FEDERAL RESERVE BANK
OF DALLAS

ROBERT D. McTEER, JR.
PRESIDENT
AND CHIEF EXECUTIVE OFFICER

September 9, 1994

DALLAS, TEXAS
75265-5906

Notice 94-95

TO: The Chief Executive Officer of each member bank and others concerned in the Eleventh Federal Reserve District

SUBJECT

Request for Public Comment on a Proposed Amendment to the Risk-based Capital Guidelines

DETAILS

The Board of Governors of the Federal Reserve System has requested public comment on a proposed amendment to the Board's risk-based capital guidelines for state member banks and bank holding companies regarding the treatment of derivative contracts.

The proposal would

1. Revise and expand the set of conversion factors used to calculate the potential future exposure of derivative contracts; and

2. Recognize effects of netting arrangements in the calculation of potential future exposure for derivative contracts subject to qualifying bilateral netting arrangements.

The proposal is based on consultative proposals issued by the Basle Supervisors' Committee on July 15, 1994.

The first part of the proposal would apply new higher conversion factors to long-dated interest and exchange rate contracts (that is, those with a remaining maturity of five years or more). The second part of the proposal builds upon the Board's pending proposal (and is contingent upon the adoption of a final amendment) to recognize qualifying, legally enforceable bilateral netting arrangements in the calculation of current exposure.

For additional copies, bankers and others are encouraged to use one of the following toll-free numbers in contacting the Federal Reserve Bank of Dallas: Dallas Office (800) 333-4460; El Paso Branch *Intrastate* (800) 592-1631, *Interstate* (800) 351-1012; Houston Branch *Intrastate* (800) 392-4162, *Interstate* (800) 221-0363; San Antonio Branch *Intrastate* (800) 292-5810.

The Board must receive comments by October 21, 1994. Comments should be addressed to William W. Wiles, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, N.W., Washington, D.C. 20551. All comments should refer to Docket No. R-0845.

ATTACHMENT

A copy of the Board's notice as it appears on pages 43508-17, Vol. 59, No. 163, of the Federal Register dated August 24, 1994, is attached.

MORE INFORMATION

For more information, please contact Dorsey Davis at (214) 922-6051. For additional copies of this Bank's notice, please contact the Public Affairs Department at (214) 922-5254.

Sincerely yours,

Robert D. McTeer, Jr.

PROPOSAL TO REVISE THE

RISK-BASED CAPITAL

GUIDELINES

(DOCKET R-0845)

FEDERAL RESERVE SYSTEM

12 CFR Parts 208 and 225

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

Capital; Capital Adequacy Guidelines

AGENCY: Board of Governors of the Federal Reserve System.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: The Board of Governors of the Federal Reserve System is proposing to amend its risk-based capital guidelines for state member banks and bank holding companies. The proposal would revise and expand the set of conversion factors used to calculate the potential future exposure of derivative contracts and recognize effects of netting arrangements in the calculation of potential future exposure for derivative contracts subject to qualifying bilateral netting arrangements.

The Board is proposing these amendments on the basis of proposed revisions to the Basle Accord announced on July 15, 1994. The effect of the proposed amendments would be twofold. First, long-dated interest rate and exchange rate contracts would be subject to new higher conversion factors and new conversion factors would be set forth that specifically apply to derivative contracts related to equities, precious metals, and other commodities. Second, institutions would be permitted to recognize a reduction in potential future exposure for transactions subject to qualifying bilateral netting arrangements.

DATES: Comments must be received on or before October 21, 1994.

ADDRESSES: Comments should refer to docket No. R-0845 and may be mailed to William W. Wiles, Secretary, Board of Governors of the Federal Reserve System, 20th Street and Constitution Avenue, N.W., Washington, D.C. 20551. Comments may also be delivered to Room B-2222 of the Eccles Building between 8:45 a.m. and 5:15 p.m. weekdays, or to the guard station in the Eccles Building courtyard on 20th Street, N.W. (between Constitution Avenue and C Street) at any time. Comments may be inspected in Room MP-500 of the Martin Building between 9:00 a.m. and 5:00 p.m. weekdays, except as provided in 12 CFR 261.8 of the Board's Rules regarding availability of information.

FOR FURTHER INFORMATION CONTACT: Roger Cole, Deputy Associate Director (202/452-2618), Norah Barger, Manager (202/452-2402), Robert Motyka, Supervisory Financial Analyst (202/452-3621), Barbara Bouchard, Senior 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, Telecommunication Device for the Deaf, Dorothea Thompson (202/452-3544).

