

risk-based capital requirements specified in § 932.2 and § 932.3 of this chapter, respectively, and each member shall comply with the minimum investment established in the capital plan, as of the effective date of that Bank's capital plan. The effective date of a Bank's capital plan shall be the date on which the Bank first issues any Class A or Class B stock. Prior to the effective date, the issuance and retention of Bank stock shall be as provided in § 925.20 and § 925.22 of this chapter.

(b) *Transition period.* (1) *Bank transition.* A Bank that will not be in compliance with the minimum leverage and risk-based capital requirements specified in § 932.2 and § 932.3 of this chapter as of the effective date of its capital plan shall maintain compliance with the leverage limit requirements in § 966.3(a) of this chapter and shall include in its capital plan a description of the steps that the Bank will take to achieve compliance with the minimum capital requirements specified in § 932.2 and § 932.3 of this chapter. The period of time for compliance with the minimum capital requirements shall be stated in the plan and shall not exceed three years from the effective date of the capital plan. When the Bank has achieved compliance with the leverage requirement of § 932.2 of this chapter, the leverage limit requirements of § 966.3(a) of this chapter shall cease to apply to that Bank.

(2) *Member transition.* (i) *Existing members.* A Bank's capital plan shall require any institution that was a member on November 12, 1999, and whose investment in Bank stock as of the effective date of the capital plan will be less than the minimum investment required by the plan, to comply with the minimum investment by a date specified in the Bank's capital plan. The length of the transition period shall be specified in the capital plan and shall not exceed three years. The capital plan shall describe the actions that the existing members are required to take to achieve compliance with the minimum investment, and may require such members to purchase additional Bank stock periodically over the course of the transition period.

(ii) *New members.* A Bank's capital plan shall require any institution that

became a member after November 12, 1999, but prior to the effective date of the capital plan, to comply with the minimum investment specified in the Bank's capital plan as of the effective date of the plan. A Bank's capital plan shall require any institution that becomes a member after the effective date of the capital plan, to comply with the minimum investment upon becoming a member.

(3) *New business.* A Bank's capital plan shall require any member that obtains an advance or other services from the Bank, or that initiates any other business activity with the Bank against which the Bank is required to hold capital, after the effective date of the capital plan to comply with the minimum investment specified in the Bank's capital plan for such advance, services, or activity at the time the transaction occurs.

## PART 932—FEDERAL HOME LOAN BANK CAPITAL REQUIREMENTS

### Sec.

- 932.1 Risk management.
- 932.2 Total capital requirement.
- 932.3 Risk-based capital requirement.
- 932.4 Credit risk capital requirement.
- 932.5 Market risk capital requirement.
- 932.6 Operations risk capital requirement.
- 932.7 Reporting requirements.
- 932.8 Minimum liquidity requirements.
- 932.9 Limits on unsecured extensions of credit to one counterparty or affiliated counterparties; reporting requirements for total extensions of credit to one counterparty or affiliated counterparties.

AUTHORITY: 12 U.S.C. 1422a(a)(3), 1422b(a), 1426, 1440, 1443, 1446.

SOURCE: 66 FR 8310, Jan. 30, 2001, unless otherwise noted.

### § 932.1 Risk management.

Before its new capital plan may take effect, each Bank shall obtain the approval of the Finance Board for the internal market risk model or the internal cash flow model used to calculate the market risk component of its risk-based capital requirement, and for the risk assessment procedures and controls (whether established as part of its risk management policy or otherwise) to be used to manage its credit, market, and operations risks.

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### § 932.2 Total capital requirement.

(a) Each Bank shall maintain at all times:

(1) Total capital in an amount at least equal to 4.0 percent of the Bank's total assets; and

(2) A leverage ratio of total capital to total assets of at least 5.0 percent of the Bank's total assets. For purposes of determining the leverage ratio, total capital shall be computed by multiplying the Bank's permanent capital by 1.5 and adding to this product all other components of total capital.

(b) For reasons of safety and soundness, the Finance Board may require an individual Bank to have and maintain a greater amount of total capital than mandated by paragraph (a)(1) of this section.

### § 932.3 Risk-based capital requirement.

(a) Each Bank shall maintain at all times permanent capital in an amount at least equal to the sum of its credit risk capital requirement, its market risk capital requirement, and its operations risk capital requirement, calculated in accordance with §§ 932.4, 932.5 and 932.6, respectively.

(b) For reasons of safety and soundness, the Finance Board may require an individual Bank to have and maintain a greater amount of permanent capital than required by paragraph (a) of this section.

### § 932.4 Credit risk capital requirement.

(a) *General requirement.* Each Bank's credit risk capital requirement shall be equal to the sum of the Bank's credit risk capital charges for all assets, off-balance sheet items and derivative contracts.

