with a single counterparty and subject to a qualifying bilateral netting contract is determined as provided by section 3(b)(5)(ii)(A) of this appendix A.

TABLE A—CONVERSION FACTOR MATRIX<sup>1</sup>

Remaining maturity <sup>2</sup>	Interest rate	Foreign exchange rate and gold	Equity <sup>2</sup>	Precious metals	Other commodity
One year or less .....	0.0	1.0	6.0	7.0	10.0
Over one to five years .....	0.5	5.0	8.0	7.0	12.0
Over five years .....	1.5	7.5	10.0	8.0	15.0

<sup>1</sup> For derivative contracts with multiple exchanges of principal, the conversion factors are multiplied by the number of remaining payments in the derivative contract.

<sup>2</sup> For derivative contracts that automatically reset to zero value following a payment, the remaining maturity equals the time until the next payment. However, interest rate contracts with remaining maturities of greater than one year shall be subject to a minimum conversion factor of 0.5 percent.

(ii) *Derivative contracts subject to a qualifying bilateral netting contract.* (A) *Netting calculation.* The credit equivalent amount for multiple derivative contracts executed with a single counterparty and subject to a qualifying bilateral netting contract as provided by section 3(b)(5)(ii)(B) of this appendix A is calculated by adding the net current credit exposure and the adjusted sum of the potential future credit exposure for all derivative contracts subject to the qualifying bilateral netting contract.

(1) *Net current credit exposure.* The net current credit exposure is the net sum of all positive and negative mark-to-market values of the individual derivative contracts subject to a qualifying bilateral netting contract. If the net sum of the mark-to-market value is positive, then the net current credit exposure equals that net sum of the mark-to-market value. If the net sum of the mark-to-market value is zero or negative, then the net current credit exposure is zero.

(2) *Adjusted sum of the potential future credit exposure.* The adjusted sum of the potential future credit exposure is calculated as:

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

$A_{net}$  is the adjusted sum of the potential future credit exposure,  $A_{gross}$  is the gross potential future credit exposure, and NGR is the net to gross ratio.  $A_{gross}$  is the sum of the potential future credit exposure (as determined under section 3(b)(5)(i)(B) of this

appendix A) for each individual derivative contract subject to the qualifying bilateral netting contract. The NGR 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 section 3(b)(5)(i)(A) of this appendix A) of all individual derivative contracts subject to the qualifying bilateral netting contract.

(B) *Qualifying bilateral netting contract.* In determining the current credit exposure for multiple derivative contracts executed with a single counterparty, a bank may net derivative contracts subject to a qualifying bilateral netting contract by offsetting positive and negative mark-to-market values, provided that:

(1) The qualifying bilateral netting contract is in writing.

(2) The qualifying bilateral netting contract is not subject to a walkaway clause.

(3) The qualifying bilateral netting contract creates a single legal obligation for all individual derivative contracts covered by the qualifying bilateral netting contract. In effect, the qualifying bilateral netting contract must provide that the bank would have a single claim or obligation either to receive or to pay only the net amount of the sum of the positive and negative mark-to-market values on the individual derivative contracts covered by the qualifying bilateral netting contract. The single legal obligation for the

net amount is operative in the event that a counterparty, or a counterparty to whom the qualifying bilateral netting contract has been assigned, fails to perform due to any of the following events: default, insolvency, bankruptcy, or other similar circumstances.

(4) The bank obtains a written and reasoned legal opinion(s) that represents, with a high degree of certainty, that in the event of a legal challenge, including one resulting from default, insolvency, bankruptcy, or similar circumstances, the relevant court and administrative authorities would find the bank's exposure to be the net amount under:

(i) 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;

(ii) The law of the jurisdiction that governs the individual derivative contracts covered by the bilateral netting contract; and

(iii) The law of the jurisdiction that governs the qualifying bilateral netting contract.

(5) The bank establishes and maintains procedures to monitor possible changes in relevant law and to ensure that the qualifying bilateral netting contract continues to satisfy the requirement of this section.