SUPPLEMENTARY INFORMATION:

I. Background

The international risk-based capital standards (the Basle Accord)[1] set forth a framework for measuring capital adequacy under which risk-weighted assets are calculated by assigning assets and off-balance-sheet items to broad categories based primarily on their credit risk, that is, the risk that a loss will be incurred due to an obligor or counterparty default on a transaction.[2] Off-balance-sheet transactions are incorporated into risk-weighted assets by converting each item into a credit equivalent amount which 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 the collateral.

The credit equivalent amount of an interest rate or exchange rate contract (rate contract) is determined by adding together the current replacement cost (current exposure) and an estimate of the possible increases in future replacement cost, in view of the volatility of the current exposure over the remaining life of the contract (potential future exposure, also referred to as the add-on). Each credit equivalent amount is then assigned to the appropriate risk category generally based on the identity of the counterparty. The maximum risk weight applied to interest rate or exchange rate contracts is 50 percent.[3]

A. Current Exposure

A banking organization that has a rate contract with a positive mark-to-market value has a current exposure to a possible loss equal to the mark-to-market value.[4] For risk-based capital purposes, if the mark-to-market value is zero or negative, then there is no replacement cost associated with the contract and 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.

The Basle Accord, as endorsed in 1988, provided that current exposure would be determined individually for every rate contract entered into by a banking organization. Generally, institutions were not permitted to offset, that is, net, positive and negative mark-to-market values of multiple rate contracts with a single counterparty to determine one current exposure relative to that counterparty.[5] In April 1993 the Basle Supervisors' Committee (BSC) proposed a revision to the Basle Accord, endorsed by the G-10 Governors in July 1994, that permits institutions to net positive and negative mark-to-market values of rate contracts subject to a qualifying, legally enforceable, bilateral netting arrangement. Under the revision to the Accord, institutions with qualifying netting arrangements could replace the gross current exposure of a set of contracts included in such an arrangement with a single net current exposure for purposes of calculating the credit equivalent amount for the included contracts. If the net market value is positive, then that market value equals the current exposure for the netting contract. If the net market value is zero or negative, then the current exposure is zero.

On May 20, 1994, the Board and the Office of the Comptroller of the Currency (OCC) issued a joint proposal to amend their respective risk-based capital guidelines in accordance with the BSC April 1993 proposal.[6] Generally, under the proposal, a bilateral netting arrangement would be recognized for risk-based capital purposes only if the netting arrangement is legally enforceable. The institution would have to have a legal opinion(s) to this effect. The joint Federal Reserve/OCC proposal is consistent with the final July 1994 change to the Basle Accord. (A detailed discussion of the BSC proposal and the Board/OCC proposed amendment to their risk-based capital guidelines can be found at 59 FR 26456, May 20, 1994.)

B. Potential Future Exposure

The second part of the credit equivalent amount, potential future exposure, is an estimate of the additional exposure that may arise over the remaining life of the contract as a result of fluctuations in prices or rates. Such changes may increase the market value of the contract in the future and, therefore, increase the cost of replacing it if the counterparty subsequently defaults.

The add-on for potential future exposure is estimated by multiplying the notional principal amount[7] of the underlying contract by a credit conversion factor that is determined by the remaining maturity of the contract and the type of contract. The existing set of conversion factors used to calculate potential future exposure, referred to as the add-on matrix, is as follows:

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

The conversion factors were determined through simulation studies that estimated the potential volatility of interest and exchange rates and analyzed the implications of movements in those rates for the replacement costs of various types of interest rate and exchange rate contracts. The simulation studies were conducted only on interest rate and foreign exchange rate contracts, because at the time the Accord was being developed activity in the derivatives market was for the most part limited to these types of transactions. The analysis produced probability distributions of potential replacement costs over the remaining life of matched pairs of rate contracts.[8] Potential future

[1] The Basle Accord was proposed by the Basle Committee on Banking Supervision (Basle Supervisors' Committee, BSC) 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. In January 1989 the Federal Reserve Board adopted a similar framework to be used by state member banks and bank holding companies.

[2] Other types of risks, such as market risks, generally are not addressed by the risk-based framework.

[3] Exchange rate contracts with an original maturity of 14 calendar days or less and instruments traded on exchanges that require daily payment of variation margin are excluded from the risk-based capital ratio calculations.

[4] The loss to a banking organization from a counterparty's default on a rate contract is the cost of replacing the cash flows specified by the contract. The mark-to-market value is the present value of the net cash flows specified by the contract, calculated on the basis of current market interest and exchange rates.

[5] Netting by novation, however, was recognized. Netting by novation is accomplished under a written bilateral contract providing that any obligation to deliver a given currency on a given date is automatically amalgamated with all other obligations for the same currency and value date. The previously existing contracts are extinguished and a new contract, for the single net amount, is legally substituted for the amalgamated gross obligations.

[6] The Office of Thrift Supervision issued a similar netting proposal on June 14, 1994 and the Federal Deposit Insurance Corporation issued its netting proposal on July 25, 1994.