(b) *Credit risk capital charge for assets.* Except as provided in paragraph (i) of this section, each Bank's credit risk capital charge for an asset shall be equal to the book value of the asset multiplied by the credit risk percentage requirement assigned to that asset pursuant to paragraph (e)(2) of this section.

(c) *Credit risk capital charge for off-balance sheet items.* Each Bank's credit risk capital charge for an off-balance sheet item shall be equal to the credit equivalent amount of such item, as de-

termined pursuant to paragraph (f) of this section multiplied by the credit risk percentage requirement assigned to that item pursuant to paragraph (e)(2) of this section, except that the credit risk percentage requirement applied to the credit equivalent amount for a stand-by letter of credit shall be that for an advance with the same remaining maturity as that stand-by letter of credit.

(d) *Credit risk capital charge for derivative contracts.* (1) *Derivative contracts with non-member counterparties.* Except as provided in paragraph (j) of this section, each Bank's credit risk capital charge for a specific derivative contract entered into between a Bank and a non-member institution shall equal the sum of:

(i) The current credit exposure for the derivative contract, calculated in accordance with paragraph (g) or (h) of this section, as applicable, multiplied by the credit risk percentage requirement assigned to that derivative contract pursuant to paragraph (e)(2) of this section, provided that:

(A) The remaining maturity of the derivative contract shall be deemed to be less than one year for the purpose of applying Table 1.1 or 1.3 of this part; and

(B) Any collateral held against an exposure from the derivative contract shall be applied to reduce the portion of the credit risk capital charge corresponding to the current credit exposure in accordance with the requirements of paragraph (e)(2)(ii)(B) of this section; plus

(ii) The potential future credit exposure for the derivative contract calculated in accordance with paragraph (g) or (h) of this section, as applicable, multiplied by the credit risk percentage requirement assigned to that derivative contract pursuant to paragraph (e)(2) of this section, where the actual remaining maturity of the derivative contract is used to apply Table 1.1 or Table 1.3 of this part.

(2) *Derivative contracts with a member.* Except as provided in paragraph (j) of this section, the credit risk capital charge for any derivative contract entered into between a Bank and one of its member institutions shall be calculated in accordance with paragraph

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(d)(1) of this section. However, the credit risk percentage requirements used in the calculations shall be found in Table 1.1 of this part, which sets forth the credit risk percentage requirements for advances.

(e) *Determination of credit risk percentage requirements*—(1) *Finance Board determination of credit risk percentage requirements.* The Finance Board shall determine, and update periodically, the credit risk percentage requirements set forth in Tables 1.1 through 1.4 of this part applicable to a Bank's assets, off-balance sheet items, and derivative contracts.

(2) *Bank determination of credit risk percentage requirements.* (i) Each Bank shall determine the credit risk percentage requirement applicable to each asset, each off-balance sheet item and each derivative contract by identifying the category set forth in Table 1.1, Table 1.2, Table 1.3 or Table 1.4 of this part to which the asset, item or derivative belongs, given, if applicable, its demonstrated credit rating and remaining maturity (as determined in accordance with paragraphs (e)(2)(ii) and (e)(2)(iii) of this section). The applicable credit risk percentage requirement for an asset, off-balance sheet item or derivative contract shall be used to calculate the credit risk capital charge for such asset, item, or derivative contract in accordance with paragraphs (b), (c) or (d) of this section respectively. The relevant categories and credit risk percentage require-

ments are provided in the following Tables 1.1 through 1.4 of this part:

**TABLE 1.1.—REQUIREMENT FOR ADVANCES**

Type of advances	Percentage applicable to advances
Advances with:	
Remaining maturity <= 4 years .....	0.07
Remaining maturity > 4 years to 7 years .....	0.20
Remaining maturity > 7 years to 10 years .....	0.30
Remaining maturity > 10 years .....	0.35

**TABLE 1.2.—REQUIREMENT FOR RATED RESIDENTIAL MORTGAGE ASSETS**

Type of residential mortgage asset	Percentage applicable to residential mortgage assets
Highest Investment Grade .....	0.37
Second Highest Investment Grade .....	0.60
Third Highest Investment Grade .....	0.86
Fourth Highest Investment Grade .....	1.20
If Downgraded to Below Investment Grade After Acquisition By Bank:	
Highest Below Investment Grade .....	2.40
Second Highest Below Investment Grade .....	4.80
All Other Below Investment Grade .....	34.00
Subordinated Classes of Mortgage Assets:	
Highest Investment Grade .....	0.37
Second Highest Investment Grade .....	0.60
Third Highest Investment Grade .....	1.60
Fourth Highest Investment Grade .....	4.45
If Downgraded to Below Investment Grade After Acquisition By Bank:	
Highest Below Investment Grade .....	13.00
Second Highest Below Investment Grade .....	34.00
All Other Below Investment Grade .....	100.00