(6) The bank maintains in its files documentation adequate to support the netting of a derivative contract.<sup>21</sup>

<sup>19</sup> For purposes of calculating either the potential future credit exposure under section 3(b)(5)(i)(B) of this appendix A or the gross potential future credit exposure under section 3(b)(5)(ii)(A)(2) of this appendix A for foreign exchange contracts and other similar contracts in which the notional principal is equivalent to the cash flows, total notional principal is the net receipts to each party falling due on each value date in each currency.

<sup>20</sup> No potential future credit exposure is calculated for single currency interest rate swaps in which payments are made based upon two floating indices, so-called floating/floating or basis swaps; the credit equivalent amount is measured solely on the basis of the current credit exposure.

<sup>21</sup> By netting individual derivative contracts for the purpose of calculating its credit equivalent amount, a bank represents that documentation adequate to support the netting of a set of derivative

contract is in the bank's files and available for inspection by the OCC. Upon determination by the OCC that a bank's files are inadequate or that a qualifying bilateral netting contract may not be legally enforceable in any one of the bodies of law described in section 3(b)(5)(ii)(B)(3)(i) through (iii) of this appendix A, the underlying derivative contracts may not be netted for the purposes of this section.

(iii) *Risk weighting.* Once the bank determines the credit equivalent amount for a derivative contract or a set of derivative contracts subject to a qualifying bilateral netting contract, the bank assigns that amount to the risk weight category appropriate to the counterparty, or, if relevant, the nature of any collateral or guarantee.<sup>22</sup> However, the maximum weight that will be applied to the credit equivalent amount of such derivative contract(s) is 50 percent.

(iv) *Exceptions.* The following derivative contracts are not subject to the above calculation, and therefore, are not part of the

denominator of a national bank's risk-based capital ratio:

(A) An exchange rate contract with an original maturity of 14 calendar days or less;<sup>23</sup> and

(B) A derivative contract that is traded on an exchange requiring the daily payment of any variations in the market value of the contract.

\* \* \* \* \*

4. Table 3, at the end of appendix A, is revised to read as follows:

\* \* \* \* \*

**Table 3—Treatment of Derivative Contracts**

1. The current exposure method is used to calculate the credit equivalent amounts of derivative contracts. These amounts are assigned a risk weight appropriate to the obligor or any collateral or guarantee. However, the maximum risk weight is limited to 50 percent. Multiple derivative contracts with a single counterparty may be netted if those contracts are subject to a qualifying bilateral netting contract.

CONVERSION FACTOR MATRIX <sup>1</sup>  
[Percent]

Remaining maturity <sup>2</sup>	Interest rate	Foreign exchange rate and gold	Equity <sup>2</sup>	Precious metals	Other commodity
One year or less .....	0.0	1.0	6.0	7.0	10.0
Over one to five years .....	0.5	5.0	8.0	7.0	12.0
Over five years .....	1.5	7.5	10.0	8.0	15.0

<sup>1</sup> For derivative contracts with multiple exchanges of principal, the conversion factors are multiplied by the number of remaining payments in the derivative contract.

<sup>2</sup> For derivative contracts that automatically reset to zero value following a payment, the remaining maturity equals the time until the next payment. However, interest rate contracts with remaining maturities of greater than one year shall be subject to a minimum conversion factor of 0.5 percent.

2. The following derivative contracts will be excluded:

- a. Exchange rate contract with an original maturity of 14 calendar days or less; and
- b. Derivative contract traded on exchanges and subject to daily margin requirements.

Dated: August 24, 1995.

**Eugene A. Ludwig,**  
*Comptroller of the Currency.*

**FEDERAL RESERVE SYSTEM**

**12 CFR CHAPTER II**

For the reasons set out in the joint preamble, the Board of Governors of the Federal Reserve System amends 12 CFR parts 208 and 225 as set forth below.

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

1. The authority citation for part 208 continues to read as follows:

**Authority:** 12 U.S.C. 36, 248(a), 248(c), 321–338a, 371d, 461, 481–486, 601, 611, 1814, 1823(j), 1828(o), 1831o, 1831p-1, 3105, 3310, 3331–3351, and 3906–3909; 15 U.S.C. 78b, 781(b), 781(g), 781(i), 78o-4(c)(5), 78q, 78q-1 and 78w; 31 U.S.C. 5318; 42 U.S.C. 4012a, 4104a, 4104b.