[7] The notional principal amount, or value, is a reference amount of money used to calculate payment streams between the counterparties. Principal amounts generally are not exchanged in single-currency interest rate swaps, but generally are exchanged in foreign exchange contacts (including cross-currency interest rate swaps).

[8] A matched pair is a pair of contracts with identical terms, with the banking organization the

Continued

exposure was then defined in terms of confidence limits for these distributions. The conversion factors were intended to be a compromise between precision, on the one hand, and complexity and burden, on the other.[9]

The add-on for potential future exposure is calculated for all 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 add-on will always be either a positive number or zero. The recent revision to the Basle Accord to recognize netting for the calculation of current exposure does not affect the calculation of potential future exposure, which generally continues to be calculated on a gross basis. This means that an add-on for potential future exposure is calculated separately for each individual contract subject to the netting arrangement and then these individual future exposures are added together to arrive at a gross add-on for potential future exposure. For contracts subject to a qualifying bilateral netting arrangement in accordance with the newly adopted Accord changes, the gross add-on for potential future exposure would be added to the net current exposure to arrive at one credit equivalent amount for the contracts subject to the netting arrangement.

The original Basle Accord noted that the credit conversion factors in the add-on matrix were provisional and would be subject to revision if volatility levels or market conditions changed.

II. Basle Proposals for the Treatment of Potential Future Exposure

Since the original Accord was adopted, the derivatives market has grown and broadened. The use of certain types of derivative instruments not specifically addressed in the Accord—notably commodity, precious metals, and equity-linked transactions [10]—has become much more widespread. As a result of continued review of the method for calculating the add-on for potential future exposure, in July 1994 the BSC issued two proposals for public consultation.[11] The first proposal would expand the matrix of add-on factors used to calculate potential future exposure to take into account innovations in the derivatives market. The second proposal would recognize reductions in the potential future exposure of derivative contracts that result from entering into bilateral netting arrangements. The second proposal is an extension of the recent revision to the Accord recognizing bilateral netting arrangements for purposes of calculating current exposure and would formally extend the recognition of netting arrangements to equity, precious metals and other commodity derivative contracts. The consultation period for these BSC proposals is scheduled to end on October 10, 1994.

A. Expansion of Add-on Matrix

A recently concluded BSC review of the add-on for potential future exposure indicated that the current add-on factors used to calculate the add-on amount may produce insufficient capital for certain types of derivative instruments, in particular, long-dated interest rate contracts, commodity contracts, and equity-index contracts. The BSC review indicated that the current add-on factors do not adequately address the full range of contract structures and the timing of cash flows. The review also showed that the conversion factors many institutions are using to calculate potential future exposure for commodity, precious metals, and equity contracts could result in insufficient capital coverage in view of the volatility of the indices or prices on the underlying assets from which these contracts derive their value.[12]

The BSC concluded that it was not appropriate to address these problems with a significant departure from the existing methodology used in the Accord. The BSC decided that it would be appropriate to preserve the conversion factors existing in the Accord and add new conversion factors. Consequently, the revision proposed by the BSC retains the existing conversion factors for interest and exchange rate contracts but applies new higher conversion factors to such contracts with remaining maturities of five years and over.[13] The proposal also introduces conversion factors specifically applicable to commodity, precious metals, and equity contracts. The new conversion factors were determined on the basis of simulation studies that used the same general approach that generated the original add-on conversion factors.[14]

The proposed matrix is set forth below:

CONVERSION FACTOR MATRIX*

[Amounts in percent]

Residual maturity	Interest rate	Foreign exchange and gold	Equity**	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%

*For contracts with multiple exchanges of principal, the factors are to be multiplied by the number of remaining payments in the contract.
**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.

buyer of one of the contracts and the seller of the other.

[9] The methodology upon which the statistical analyses were based is described in detail in a technical working paper entitled "Potential Credit Exposure on Interest Rate and Foreign Exchange Rate Related Instruments." This paper is available upon request from the Board's Freedom of Information Office.

[10] In general terms, these are off-balance-sheet transactions that have a return, or a portion of their return, linked to the price of a particular commodity, precious metal, or equity or to an index of commodity, precious metal, or equity prices.

[11] The proposals are contained in a paper from the BSC 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 Freedom of Information Office.

[12] While commodity, precious metals, and equity contracts were not explicitly covered by the original Accord, as the use of such contracts became more prevalent, many G-10 banking supervisors, including U.S. banking supervisors, have informally permitted institutions to apply the conversion factors for exchange rate contracts to these types of transactions pending development of a more appropriate treatment.

[13] The conversion factors for rate contracts with remaining maturities of one to five years are currently applied to contracts with a remaining maturity of over one year.