**TABLE 1.3.—REQUIREMENT FOR RATED ASSETS OR RATED ITEMS OTHER THAN ADVANCES OR RESIDENTIAL MORTGAGE ASSETS**

[Based on remaining maturity]

	Applicable percentage				
	≤ 1 year	>1 yr to 3 yrs	>3 yrs to 7yrs	>7 yrs to 10 yrs	>10 yrs
U.S. Government Securities .....	0.00	0.00	0.00	0.00	0.00
Highest Investment Grade .....	0.15	0.40	0.90	1.40	2.20
Second Highest Investment Grade .....	0.20	0.45	1.00	1.45	2.30
Third Highest Investment Grade .....	0.70	1.10	1.60	2.05	2.95
Fourth Highest Investment Grade .....	2.50	3.70	4.45	5.50	7.05
If Downgraded Below Investment Grade After Acquisition by Bank:					
Highest Below Investment Grade .....	10.00	13.00	13.00	13.00	13.00
Second Highest Below Investment Grade .....	26.00	34.00	34.00	34.00	34.00
All Other .....	100.00	100.00	100.00	100.00	100.00

TABLE 1.4.—REQUIREMENT FOR UNRATED ASSETS

Type of unrated asset	Applicable percentage
Cash .....	0.00
Premises, Plant, and Equipment .....	8.00
Investments Under § 940.3(e) & (f) .....	8.00

(ii) When determining the applicable credit risk percentage requirement from Tables 1.2 or 1.3 of this part, each Bank shall apply the following criteria:

(A) For assets or items that are rated directly by an NRSRO, the credit rating shall be the NRSRO’s credit rating for the asset or item as determined in accordance with paragraph (e)(2)(iii) of this section.

(B) When using Table 1.3 of this part, for an asset, off-balance sheet item, or derivative contract that is not rated directly by an NRSRO, but for which an NRSRO rating has been assigned to any corresponding obligor counterparty, third party guarantor, or collateral backing the asset, item, or derivative, the credit rating that shall apply to the asset, item, or derivative, or portion of the asset, item, or derivative so guaranteed or collateralized, shall be the credit rating corresponding to such obligor counterparty, third party guarantor, or underlying collateral, as determined in accordance with paragraph (e)(2)(iii) of this section. If there are multiple obligor counterparties, third party guarantors, or collateral instruments backing an asset, item, or derivative not rated directly by an NRSRO, or any specific portion thereof, then the credit rating that shall apply to that asset, item, or derivative or specific portion thereof, shall be the highest credit rating among such obligor counterparties, third party guarantors, or collateral instruments, as determined in accordance with paragraph (e)(2)(iii) of this section. Assets, items or derivatives shall be deemed to be backed by collateral for purposes of this paragraph if the collateral is:

(1) Actually held by the Bank or an independent, third-party custodian, or, if permitted under the Bank’s collateral agreement with such party, by the Bank’s member or an affiliate of that member where the term “affiliate” has

the same meaning as in § 950.1 of this chapter;

(2) Legally available to absorb losses;

(3) Of a readily determinable value at which it can be liquidated by the Bank;

(4) Held in accordance with the provisions of the Bank’s member products policy established pursuant to § 917.4 of this chapter; and

(5) Subject to an appropriate discount to protect against price decline during the holding period, as well as the costs likely to be incurred in the liquidation of the collateral.

(C) When using Table 1.3 of this part, for an asset with a short-term credit rating from a given NRSRO, the credit risk percentage requirement shall be based on the remaining maturity of the asset and the long-term credit rating provided for the issuer of the asset by the same NRSRO. Should the issuer of the short-term asset not have a long-term credit rating, the long-term equivalent rating shall be determined as follows:

(1) The highest short-term credit rating shall be equivalent to the third highest long-term rating;

(2) The second highest short-term rating shall be equivalent to the fourth highest long-term rating;

(3) The third highest short-term rating shall be equivalent to the fourth highest long-term rating; and

(4) If the short-term rating is downgraded to below investment grade after acquisition by the Bank, the short-term rating shall be equivalent to the second highest below investment grade long-term rating.

(D) For residential mortgage assets and other assets or items, or relevant portion of an asset or item, that do not meet the requirements of paragraphs (e)(2)(ii)(A), (e)(2)(ii)(B) or (e)(2)(ii)(C) of this section, and are not identified in Tables 1.1 or Table 1.4 of this part, each Bank shall determine its own credit rating for such assets or items, or relevant portion thereof, using credit rating standards available from an NRSRO or other similar standards. This credit rating, as determined by the Bank, shall be used to identify the applicable credit risk percentage requirement under Table 1.2 of this part for residential mortgage assets, or

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under Table 1.3 of this part for all other assets or items.