<sup>22</sup> Derivative contracts are an exception to the general rule of applying collateral and guarantees to the face value of off-balance sheet items. The sufficiency of collateral and guarantees is determined on the basis of the credit equivalent amount of derivative contracts. However, collateral and guarantees held against a qualifying bilateral netting contract is not recognized for capital

2. In part 208, appendix A is amended by revising the last paragraph of section III.C.3. and footnote 40 in the introductory text of section III.D. to read as follows:

**Appendix A to Part 208—Capital Adequacy Guidelines for State Member Banks: Risk-Based Measure**

\* \* \* \* \*

III. \* \* \*

C. \* \* \*

3. \* \* \*

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.

\* \* \* \* \*

D. \* \* \* 40 \* \* \*

\* \* \* \* \*

3. In part 208, appendix A is amended by revising the section III.E. heading and section III.E. to read as follows:

\* \* \* \* \*

purposes unless it is legally available for all contracts included in the qualifying bilateral netting contract.

<sup>23</sup> Notwithstanding section 3(b)(5)(B) of this appendix A, gold contracts do not qualify for this exception.

<sup>40</sup> The sufficiency of collateral and guarantees for off-balance-sheet items is determined by the market

III. \* \* \*

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 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

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



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
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.<sup>49</sup>

<sup>49</sup>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

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 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.<sup>50</sup>

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

if the defaulter or the estate of the defaulter is a net creditor under the contract.

<sup>50</sup>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.

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:

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

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.<sup>51</sup> 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, 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.

\* \* \* \* \*

4. In appendix A to part 208, Attachments IV and V are revised to read as follows:

\* \* \* \* \*

**Attachment IV—Credit Conversion Factors for Off-Balance-Sheet Items for State Member Banks**

**100 Percent Conversion Factor**

1. Direct credit substitutes. (These include general guarantees of indebtedness and all guarantee-type instruments, including standby letters of credit backing the financial obligations of other parties.)

2. Risk participations in bankers acceptances and direct credit substitutes, such as standby letters of credit.

3. Sale and repurchase agreements and assets sold with recourse that are not included on the balance sheet.

4. Forward agreements to purchase assets, including financing facilities, on which drawdown is certain.

5. Securities lent for which the bank is at risk.

**50 Percent Conversion Factor**

1. Transaction-related contingencies. (These include bid-bonds, performance bonds, warranties, and standby letters of credit backing the nonfinancial performance of other parties.)

2. Unused portions of commitments with an original maturity exceeding one year, including underwriting commitments and commercial credit lines.

3. Revolving underwriting facilities (RUFs), note issuance facilities (NIFs), and similar arrangements.

**20 Percent Conversion Factor**

Short-term, self-liquidating trade-related contingencies, including commercial letters of credit.

**Zero Percent Conversion Factor**

Unused portions of commitments with an original maturity of one year or less, or which are unconditionally cancellable at any time, provided a separate credit decision is made before each drawing.

**Credit Conversion for Derivative Contracts**

1. The credit equivalent amount of a derivative contract is the sum of the current credit exposure of the contract and an estimate of potential future increases in credit exposure. The current exposure is the positive mark-to-market value of the contract (or zero if the mark-to-market value is zero or negative). For derivative contracts that are subject to a qualifying bilateral netting contract, the current exposure is, generally, the net sum of the positive and negative mark-to-market values of the contracts included in the netting contract (or zero if the net sum of the mark-to-market values is zero or negative). The potential future exposure is calculated by multiplying the effective notional amount of a contract by one of the following credit conversion factors, as appropriate:

**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
Over five years .....	1.5	7.5	10.0	15.0	8.0

<sup>51</sup> 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.

For contracts subject to a qualifying bilateral netting contract, the potential future exposure is, generally, the sum of the individual potential future exposures for each contract included under the netting contract adjusted by the application of the following formula:

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

NGR is the ratio of net current exposure to gross current exposure.

2. No potential future exposure is calculated for single currency interest rate swaps in which payments are made based upon two floating indices, that is, so called floating/floating or basis swaps. The credit exposure on these contracts is evaluated

solely on the basis of their mark-to-market value. Exchange rate contracts with an original maturity of fourteen days or fewer are excluded. Instruments traded on exchanges that require daily receipt and payment of cash variation margin are also excluded.