[14] The methodology and results of the statistical analyses are summarized in a paper entitled "The Calculation of Add-Ons for Derivative Contracts: the "Expanded Matrix" Approach" that is available upon request from the Board's Freedom of Information Office.

Gold is included within the foreign exchange column because the price volatility of gold has been found to be comparable to the exchange rate volatility of major currencies. In addition, the BSC determined that gold's role as a financial asset distinguishes it from other precious metals. The proposed matrix is designed to accommodate the different structures of contracts, as well as the observed disparities in the volatilities of the associated indices or prices of the underlying assets.

Two footnotes are attached to the matrix to address two particular contract structures. The first relates to contracts with multiple exchanges of principal. Since the level of potential future exposure rises generally in proportion to the number of remaining exchanges, the conversion factors are to be multiplied by the number of remaining payments (that is, exchanges of principal) in the contract. This treatment is intended to ensure that the full level of potential future exposure is adequately covered. The second footnote applies to equity contracts that automatically reset to zero each time a payment is made. The credit risk associated with these contracts is similar to that of a series of shorter contracts beginning and ending at each reset date. For this type of equity contract the remaining maturity is set equal to the time remaining until the next payment.

While the capital charges resulting from the application of the new proposed conversion factors may not provide complete coverage for risks associated with any single contract, the BSC believes the factors will provide a reasonable level of prudential coverage for derivative contracts on a portfolio basis. Like the original matrix, the proposed expanded matrix is designed to provide a reasonable balance between precision, and complexity and burden.

B. Recognition of the Effects of Netting

The simulation studies used to generate the conversion factors for potential future exposure analyzed the implications of underlying rate and price movements on the current exposure of contracts without taking into account reductions in exposure that could result from legally enforceable netting arrangements. Thus, the conversion factors are most appropriately applied to non-netted contracts, and when applied to legally enforceable netted contracts, they could in some cases, overstate the potential future exposure.

Comments provided during the consultative process of revising the Basle Accord to recognize qualifying bilateral netting arrangements and further research conducted by the BSC, have suggested that netting arrangements can reduce not only a banking organization's current exposure for the transactions subject to the netting arrangement, but also its potential future exposure for those transactions.[15]

As a result, in July 1994 the BSC issued a proposal to incorporate into the calculation of the add-on for potential future exposure a method for recognizing the risk-reducing effects of qualifying netting arrangements. Under the proposal, institutions could recognize these effects only for transactions subject to legally enforceable bilateral netting arrangements that meet the requirements of netting for current exposure as set forth in the recent revision to the Accord.

Depending on market conditions and the characteristics of a banking organization's derivative portfolio, netting arrangements can have substantial effects on the organization's potential future exposure to multiple derivative contracts it has entered into with a single counterparty. Should the counterparty default at some future date, the institution's exposure would be limited to the net amount the counterparty owes on the date of default rather than the gross current exposure of the included contracts. By entering into a netting arrangement a bank may reduce not only its current exposure, but possibly its future exposure as well. Nevertheless, while in many circumstances a netting arrangement can reduce the potential future exposure of a counterparty portfolio, this is not always the case.[16]

The most important factors influencing whether a netting arrangement will have an effect on potential future exposure are the volatilities of the current exposure to the counterparty on both a gross and net basis.[17] The volatilities of net current exposure and gross current exposure of the portfolio may not necessarily be the same. Volatility of gross current exposure is influenced primarily by the fluctuations of the market values of positively valued contracts. Volatility of net current exposure on the other hand, is influenced by the fluctuations of the market values of all contracts within the portfolio. In those cases where net current exposure has a tendency to fluctuate more over time than gross current exposure, a netting arrangement will not reduce the potential future exposure. However, in those situations where net current exposure has a tendency to fluctuate less over time than gross current exposure, a netting arrangement can reduce the potential future exposure.

Net current exposure is likely to be less volatile relative to the volatility of gross current exposure when the portfolio of contracts as a whole is more diverse than the subset of positively valued contracts. When a netting arrangement is applied to a diversified portfolio and the positively valued contracts within the portfolio as a group are less diversified than the overall portfolio, then the effect of the netting arrangement will likely be to reduce the potential future exposure of the portfolio.

The BSC has studied and analyzed several alternatives for taking into account the effects of netting when calculating the capital charge for potential future exposure. In particular, the BSC reviewed one general method proposed by commenters to the April 1993 netting proposal. This method would reduce the amount of the add-on for potential future exposure by multiplying the calculated gross add-on by the ratio of the portfolio's net current exposure to gross current exposure (the net-to-gross ratio or NGR). The NGR is used as a proxy for the risk-reducing effects of the netting arrangement on the potential future exposure. The more diversified the portfolio, the lower the net current exposure tends to be relative to gross current exposure.