(E) The credit risk percentage requirement for mortgage assets that are acquired member assets described in §955.2 of this chapter shall be assigned from Table 1.2 of this part based on the rating of those assets after taking into account any credit enhancement required by §955.3 of this chapter. Should a Bank further enhance a pool of loans through the purchase of insurance or by some other means, the credit risk percentage requirement shall be based on the rating of such pool after the supplemental credit enhancement, except that the Finance Board retains the right to adjust the credit capital charge to account for any deficiencies with the supplemental enhancement on a case-by-case basis.

(iii) In determining the credit ratings under paragraph (e)(2)(ii)(A), (e)(2)(ii)(B) and (e)(2)(ii)(C) of this section, each Bank shall apply the following criteria:

(A) The most recent credit rating from a given NRSRO shall be considered. If only one NRSRO has rated an asset or item, that NRSRO's rating shall be used. If an asset or item has received credit ratings from more than one NRSRO, the lowest credit rating from among those NRSROs shall be used.

(B) Where a credit rating has a modifier (*e.g.*, A-1+ for short-term ratings and A+ or A- for long-term ratings) the credit rating is deemed to be the credit rating without the modifier (*e.g.*, A-1+ = A-1 and A+ or A- = A);

(f) *Calculation of credit equivalent amount for off-balance sheet items.* (1) *General requirement.* The credit equivalent amount for an off-balance sheet item shall be determined by a Finance Board approved model or shall be equal to the face amount of the instrument multiplied by the credit conversion factor assigned to such risk category of instruments, subject to the exceptions in paragraph (f)(2) of this section, provided in the following Table 2 of this part:

**TABLE 2—CREDIT CONVERSION FACTORS FOR OFF-BALANCE SHEET ITEMS**

Instrument	Credit conversion factor (In percent)
Asset sales with recourse where the credit risk remains with the Bank .....	100
Commitments to make advances subject to certain drawdown.	
Commitments to acquire loans subject to certain drawdown.	
Standby letters of credit .....	50
Other commitments with original maturity of over one year.	
Other commitments with original maturity of one year or less .....	20

(2) *Exceptions.* The credit conversion factor shall be zero for Other Commitments With Original Maturity of Over One Year and Other Commitments With Original Maturity of One Year or Less, for which credit conversion factors of 50 percent or 20 percent would otherwise apply, that are unconditionally cancelable, or that effectively provide for automatic cancellation, due to the deterioration in a borrower's creditworthiness, at any time by the Bank without prior notice.

(g) *Calculation of current and potential future credit exposures for single derivative contracts.* (1) *Current credit exposure.* The current credit exposure for a derivative contract that is not subject to a qualifying bilateral netting contract described in paragraph (h)(3) of this section shall be:

(i) If the mark-to-market value of the contract is positive, the mark-to-market value of the contract; or (ii) If the mark-to-market value of the contract is zero or negative, zero.

(2) *Potential future credit exposure.* (i) The potential future credit exposure for a single derivative contract, including a derivative contract with a negative mark-to-market value, shall be calculated using an internal model approved by the Finance Board or, in the alternative, by multiplying the effective notional amount of the derivative contract by one of the assigned credit conversion factors, modified as may be required by paragraph (g)(2)(ii) of this section, for the appropriate category as provided in the following Table 3 of this part:

TABLE 3.—CREDIT CONVERSION FACTORS FOR POTENTIAL FUTURE CREDIT EXPOSURE DERIVATIVE CONTRACTS  
[In percent]

Residual maturity	Interest rate	Foreign exchange and gold	Equity	Precious metals except gold	Other commodities
One year or less .....	0	1	6	7	10
Over 1 year to five years .....	.5	5	8	7	12
Over five years .....	1.5	7.5	10	8	15

(ii) In applying the credit conversion factors in Table 3 of this part the following modifications shall be made:

(A) For derivative contracts with multiple exchanges of principal, the conversion factors are multiplied by the number of remaining payments in the derivative contract; and

(B) For derivative contracts that automatically reset to zero value following a payment, the residual 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.

(iii) If a Bank uses an internal model to determine the potential future credit exposure for a particular type of derivative contract, the Bank shall use the same model for all other similar types of contracts. However, the Bank may use an internal model for one type of derivative contract and Table 3 of this part for another type of derivative contract.

(iv) Forwards, swaps, purchased options and similar derivative contracts not included in the Interest Rate, Foreign Exchange and Gold, Equity, or Precious Metals Except Gold categories shall be treated as other commodities contracts when determining potential future credit exposures using Table 3 of this part.

(v) If a Bank uses Table 3 of this part to determine the potential future credit exposures for credit derivative contracts, the credit conversion factors provided in Table 3 for equity contracts shall also apply to the credit derivative contracts entered into with investment grade counterparties. If the counterparty is downgraded to below investment grade, the credit conversion factor provided in Table 3 of this

part for other commodity contracts shall apply.