ATTACHMENT V—CALCULATING CREDIT EQUIVALENT AMOUNTS FOR DERIVATIVE CONTRACTS

Type of contract	Notional principal amount	Conversion factor	Potential exposure (dollars)	Mark-to-market	Current exposure (dollars)	Credit equivalent amount
(1) 120-day forward foreign exchange .....	5,000,000	0.01	50,000	100,000	100,000	150,000
(2) 4-year forward foreign exchange .....	6,000,000	0.05	300,000	- 120,000	0	300,000
(3) 3-year single-currency fixed & floating interest rate swap .....	10,000,000	0.005	50,000	200,000	200,000	250,000
(4) 6-month oil swap .....	10,000,000	0.10	1,000,000	- 250,000	0	1,000,000
(5) 7-year cross-currency floating & floating interest rate swap .....	20,000,000	0.075	1,500,000	- 1,500,000	0	1,500,000
Total .....			2,900,000	+	300,000	3,200,000

a. If contracts (1) through (5) above are subject to a qualifying bilateral netting contract, then the following applies:

Contract	Potential future exposure	Net current exposure	Credit equivalent amount
(1) .....	50,000	.....	.....
(2) .....	300,000	.....	.....
(3) .....	50,000	.....	.....
(4) .....	1,000,000	.....	.....
(5) .....	1,500,000	.....	.....
Total .....	2,900,000	+0	2,900,000

NOTE: The total of the mark-to-market values from the first table is - \$1,370,000. Since this is a negative amount, the net current exposure is zero.

b. To recognize the effects of bilateral netting on potential future exposure the following formula applies:

$$A_{net} = (.4 \times A_{gross}) + .6(NGR \times A_{gross})$$

c. In the above example where the net current exposure is zero, the credit equivalent amount would be calculated as follows:

$$NGR = 0 = (0/300,000)$$

$$A_{net} = (0.4 \times \$2,900,000) + 0.6 (0 \times \$2,900,000)$$

$$A_{net} = \$1,160,000$$

The credit equivalent amount is \$1,160,000+0=\$1,160,000.

d. If the net current exposure was a positive number, for example \$200,000, the credit equivalent amount would be calculated as follows:

$$NGR = .67 = (\$200,000/\$300,000)$$

$$A_{net} = (0.4 \times \$2,900,000) + 0.6 (.67 \times \$2,900,000)$$

$$A_{net} = \$2,325,800.$$

The credit equivalent amount would be \$2,325,800+\$200,000=\$2,525,800.

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

1. The authority citation for part 225 continues to read as follows:

**Authority:** 12 U.S.C. 1817(j)(13), 1818, 1828(o), 1831i, 1831p-1, 1843(c)(8), 1844(b), 1972(1), 3106, 3108, 3310, 3331-3351, 3907, and 3909.

2. In part 225, appendix A is amended by revising the last paragraph of section III.C.3. and footnote 43 in the introductory text of section III.D. to read as follows:

**Appendix A to Part 225—Capital Adequacy Guidelines for Bank Holding Companies: Risk-Based Measure**

\* \* \* \* \*

III. \* \* \*

C. \* \* \*

3. \* \* \*

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.

\* \* \* \* \*

D. \* \* \* 43 \* \* \*

3. In part 225, appendix A is amended by revising the section III.E. heading and section III.E. to read as follows:

\* \* \* \* \*

III. \* \* \*

*E. Derivative Contracts (Interest Rate, Exchange Rate, Commodity- (including*

<sup>43</sup>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 guarantees are subject to the same provisions noted under section III.B. of this appendix A.

*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 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. Banking organizations 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
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 banking organization 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 banking organization 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 banking organization'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 banking organization 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 banking organization 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.<sup>53</sup>

c. A banking organization 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 banking organization's files and available for inspection by the Federal Reserve. The Federal Reserve may determine that a

<sup>53</sup> 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.

banking organization'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 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.<sup>54</sup>

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:

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

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 the same 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 current exposures for other counterparties.

iii. A banking organization must use consistently 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—an institution 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.<sup>55</sup> 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, 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 banking organization'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.