The BSC incorporated this method into its proposal. However, given that there are portfolio-specific situations in which the NGR does not provide a good indication of these effects, the BSC proposal gives only partial weight to the effects of the NGR on the add-on for potential future exposure. The proposed method would average the amount of

[15] While current exposure is intended to cover an organization's credit exposure at one point in time, potential future exposure provides an estimate of possible increases in future replacement cost, in view of the volatility of current exposure over the remaining life of the contract. The greater the tendency of the current exposure to fluctuate over time, the greater the add-on for potential future exposure should be to cover possible fluctuations.

[16] For purposes of this discussion, a portfolio refers to a set of contracts with a single counterparty. A banking organization's global portfolio refers to all of the contracts in the institution's total derivatives portfolio that are subject to qualifying netting arrangements.

[17] Volatility in this discussion is the tendency of the market value of a contract to vary or fluctuate over time. A highly volatile portfolio would have a tendency to fluctuate significantly over short periods of time. One of the most important factors influencing a portfolio's volatility is the correlation of the contracts within the portfolio, that is, the degree to which the contracts in the portfolio respond similarly to changing market conditions.

the add-on as currently calculated (A_{gross}) and the same amount multiplied by the NGR to arrive at a reduced add-on (A_{net}) for contracts subject to qualifying netting arrangements in accordance with the requirements set forth in the recently revised Accord. This formula is expressed as:

$A_{net}=.5(A_{gross}+(NGR\times A_{gross}))$.

For example, a bank with a gross current exposure of 500,000, a net current exposure of 300,000, and a gross add-on for potential future exposure of 1,200,000, would have an NGR of .6 (300,000/500,000) and would calculate A_{net} as follows:

$.5(1,200,000+(.6\times 1,200,000))$

$A_{net}=960,000$

For banking organizations with an NGR of 50 percent, the effect of this treatment would be to permit a reduction in the amount of the add-on by 25 percent. The BSC believes that most dealer banks are likely to have an NGR in the vicinity of 50 percent.

The BSC proposal does not specify whether the NGR should be calculated on a counterparty-by-counterparty basis or on an aggregate basis for all transactions subject to qualifying, legally enforceable netting arrangements. The proposal requests comment on whether the choice of method could bias the results and whether there is a significant difference in calculation burden between the two methods.

The BSC proposal also acknowledges that simulations using institutions' internal models for measuring credit risk exposure would most likely produce the most accurate determination of the effect of netting arrangements on potential future exposures. The proposal states that the use of such models would be considered at some future date.

III. The Board Proposal

In light of the BSC proposal, the Board believes that it is appropriate to seek comment on proposed revisions to the calculation of the add-on for potential future exposure for derivative contracts. Therefore, the Board is proposing to amend its risk-based capital guidelines for state member banks and bank holding companies to expand the matrix of conversion factors, and to permit institutions that make use of qualifying netting arrangements to recognize the effects of those netting arrangements in the calculation of the add-on for potential future exposure. The second part of the proposed amendment is contingent on the adoption of a final amendment to the Board's risk-based capital guidelines to recognize bilateral close-out netting arrangements and would formally extend this recognition to commodity, precious metals, and equity derivative contracts.

With regard to the portion of the proposal to expand the conversion factor matrix, the Board is proposing the same conversion factors set forth in the BSC proposal. The Board agrees with the BSC that the existing conversion factors applicable to long-dated transactions do not provide sufficient capital for the risks associated with those types of contracts. The Board also agrees with the BSC that the conversion factors for foreign exchange transactions are significantly too low for commodity, precious metals, and equity derivative contracts due to the volatility of the associated indices and the prices on the underlying assets.[18]

The Board is proposing the same formula as the BSC proposal to calculate a reduction in the add-on for potential future exposure for contracts subject to qualifying netting contracts. The Board recognizes several advantages with this formula. First, the formula uses bank-specific information to calculate the NGR. The NGR is simple to calculate and uses readily available information. The Board believes the use of the averaging factor of 0.5 is an important aspect of the proposed formula because it means the add-on for potential future exposure can never be reduced to zero and banking organizations will always hold some capital against derivative contracts, even in those instances where the net current exposure is zero.

The Board is seeking comment on all aspects of this proposal. As mentioned earlier, the BSC proposal seeks comment on whether the NGR should be calculated on a counterparty-by-counterparty basis, or on a global basis for all contracts subject to qualifying bilateral netting arrangements. The Board's proposed regulatory language would require the calculation of a separate NGR for each counterparty with which it has a qualifying netting contract. However, the Board is also seeking comment as to which method of calculating the NGR would be most efficient and appropriate for institutions with numerous qualifying bilateral netting arrangements. With either calculation method the NGR would be applied separately to adjust the add-on for potential future exposure for each netting arrangement. The Board notes that some preliminary findings indicate that a global NGR may be less burdensome to apply since the same NGR would be used for each counterparty with a netting arrangement, but counterparty specific NGRs may provide a more accurate indication of the credit risk associated with each counterparty.