(h) *Calculation of current and potential future credit exposures for multiple derivative contracts subject to a qualifying bilateral netting contract*—(1) Current credit exposure. The current credit exposure for multiple derivative contracts executed with a single counterparty and subject to a qualifying bilateral netting contract described in paragraph (h)(3) of this section, shall be calculated on a net basis and shall equal:

(i) 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 values is positive; or

(ii) Zero, if the net sum of the mark-to-market values is zero or negative.

(2) *Potential future credit exposure.* The potential future credit exposure for each individual derivative contract from among a group of derivative contracts that are executed with a single counterparty and subject to a qualifying bilateral netting contract described in paragraph (h)(3) of this section shall be calculated as follows:

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

where:

(i)  $A_{\text{net}}$  is the potential future credit exposure for an individual derivative contract subject to the qualifying bilateral netting contract;

(ii)  $A_{\text{gross}}$  is the gross potential future credit exposure, *i.e.*, the potential future credit exposure for the individual derivative contract, calculated in accordance with paragraph (g)(2) of this section but without regard to the fact that the contract is subject to the qualifying bilateral netting contract;

(iii) NGR is the net to gross ratio, *i.e.*, the ratio of the net current credit

exposure of all the derivative contracts subject to the qualifying bilateral netting contract, calculated in accordance with paragraph (h)(1) of this section, to the gross current credit exposure; and

(iv) The gross current credit exposure is the sum of the positive current credit exposures of all the individual derivative contracts subject to the qualifying bilateral netting contract, calculated in accordance with paragraph (g)(1) of this section but without regard to the fact that the contract is subject to the qualifying bilateral netting contract.

(3) *Qualifying bilateral netting contract.* A bilateral netting contract shall be considered a qualifying bilateral netting contract if the following conditions are met:

(i) The netting contract is in writing;

(ii) The netting contract is not subject to a walkaway clause;

(iii) The netting contract provides that the Bank would have a single legal 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 netting contract in the event that a counterparty, or a counterparty to whom the netting contract has been assigned, fails to perform due to default, insolvency, bankruptcy, or other similar circumstance;

(iv) The Bank obtains a written and reasoned legal opinion 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:

(A) The law of the jurisdiction by which the counterparty is chartered or the equivalent location in the case of non-corporate entities, and if a branch of the counterparty is involved, then also under the law of the jurisdiction in which the branch is located;

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

(C) The law of the jurisdiction that governs the netting contract;

(v) The Bank establishes and maintains procedures to monitor possible changes in relevant law and to ensure that the netting contract continues to satisfy the requirements of this section; and

(vi) The Bank maintains in its files documentation adequate to support the netting of a derivative contract.

(i) *Credit risk capital charge for assets hedged with credit derivatives*—(1) Credit derivatives with a remaining maturity of one year or more. The credit risk capital charge for an asset that is hedged with a credit derivative that has a remaining maturity of one year or more may be reduced only in accordance with paragraph (i)(3) or (i)(4) of this section and only if the credit derivative provides substantial protection against credit losses.

(2) *Credit derivatives with a remaining maturity of less than one year.* The credit risk capital charge for an asset that is hedged with a credit derivative that has a remaining maturity of less than one year may be reduced only in accordance with paragraph (i)(3) of this section and only if the remaining maturity on the credit derivative is identical to or exceeds the remaining maturity of the hedged asset and the credit derivative provides substantial protection against credit losses.

(3) *Capital charge reduced to zero.* The credit risk capital charge for an asset shall be zero if a credit derivative is used to hedge the credit risk on that asset in accordance with paragraph (i)(1) or (i)(2) of this section, provided that:

(i) The remaining maturity for the credit derivative used for the hedge is identical to or exceeds the remaining maturity for the hedged asset, and either:

(A) The asset referenced in the credit derivative is identical to the hedged asset; or

(B) The asset referenced in the credit derivative is different from the hedged asset, but only if the asset referenced in the credit derivative and the hedged asset have been issued by the same obligor, the asset referenced in the credit derivative ranks *pari passu* to or more junior than the hedged asset and has the same maturity as the hedged asset, and cross-default clauses apply; and

(ii) The credit risk capital charge for the credit derivative contract calculated pursuant to paragraph (d) of this section is still applied.