\* \* \* \* \*

4. In appendix A to part 225, Attachments IV and V are revised to read as follows:

\* \* \* \* \*

### Attachment IV—Credit Conversion Factors for Off-Balance-Sheet Items for Bank Holding Companies

#### 100 Percent Conversion Factor

1. Direct credit substitutes. (These include general guarantees of indebtedness and all guarantee-type instruments, including standby letters of credit backing the financial obligations of other parties.)

2. Risk participations in bankers acceptances and direct credit substitutes, such as standby letters of credit.

3. Sale and repurchase agreements and assets sold with recourse that are not included on the balance sheet.

4. Forward agreements to purchase assets, including financing facilities, on which drawdown is certain.

5. Securities lent for which the banking organization is at risk.

#### 50 Percent Conversion Factor

1. Transaction-related contingencies. (These include bid-bonds, performance bonds, warranties, and standby letters of credit backing the nonfinancial performance of other parties.)

2. Unused portions of commitments with an original maturity exceeding one year, including underwriting commitments and commercial credit lines.

3. Revolving underwriting facilities (RUFs), note issuance facilities (NIFs), and similar arrangements.

#### 20 Percent Conversion Factor

Short-term, self-liquidating trade-related contingencies, including commercial letters of credit.

#### Zero Percent Conversion Factor

Unused portions of commitments with an original maturity of one year or less, or which are unconditionally cancellable at any time, provided a separate credit decision is made before each drawing.

#### Credit Conversion for Derivative Contracts

1. The credit equivalent amount of a derivative contract is the sum of the current credit exposure of the contract and an estimate of potential future increases in credit exposure. The current exposure is the positive mark-to-market value of the contract (or zero if the mark-to-market value is zero or negative). For derivative contracts that are subject to a qualifying bilateral netting contract, the current exposure is, generally, the net sum of the positive and negative mark-to-market values of the contracts included in the netting contract (or zero if the net sum of the mark-to-market values is zero or negative). The potential future exposure is calculated by multiplying the effective notional amount of a contract by one of the following credit conversion factors, as appropriate:

<sup>54</sup> 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.

<sup>55</sup> 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.

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
Over five years .....	1.5	7.5	10.0	15.0	8.0

For contracts subject to a qualifying bilateral netting contract, the potential future exposure is, generally, the sum of the individual potential future exposures for each contract included under the netting contract adjusted by the application of the following formula:

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

NGR is the ratio of net current exposure to gross current exposure.

2. No potential future exposure is calculated for single currency interest rate swaps in which payments are made based upon two floating indices, that is, so called floating/floating or basis swaps. The credit exposure on these contracts is evaluated

solely on the basis of their mark-to-market value. Exchange rate contracts with an original maturity of fourteen or fewer days are excluded. Instruments traded on exchanges that require daily receipt and payment of cash variation margin are also excluded.

ATTACHMENT V—CALCULATING CREDIT EQUIVALENT AMOUNTS FOR DERIVATIVE CONTRACTS

Type of Contract	Notional principal amount	Conversion factor	Potential exposure (dollars)	Mark-to-market	Current exposure (dollars)	Credit equivalent amount
(1) 120-day forward foreign exchange .....	5,000,000	.01	50,000	100,000	100,000	150,000
(2) 4-year forward foreign exchange .....	6,000,000	.05	300,000	-120,000	0	300,000
(3) 3-year single-currency fixed & floating interest rate swap .....	10,000,000	.005	50,000	200,000	200,000	250,000
(4) 6-month oil swap .....	10,000,000	.10	1,000,000	-250,000	0	1,000,000
(5) 7-year cross-currency floating & floating interest rate swap .....	20,000,000	.075	1,500,000	-1,500,000	0	1,500,000
Total .....			2,900,000	+	300,000	3,200,000

a. If contracts (1) through (5) above are subject to a qualifying bilateral netting contract, then the following applies:

Contract	Potential future exposure	Net current exposure	Credit equivalent amount
(1) .....	50,000	.....	.....
(2) .....	300,000	.....	.....
(3) .....	50,000	.....	.....
(4) .....	1,000,000	.....	.....
(5) .....	1,500,000	.....	.....
Total .....	2,900,000	+0	2,900,000