[18] Similar to the BSC proposal, the Board's proposed amendment specifies that for equity contracts that automatically reset to zero value following a payment, the remaining maturity is set equal to the time remaining until the next payment. Also, for contracts with multiple exchanges of principal, the conversion factors are to be multiplied by the number of remaining payments in the contract.

Regulatory Flexibility Act Analysis

The Board does not believe that adoption of this proposal would have a significant economic impact on a substantial number of small business entities (in this case, small banking organizations), in accord with the spirit and purposes of the Regulatory Flexibility Act (5 U.S.C 601 *et seq.*). In this regard, while some small institutions with limited derivative portfolios may experience an increase in capital charges, for most of these institutions the proposal will have no effect. For institutions with more developed derivative portfolios the overall affect of the proposal will likely be to reduce regulatory burden and the capital charge for certain 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 proposal will not affect such companies.

Paperwork Reduction Act

The Federal Reserve has determined that its proposed amendments, if adopted, would 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.*).

List of Subjects

12 CFR Part 208

Accounting, Agriculture, Banks, banking, Capital adequacy, Confidential business information, Currency, Federal Reserve System, Reporting and recordkeeping requirements, Securities, State member banks.

12 CFR Part 225

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

For the reasons set forth in the preamble, the Board proposes to amend 12 CFR parts 208 and 225 as follows.

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

1. The authority citation for part 208 is revised 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, 78l(b), 78l(g), 78l(i), 78o-4(c)(5), 78q, 78q-1 and 78w; 31 U.S.C. 5318.

2. Appendix A to part 208 is amended by revising the last paragraph in 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. Appendix A to part 208 is amended by revising the section III.E. heading and section III.E.1. to read as follows:

* * * * *

III. * * *

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

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

I. Interest Rate Contracts

A. Single currency interest rate swaps.
B. Basis swaps.
C. Forward rate agreements.
D. Interest rate options purchased (including caps, collars, and floors purchased).
E. Any other instrument that gives rise to similar credit risks (including when-issued securities and forward deposits accepted).

II. Exchange Rate Contracts

A. Cross-currency interest rate swaps.
B. Forward foreign exchange contracts.
C. Currency options purchased.
D. Any other instrument that gives rise to similar credit risks.

III. Commodity (including precious metal) or Equity Derivative Contracts

A. Commodity or equity linked swaps.
B. Commodity or equity linked options purchased.
C. Forward commodity or equity linked contracts.
D. Any other instrument that gives rise to similar credit risks.

(b) Exchange rate contracts with an original maturity of fourteen calendar days or less and derivative contracts traded on exchanges that require daily payment of variation margin may be excluded from the risk-based ratio calculation. Over-the-counter options purchased, however, are included and treated in the same way as other derivative contracts.

* * * * *

4. In appendix A to part 208, section III.E.2. and section III.E.3., as those sections were proposed to be revised at 59 FR 26461, May 20, 1994, are revised to read as follows:

* * * * *

III. * * *

E. * * *

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 over the remaining life 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 both underlying rates, prices, and indices, and counterparty credit quality.

(c) The potential future credit exposure of a contract, including contracts with negative mark-to-market values, is estimated by multiplying the notional principal amount of the contract by one of the following credit conversion factors, as appropriate:

CONVERSION FACTOR MATRIX*

[Amounts in percent]

Residual maturity	Interest rate	Exchange rate and gold	Equity**	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

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

(d) 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.

(e) 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:

(1) 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 perform due to any of the following events: default, insolvency, bankruptcy, or similar circumstances.

(2) 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,

[40] 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.

liquidation or similar circumstances, the relevant court and administrative authorities would find the bank's exposure to be such a 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 that governs the individual contracts covered by the netting contract; and

(iii) the law that governs the netting contract.

(3) 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.

(4) The bank maintains in its files documentation adequate to support the netting of rate 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.[49]

(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 Federal Reserve. Upon determination by the Federal Reserve 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 section III.E.3.(a)(2) (i) through (iii) 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 for 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.

(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 sum of the estimates of potential future exposure for all individual contracts subject to the netting contract (A_{gross}), adjusted to reflect the effects of the netting contract (A_{net}), is determined through application of a formula. The formula, which employs the ratio of the net current exposure to the gross current exposure (NGR), is expressed as:

$$A_{net}=.5(A_{gross}+(NGR\times A_{gross}))$$

(g) 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.[50] 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 III.E.2. of this appendix A. The effect of this treatment is that A_{net} is the average of A_{gross} and A_{gross} adjusted by the NGR.