(4) *Capital charge reduction in certain other cases.* The credit risk capital charge for an asset hedged with a credit derivative in accordance with paragraph (i)(1) of this section shall equal the sum of the credit risk capital charges for the hedged and unhedged portion of the asset provided that:

(i) The remaining maturity for the credit derivative is less than the remaining maturity for the hedged asset and either:

(A) The asset referenced in the credit derivative is identical to the hedged asset; or

(B) The asset referenced in the credit derivative is different from the hedged asset, but only if the asset referenced in the credit derivative and the hedged asset have been issued by the same obligor, the asset referenced in the credit derivative ranks *pari passu* to or more junior than the hedged asset and has the same maturity as the hedged asset, and cross-default clauses apply; and

(ii) The credit risk capital charge for the unhedged portion of the asset equals:

(A) The credit risk capital charge for the hedged asset, calculated as the book value of the hedged asset multiplied by the hedged asset's credit risk percentage requirement assigned pursuant to paragraph (e)(2) of this section where the appropriate credit rating is that for the hedged asset and the appropriate maturity is the remaining maturity of the hedged asset; minus

(B) The credit risk capital charge for the hedged asset, calculated as the book value of the hedged asset multiplied by the hedged asset's credit risk percentage requirement assigned pursuant to paragraph (e)(2) of this section where the appropriate credit rating is that for the hedged asset but the appropriate maturity is deemed to be the remaining maturity of the credit derivative; and

(iii) The credit risk capital charge for the hedged portion of the asset is equal to the credit risk capital charge for the credit derivative, calculated in accordance with paragraph (d) of this section.

(j) *Zero Credit risk capital charge for certain derivative contracts.* The credit risk capital charge for the following derivative contracts shall be zero:

(1) A foreign exchange rate contract with an original maturity of 14 calendar days or less (gold contracts do not qualify for this exception); and

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

(k) *Date of calculations.* Unless otherwise directed by the Finance Board, each Bank shall perform all calculations required by this section using the assets, off-balance sheet items, and derivative contracts held by the Bank, and, if applicable, the values or credit ratings of such assets, items, or derivatives as of the close of business of the last business day of the month for which the credit risk capital charge is being calculated.

[66 FR 8310, Jan. 30, 2001, as amended at 66 FR 54108, Oct. 26, 2001]

#### § 932.5 Market risk capital requirement.

(a) *General requirement.* (1) Each Bank's market risk capital requirement shall equal the sum of:

(i) The market value of the Bank's portfolio at risk from movements in interest rates, foreign exchange rates, commodity prices, and equity prices that could occur during periods of market stress, where the market value of the Bank's portfolio at risk is determined using an internal market risk model that fulfills the requirements of paragraph (b) of this section and that has been approved by the Finance Board; and

(ii) The amount, if any, by which the Bank's current market value of total capital is less than 85 percent of the Bank's book value of total capital, where:

(A) The current market value of the total capital is calculated by the Bank using the internal market risk model approved by the Finance Board under paragraph (d) of this section; and

(B) The book value of total capital is the same as the amount of total capital reported by the Bank to the Finance Board under § 932.7 of this part.

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(2) A Bank may substitute an internal cash flow model to derive a market risk capital requirement in place of that calculated using an internal market risk model under paragraph (a)(1) of this section, provided that:

(i) The Bank obtains Finance Board approval of the internal cash flow model and of the assumptions to be applied to the model; and

(ii) The Bank demonstrates to the Finance Board that the internal cash flow model subjects the Bank's assets and liabilities, off-balance sheet items and derivative contracts, including related options, to a comparable degree of stress for such factors as will be required for an internal market risk model.

(b) *Measurement of market value at risk under a Bank's internal market risk model.* (1) Except as provided under paragraph (a)(2) of this section, each Bank shall use an internal market risk model that estimates the market value of the Bank's assets and liabilities, off-balance sheet items, and derivative contracts, including any related options, and measures the market value of the Bank's portfolio at risk of its assets and liabilities, off-balance sheet items, and derivative contracts, including related options, from all sources of the Bank's market risks, except that the Bank's model need only incorporate those risks that are material.

(2) The Bank's internal market risk model may use any generally accepted measurement technique, such as variance-covariance models, historical simulations, or Monte Carlo simulations, for estimating the market value of the Bank's portfolio at risk, provided that any measurement technique used must cover the Bank's material risks.

(3) The measures of the market value of the Bank's portfolio at risk shall include the risks arising from the non-linear price characteristics of options and the sensitivity of the market value of options to changes in the volatility of the options' underlying rates or prices.

(4) The Bank's internal market risk model shall use interest rate and market price scenarios for estimating the market value of the Bank's portfolio at risk, but at a minimum:

(i) The Bank's internal market risk model shall provide an estimate of the market value of the Bank's portfolio at risk such that the probability of a loss greater than that estimated shall be no more than one percent;

(ii) The Bank's internal market risk model shall incorporate scenarios that reflect changes in interest rates, interest rate volatility, and shape of the yield curve, and changes in market prices, equivalent to those that have been observed over 120-business day periods of market stress. For interest rates, the relevant historical observations should be drawn from the period that starts at the end of the previous month and goes back to the beginning of 1978;

(iii) The total number of, and specific historical observations identified by the Bank as, stress scenarios shall be:

(A) Satisfactory to the Finance Board;

(B) Representative of the periods of the greatest potential market stress given the Bank's portfolio, and

(C) Comprehensive given the modeling capabilities available to the Bank; and

(iv) The measure of the market value of the Bank's portfolio at risk may incorporate empirical correlations among interest rates.