**Note:** The total of the mark-to-market values from the first table is -\$1,370,000. Since this is a negative amount the net current exposure is zero.

b. To recognize the effects of bilateral netting on potential future exposure the following formula applies:

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

c. In the above example, where the net current exposure is zero, the credit equivalent amount would be calculated as follows:

$$NGR = 0 = (0 / 300,000)$$

$$A_{net} = (0.4 \times \$2,900,000) + .6(0 \times \$2,900,000)$$

$$A_{net} = \$1,160,000$$

The credit equivalent amount is \$1,160,000 + 0 = \$1,160,000.

d. If the net current exposure was a positive number, for example \$200,000, the credit equivalent would be calculated as follows:

$$NGR = .67 = (\$200,000 / \$300,000)$$

$$A_{net} = (0.4 \times \$2,900,000) + 0.6(.67 \times \$2,900,000)$$

$$A_{net} = \$2,325,800$$

The credit equivalent amount would be \$2,325,800 + \$200,000 = \$2,525,800.

\* \* \* \* \*

By order of the Board of Governors of the Federal Reserve System, August 25, 1995.

**Jennifer J. Johnson,**

*Deputy Secretary of the Board.*

**FEDERAL DEPOSIT INSURANCE CORPORATION**

**12 CFR CHAPTER III**

For the reasons set forth in the joint preamble, the Board of Directors of the FDIC amends 12 CFR part 325 as follows:

**PART 325—CAPITAL MAINTENANCE**

1. The authority citation for part 325 continues to read as follows:

**Authority:** 12 U.S.C. 1815(a), 1815(b), 1816, 1818(a), 1818(b), 1818(c), 1818(t), 1819(Tenth), 1828(c), 1828(d), 1828(l), 1828(m), 1828(o), 1831o, 1835, 3907, 3909, 4808; Pub. L. 102-233, 105 Stat. 1761, 1789, 1790 (12 U.S.C. 1831n note) Pub. L. 102-242, 105 Stat. 2236, 2355, 2386 (12 U.S.C. 1828 note).

2. In appendix A to part 325, section II is amended by:

a. Revising the last sentence in section II.C. Category 3;

b. Redesignating footnotes 35 through 38 as footnotes 36 through 39;

c. Adding new footnote 35 at the end of the introductory text of section II.D.; and

d. Revising section II.E. to read as follows:

**Appendix A to Part 325—Statement of Policy on Risk-Based Capital**

\* \* \* \* \*

II. \* \* \*

C. \* \* \*

*Category 3* \* \* \* In addition, the credit equivalent amount of derivative contracts that do not qualify for a lower risk weight are assigned to the 50 percent risk category.

\* \* \* \* \*

D. \* \* \* 35 \* \* \*

\* \* \* \* \*

*E. Derivative Contracts (Interest Rate, Exchange Rate, Commodity (including precious metal) and Equity Derivative Contracts)*

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

(a) Interest Rate Contracts

(i) Single currency interest rate swaps.

(ii) Basis swaps.

(iii) Forward rate agreements.

(iv) Interest rate options purchased (including caps, collars, and floors purchased).

(v) Any other instrument linked to interest rates that gives rise to similar credit risks

(including when-issued securities and forward deposits accepted).

(b) Exchange Rate Contracts

(i) Cross-currency interest rate swaps.

(ii) Forward foreign exchange contracts.

(iii) Currency options purchased.

(iv) Any other instrument linked to exchange rates that gives rise to similar credit risks.

(c) Commodity (including precious metal) or Equity Derivative Contracts

(i) Commodity- or equity-linked swaps.

(ii) Commodity- or equity-linked options purchased.

(iii) Forward commodity- or equity-linked contracts.

(iv) Any other instrument linked to commodities or equities that gives rise to similar credit risks.

2. Exchange rate contracts with an original maturity of 14 calendar days or less 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 gold contracts with an original maturity of 14 calendar days or less are included in the risk-based calculation. Over-the-counter options purchased are

included and treated in the same way as other derivative contracts.