* * * * *

5. Appendix A to part 208 is amended by revising section III.E.4. to read as follows:

* * * * *

III. * * *

E. * * *

4. *Risk weights.* (a) Once the credit equivalent amount for a derivative contract, or a group of derivative contracts subject to a qualifying netting contract, has been determined, that amount is assigned to the risk weight category appropriate to the counterparty, or, if relevant, the guarantor or the nature of any collateral.[51] However, the maximum weight that will be applied to the credit equivalent amount of such contracts is 50 percent.

* * * * *

6. In appendix A to part 208, section III.E.5., as that section was proposed to be revised at 59 FR 26461, May 20, 1994, is revised to read as follows:

* * * * *

III. * * *

E. * * *

5. *Avoidance of double counting.* (a) 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 banks' risk-based capital ratios.

(b) Examples of the calculation of credit equivalent amounts for these types of contracts are contained in Attachment V of this appendix A.

* * * * *

7. In appendix A to part 208, Attachment V, as that attachment was proposed to be revised at 59 FR 26462, May 20, 1994, is revised to read as follows:

* * * * *

ATTACHMENT V—CALCULATION OF CREDIT EQUIVALENT AMOUNTS FOR DERIVATIVE CONTRACTS

Type of contract (remaining maturity)	Potential exposure + Current exposure = Credit equivalent amount					
	Notional principal (dollars)	Conversion factor	Potential exposure (dollars)	Mark-to-market value	Current exposure (dollars)	
(1) 120-day forward foreign exchange	5,000,000	01	50,000	100,000	100,000	150,000
(2) 6-year forward foreign exchange	6,000,000	.075	450,000	−120,000	0	450,000
(3) 3-year interest rate swap	10,000,000	.005	50,000	200,000	200,000	250,000
(4) 1-year oil swap	10,000,000	.12	1,200,000	−250,000	0	1,200,000
(5) 7-year interest rate swap	20,000,000	.05	1,000,000	−1,300,000	0	1,000,000
Total			2,750,000		300,000	3,050,000

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

[49] 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.

[50] For purposes of calculating gross 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.

[51] 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.

	Potential future exposure (from above)		Net Current exposure [1]		Credit equivalent amount
(1)	50,000				
(2)	450,000				
(3)	50,000				
(4)	1,200,000				
(5)	1,000,000				
Total	2,750,000	+	0	=	2,750,000

[1] 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.

To recognize the effects of netting on potential future exposure the following formula applies: Anet=.5(Agross+(NGR×Agross.)

In the above example: NGR=0 (0/300,000) Anet=.5(2,750,000+(0×2,750,000)) Anet=1,375,000.

Credit equivalent amount: 1,375,000+0=1,375,000.

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) Anet=.5(2,750,000+(.67×2,750,000)) Anet=2,296,250.

Credit Equivalent amount: 2,296,250+200,000=2,496,250.

* * * * *

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, 1831i, 1843(c)(8), 1844(b), 1972(l), 3106, 3108, 3310, 3331-3351, 3907, and 3909.

2. Appendix A to part 225 is amended by revising the last paragraph in 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. Appendix A to part 225 is amended by revising the section III.E. heading and section III.E.1. to read as follows:

* * * * *

III. * * *

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

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

I. Interest Rate Contracts

A. Single currency interest rate swaps.
B. Basis swaps.
C. Forward rate agreements.
D. Interest rate options purchased (including caps, collars, and floors purchased).
E. Any other instrument that gives rise to similar credit risks (including when-issued securities and forward deposits accepted).

II. Exchange Rate Contracts

A. Cross-currency interest rate swaps.
B. Forward foreign exchange contracts.
C. Currency options purchased.
D. Any other instrument that gives rise to similar credit risks.

III. Commodity (including precious metal) or Equity Derivative Contracts

A. Commodity or equity linked swaps.
B. Commodity or equity linked options purchased.
C. Forward commodity or equity linked contracts.
D. Any other instrument that gives rise to similar credit risks.

(b) Exchange rate contracts with an original maturity of fourteen calendar days or less and derivative contracts traded on exchanges that require daily payment of variation margin may be excluded from the risk-based ratio calculation. Over-the-counter options purchased, however, are included and treated in the same way as other derivative contracts.

* * * * *

4. In appendix A to part 225, section III.E.2. and section III.E.3., as those sections were proposed to be revised at 59 FR 26463, May 20, 1994, are revised to read as follows:

* * * * *

III. * * *

E. * * *

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 over the remaining life 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 both underlying rates and indices, and counterparty credit quality.

(c) The potential future credit exposure of a contract, including contracts with negative mark-to-market values, is estimated by multiplying the notional principal amount of the contract by one of the following credit conversion factors, as appropriate:

[43] 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.