(5) For any consolidated obligations denominated in a currency other than U.S. Dollars or linked to equity or commodity prices, each Bank shall, in addition to fulfilling the criteria of paragraph (b)(4) of this section, calculate an estimate of the market value of its portfolio at risk due to the material foreign exchange, equity price or commodity price risk, such that, at a minimum:

(i) The probability of a loss greater than that estimated shall not exceed one percent;

(ii) The scenarios reflect changes in foreign exchange, equity, or commodity market prices that have been observed over 120-business day periods of market stress, as determined using historical data that is from an appropriate period; and

(iii) The total number of, and specific historical observations identified by the Bank as, stress scenarios shall be:

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(A) Satisfactory to the Finance Board;

(B) Representative of the periods of greatest potential stress given the Bank's portfolio; and

(C) Comprehensive given the modeling capabilities available to the Bank; and

(iv) The measure of the market value of the Bank's portfolio at risk may incorporate empirical correlations within or among foreign exchange rates, equity prices, or commodity prices.

(c) *Independent validation of Bank internal market risk model or internal cash flow model.* (1) Each Bank shall conduct an independent validation of its internal market risk model or internal cash flow model within the Bank that is carried out by personnel not reporting to the business line responsible for conducting business transactions for the Bank. Alternatively, the Bank may obtain independent validation by an outside party qualified to make such determinations. Validations shall be done on an annual basis, or more frequently as required by the Finance Board.

(2) The results of such independent validations shall be reviewed by the Bank's board of directors and provided promptly to the Finance Board.

(d) *Finance Board approval of Bank internal market risk model or internal cash flow model.* Each Bank shall obtain Finance Board approval of an internal market risk model or an internal cash flow model, including subsequent material adjustments to the model made by the Bank, prior to the use of any model. Each Bank shall make such adjustments to its model as may be directed by the Finance Board.

(e) *Date of calculations.* Unless otherwise directed by the Finance Board, each Bank shall perform any calculations or estimates required under this section using the assets and liabilities, off-balance sheet items, and derivative contracts held by the Bank, and if applicable, the values of any such holdings, as of the close of business of the last business day of the month for which the market risk capital requirement is being calculated.

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### § 932.6 Operations risk capital requirement.

(a) *General requirement.* Except as authorized under paragraph (b) of this section, each Bank's operations risk capital requirement shall at all times equal 30 percent of the sum of the Bank's credit risk capital requirement and market risk capital requirement.

(b) *Alternative requirements.* With the approval of the Finance Board, each Bank may have an operations risk capital requirement equal to less than 30 percent but no less than 10 percent of the sum of the Bank's credit risk capital requirement and market risk capital requirement if:

(1) The Bank provides an alternative methodology for assessing and quantifying an operations risk capital requirement; or

(2) The Bank obtains insurance to cover operations risk from an insurer rated at least the second highest investment grade credit rating by an NRSRO.

### § 932.7 Reporting requirements.

Each Bank shall report to the Finance Board by the 15th business day of each month its risk-based capital requirement by component amounts, and its actual total capital amount and permanent capital amount, calculated as of the close of business of the last business day of the preceding month, or more frequently, as may be required by the Finance Board.

### § 932.8 Minimum liquidity requirements.

In addition to meeting the deposit liquidity requirements contained in § 965.3 of this chapter, each Bank shall hold contingency liquidity in an amount sufficient to enable the Bank to meet its liquidity needs, which shall, at a minimum, cover five business days of inability to access the consolidated obligation debt markets. An asset that has been pledged under a repurchase agreement cannot be used to satisfy minimum liquidity requirements.

**§ 932.9 Limits on unsecured extensions of credit to one counterparty or affiliated counterparties; reporting requirements for total extensions of credit to one counterparty or affiliated counterparties.**

(a) *Unsecured extensions of credit to single counterparty.* (1) *General requirement.* Unsecured extensions of credit by a Bank to a single counterparty that arise from the Bank's on-and off-balance sheet transactions shall not exceed the product of the maximum capital exposure limit applicable to such counterparty, as set forth in paragraph (a)(2) and Table 4 of this part, multiplied by the lesser of:

- (i) The Bank's total capital; or
- (ii) The counterparty's Tier 1 capital, or if Tier 1 capital is not available, total capital (as defined by the counterparty's principal regulator) or some similar comparable measure identified by the Bank.