3. *Credit Equivalent Amounts for Derivative Contracts.* (a) The credit equivalent amount of a derivative contract that is not subject to a qualifying bilateral netting contract in accordance with section II.E.5. of this appendix A is equal to the sum of:

(i) The current exposure (which is equal to the mark-to-market value,<sup>40</sup> if positive, and is sometimes referred to as the replacement cost) of the contract; and

(ii) An estimate of the potential future credit exposure.

(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.

(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, subject to examiner review, use the effective rather than the apparent or stated notional amount in this calculation. The credit conversion factors are:

**CONVERSION FACTOR MATRIX**

Remaining maturity	Interest rate	Exchange rate and gold	Equity	Precious metals, except gold	Other commodities
One year or less .....	0.0%	1.0%	6.0%	7.0%	10.0%
More than one year to five years .....	0.5%	5.0%	8.0%	7.0%	12.0%
More than five years .....	1.5%	7.5%	10.0%	8.0%	15.0%

(d) For contracts that are structured to settle outstanding exposure on specified dates and where the terms are reset such that the market value of the contract is zero on these specified dates, the remaining maturity is equal to the time until the next reset date. For interest rate contracts with remaining maturities of more than one year and that meet these criteria, the conversion factor is subject to a minimum value of 0.5 percent.

(e) For contracts with multiple exchanges of principal, the conversion factors are to be multiplied by the number of remaining payments in the contract. Derivative contracts not explicitly covered by any of the columns of the conversion factor matrix are to be treated as "other commodities."

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

**4. Risk Weights and Avoidance of Double Counting.** (a) Once the credit equivalent

amount for a derivative contract, or a group of derivative contracts subject to a qualifying bilateral netting agreement, 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. However, the maximum weight that will be applied to the credit equivalent amount of such contracts is 50 percent.

(b) In certain cases, credit exposures arising from the derivative contracts covered by these guidelines may already be reflected, 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 types of instruments covered by these guidelines may need to be excluded from balance sheet assets in calculating a bank's risk-based capital ratio.

(c) The FDIC notes that the conversion factors set forth in section II.E.3. of appendix A, 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.

(d) Examples of the calculation of credit equivalent amounts for these types of contracts are contained in Table IV of this appendix A.

5. *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 or obligation to receive or pay, respectively, 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

<sup>35</sup> 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 guarantees are subject to the same provisions noted under section II.B. of this appendix A.

<sup>40</sup> Mark-to-market values are measured in dollars, regardless of the currency or currencies specified in the contract and should reflect changes in both underlying rates, prices and indices, and counterparty credit quality.

perform due to default, bankruptcy, 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, bankruptcy or similar circumstances, the relevant court and administrative authorities would find the bank's exposure to be such a 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; and

(iv) The bank maintains in its file 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.<sup>41</sup>

(c) By netting individual contracts for the purpose of calculating its credit equivalent amount, a bank 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 FDIC. Upon determination by the FDIC that a bank's files are inadequate or that a netting contract may not be legally enforceable under any one of the bodies of law described in

paragraphs (ii)(1) through (3) of section II.E.5.(a) of this appendix A, underlying individual contracts may be treated as though they were not subject to the netting contract.

(d) The credit equivalent amount of derivative contracts that are subject to a qualifying bilateral netting contract is calculated by adding:

(i) The net current exposure of the netting contract; and

(ii) The sum of the estimates of potential future exposure for all individual contracts subject to the netting contract, adjusted to take into account the effects of the netting contract.<sup>42</sup>

(e) The net current exposure is the sum of all positive and negative mark-to-market values of the individual contracts subject to 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.

(f) The effects of the bilateral netting contract on the gross potential future exposure are recognized through application of a formula, resulting 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:

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

The effect of this formula is that  $A_{net}$  is the weighted average of  $A_{gross}$ , and  $A_{gross}$  adjusted by the NGR.

(g) The NGR may be calculated in either one of two ways—referred to as the counterparty-by-counterparty approach and the aggregate approach.

(i) Under the counterparty-by-counterparty approach, the NGR is the ratio of the net current exposure of the 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 II.E. of this appendix A.