CONVERSION FACTOR MATRIX *

[Amounts in percent]

Residual maturity	Interest rate	Exchange rate and gold	Equity**	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

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

(d) 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.

(e) 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:

(1) 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 organization 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 perform due to any of the following events: default, insolvency, bankruptcy, or similar circumstances.

(2) 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 organization's exposure to be such a 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 that governs the individual contracts covered by the netting contract; and

(iii) the law that governs the netting contract.

(3) 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.

(4) The banking organization maintains in its files documentation adequate to support the netting of rate 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.[53]

(c) By netting individual contracts for the purpose of calculating its credit equivalent amount, a banking organization represents that it has met the requirements of this appendix A and all the appropriate documents are in the organization's files and available for inspection by the Federal Reserve. Upon determination by the Federal Reserve that a banking organization's files are inadequate or that a netting contract may not be legally enforceable under any one of the bodies of law described in section III.E.3.(a)(2) (i) through (iii) 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 for 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.

(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 sum of the estimates of potential future exposure for all individual contracts subject to the netting contract (A_{gross}), adjusted to reflect the effects of the netting contract (A_{net}), is determined through application of a formula. The formula, which employs the ratio of the net current exposure to the gross current exposure (NGR), is expressed as:

$$A_{net}=.5(A_{gross}+(NGR\times A_{gross}))$$

(g) 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.[54] 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 III.E.2. of this appendix A. The effect of this treatment is that A_{net} is the average of A_{gross} and A_{gross} adjusted by the NGR.

* * * * *

5. Appendix A to part 225 is amended by revising section III.E.4. to read as follows:

* * * * *

III. * * *

E. * * *

4. *Risk weights.* (a) Once the credit equivalent amount for a derivative contract, or a group of derivative contracts subject to a qualifying netting contract, has been determined, that amount is assigned to the risk weight category appropriate to the counterparty, or, if relevant, the guarantor or the nature of any collateral.[55] However, the maximum weight that will be applied to the credit equivalent amount of such contracts is 50 percent.

* * * * *

6. In appendix A to part 225, section III.E.5., as that section was proposed to be revised at 59 FR 26463, May 20, 1994, is revised to read as follows:

* * * * *

III. * * *

E. * * *

5. *Avoidance of double counting.* (a) In certain cases, credit exposures arising from the derivative contracts covered by these guidelines may already be reflected, in part,

[53] 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.

[54] For purposes of calculating gross 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.

[55] 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.

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 banks' risk-based capital ratios.

(b) Examples of the calculation of credit equivalent amounts for these types of contracts are contained in Attachment V of this appendix A.

* * * * *

7. In appendix A to part 225, Attachment V, as that attachment was proposed to be revised at 59 FR 26464, May 20, 1994, is revised to read as follows:

* * * * *

ATTACHMENT V—CALCULATION OF CREDIT EQUIVALENT AMOUNTS FOR DERIVATIVE CONTRACTS

Type of contract (remaining maturity)	Potential Exposure + Current Exposure = Credit Equivalent Amount					
	Notional principal (dollars)	Conversion factor	Potential exposure (dollars)	Mark-to-market value	Current exposure (dollars)	
(1) 120-day forward foreign exchange	5,000,000	.01	50,000	100,000	100,000	150,000
(2) 6-year forward foreign exchange	6,000,000	.075	450,000	−120,000	0	450,000
(3) 3-year interest rate swap	10,000,000	.005	50,000	200,000	200,000	250,000
(4) 1-year oil swap	10,000,000	.12	1,200,000	−250,000	0	1,200,000
(5) 7-year interest rate swap	20,000,000	.05	1,000,000	−1,300,000	0	1,000,000
Total			2,750,000		300,000	3,050,000

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 [1]		Credit Equivalent Amount
(1)	50,000				
(2)	450,000				
(3)	50,000				
(4)	1,200,000				
(5)	1,000,000				
Total	2,750,000	+	0	=	2,750,000

[1] 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.

To recognize the effects of netting on potential future exposure the following formula applies: Anet=.5(Agross+(NGR×Agross).

In the above example: NGR=0 (0/300,000) Anet=.5(2,750,000+(0×2,750,000)) Anet=1,375,000.

Credit equivalent amount: 1,375,000+0=1,375,000.

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) Anet=.5(2,750,000+(.67×2,750,000)) Anet=2,296,250.

Credit equivalent amount: 2,296,250+200,000=2,496,250.

* * * * *

By the order of the Board of Governors of the Federal Reserve System, August 16, 1994.

William W. Wiles,

Secretary of the Board.

[FR Doc.94-20506 Filed 8-23-94 8:45am]

BILLING CODE 6210-01-P