(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 II.E.5.(g)(i) of this appendix A). Net negative mark-to-market values to individual counterparties cannot be used to offset net positive current exposures to other counterparties.

(iii) A bank must use consistently 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.

3. In appendix A to part 325, Table III is amended by:

a. In the last sentence, removing "II.E.3." and adding in its place "II.E.5."; and

b. Revising the chart and its heading to read as follows:

Table III. \* \* \*

\* \* \* \* \*

*Credit Conversion for Derivative Contracts*

\* \* \* \* \*

CONVERSION FACTOR MATRIX

Remaining maturity	Interest rate	Exchange rate and gold	Equity	Precious metals, except gold	Other commodities
One year or less .....	0.0%	1.0%	6.0%	7.0%	10.0%
More than one year to five years .....	0.5%	5.0%	8.0%	7.0%	12.0%
More than five years .....	1.5%	7.5%	10.0%	8.0%	15.0%

\* \* \* \* \*

4. Appendix A to part 325, Table IV, is revised to read as follows:

TABLE IV.—CALCULATION OF CREDIT EQUIVALENT AMOUNTS FOR DERIVATIVE CONTRACTS

Potential exposure  Type of contract (remaining maturity)	+	Current exposure  Conversion factor	=	Credit equivalent amount		Credit equivalent amount
				Potential exposure (dollars)	Mark-to market value	
(1) 120-Day Forward Foreign Exchange .....	5,000,000	.01	50,000	100,000	100,000	150,000
(2) 4-Year Forward Foreign Exchange .....	6,000,000	.05	300,000	-120,000	0	300,000
(3) 3-Year Single-Currency Fixed/Floating Interest Rate Swap .....	10,000,000	.005	50,000	200,000	200,000	250,000

<sup>41</sup> For purposes of this section, a walkaway clause means 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 a defaulter or the estate of a defaulter is a net creditor under the contract.

<sup>42</sup> For purposes of calculating potential future credit exposure 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 to each party falling due on each value date in each currency.



TABLE IV.—CALCULATION OF CREDIT EQUIVALENT AMOUNTS FOR DERIVATIVE CONTRACTS—Continued

Potential exposure	+	Current exposure	=	Credit equivalent amount		Credit equivalent amount
Type of contract (remaining maturity)	Notional principal (dollars)	Conversion factor	Potential exposure (dollars)	Mark-to market value	Current exposure (dollars)	
(4) 6-Month Oil Swap .....	10,000,000	.10	1,000,000	-250,000	0	1,000,000
(5) 7-Year Cross-Currency Floating/Floating Interest Rate Swap .....	20,000,000	.075	1,500,000	-1,500,000	0	1,500,000
Total .....			2,900,000		300,000	3,200,000

(1) If contracts (1) through (5) above are subject to a qualifying bilateral netting contract, then the following applies:

	Potential future exposure (from above)		Net current exposure*		Credit equivalent amount
(1) .....	50,000				
(2) .....	300,000				
(3) .....	50,000				
(4) .....	1,000,000				
(5) .....	1,500,000				
Total .....	2,900,000	+	0	=	2,900,000

\*The total of the mark-to-market values from above is -1,370,000. Since this is a negative amount, the net current exposure is zero.

(2) To recognize the effects of netting on potential future exposure, the following formula applies:

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

(3) In the above example:

$$NGR = 0 = (0/300,000)$$

$$A_{net} = (0.4 \times 2,900,000) + 0.6(0 \times 2,900,000)$$

$$A_{net} = 1,160,000$$

$$\text{Credit Equivalent Amount: } 1,160,000 + 0 = 1,160,000$$

(4) If the net current exposure was a positive amount, for example, \$200,000, the credit equivalent amount would be calculated as follows:

$$NGR = .67 = (200,000/300,000)$$

$$A_{net} = (0.4 \times 2,900,000) + 0.6(.67 \times 2,900,000)$$

$$A_{net} = 2,325,800$$

$$\text{Credit Equivalent Amount: } 2,325,800 + 200,000 = 2,525,800$$

By order of the Board of Directors.

Dated at Washington, D.C. this 25th day of August, 1995.

Federal Deposit Insurance Corporation.

**Jerry L. Langley,**

*Executive Secretary.*

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