(2) *Bank determination applicable maximum exposure limits.* The applicable maximum capital exposure limits for specific counterparties are assigned to each counterparty based upon the credit rating of the counterparty, as determined in accordance with paragraph (a)(3) of this section, and are provided in the following Table 4 of this part:

TABLE 4.—MAXIMUM LIMITS ON UNSECURED EXTENSIONS OF CREDIT TO A SINGLE COUNTERPARTY BY COUNTERPARTY CREDIT RATING CATEGORY

Credit rating of counterparty category	Maximum capital exposure limit (in percent)
Highest Investment Grade .....	15
Second Highest Investment Grade .....	12
Third Highest Investment Grade .....	6
Fourth Highest Investment Grade .....	1.5
Below Investment Grade or Other .....	1

(3) *Bank determination of applicable credit ratings.* In determining the applicable credit rating category under Table 4 of this part, the following criteria shall be applied:

- (i) The most recent credit rating from a given NRSRO shall be considered. If only one NRSRO has rated the counterparty, that NRSRO's rating shall be used. If a counterparty has received credit ratings from more than one NRSRO, the lowest credit rating

from among those NRSROs shall be used;

(ii) Where a credit rating has a modifier, the credit rating is deemed to be the credit rating without the modifier;

(iii) If a counterparty has received different credit ratings for its transactions with short-term and long-term maturities:

(A) The higher credit rating shall apply for purposes of determining the allowable maximum capital exposure limit applicable to the total amount of unsecured credit extended by the Bank to such counterparty; and

(B) The lower credit rating shall apply for purposes of determining the allowable maximum capital exposure limit applicable to the amount of unsecured credit extended by the Bank to such counterparty for the transactions with maturities governed by that rating.

(iv) If a counterparty is placed on a credit watch for a potential downgrade by an NRSRO, the credit rating from that NRSRO at the next lower grade shall be used; and

(v) If a counterparty is not rated by a NRSRO, the Bank shall determine the applicable credit rating by using credit rating standards available from an NRSRO or other similar standards.

(b) *Unsecured extensions of credit to affiliated counterparties.* The total amount of unsecured extensions of credit by a Bank to all affiliated counterparties shall not exceed the product of the maximum capital exposure limit provided under Table 4 of this part based upon the highest credit rating of the affiliated counterparties, as determined in accordance with paragraph (a)(3) of this section, multiplied by the lesser of:

- (1) The Bank's total capital; or
- (2) The combined Tier 1 capital, or if Tier 1 capital is not available, the combined total capital (as defined by each affiliated counterparty's principal regulator) or some similar comparable measure identified by the Bank, of all of the affiliated counterparties.

(c) *Reporting requirements—(1) Total unsecured extensions of credit.* Each Bank shall report monthly to the Finance Board the amount of the Bank's total unsecured extensions of credit arising from on- and off-balance sheet

transactions to any single counterparty or group of affiliated counterparties that exceeds 5 percent of:

- (i) The Bank's total capital; or
- (ii) The counterparty's, or affiliated counterparties' combined, Tier 1 capital, or if Tier 1 capital is not available, total capital (as defined by each counterparty's principal regulator) or some similar comparable measure identified by the Bank.

(2) *Total secured and unsecured extensions of credit.* Each Bank shall report monthly to the Finance Board the amount of the Bank's total secured and unsecured extensions of credit arising from on- or off-balance sheet transactions to any single counterparty or group of affiliated counterparties that exceeds 5 percent of the Bank's total assets.

EFFECTIVE DATE NOTE: At 66 FR 66728, Dec. 27, 2001, §932.9 was revised, effective March 27, 2002. For the convenience of the user, the revised text is set forth as follows:

**§932.9 Limits on unsecured extensions of credit to one counterparty or affiliated counterparties; reporting requirements for total extensions of credit to one counterparty or affiliated counterparties.**

(a) *Unsecured extensions of credit to a single counterparty.* A Bank shall not extend unsecured credit to any single counterparty (other than a GSE) in an amount that would exceed the limits of this paragraph. A Bank shall not extend unsecured credit to a GSE in an amount that would exceed the limits set forth in paragraph (c) of this section. If a third-party provides an irrevocable, unconditional guarantee of repayment of a credit (or any part thereof), the third-party guarantor shall be considered the counterparty for purposes of calculating and applying the unsecured credit limits of this section with respect to the guaranteed portion of the transaction.

(1) *Term limits.* All unsecured extensions of credit by a Bank to a single counterparty that arise from the Bank's on- and off-balance sheet and derivative transactions (but excluding the amount of sales of federal funds with a maturity of one day or less and sales of federal funds subject to a continuing contract) shall not exceed the product of the maximum capital exposure limit applicable to such counterparty, as determined in accordance with paragraph (a)(4) of this section and Table 4 of this part, multiplied by the lesser of:

- (i) The Bank's total capital; or
- (ii) The counterparty's Tier 1 capital, or if Tier 1 capital is not available, total capital

(as defined by the counterparty's principal regulator) or some similar comparable measure identified by the Bank.

(2) *Overall limits including sales of overnight federal funds.* All unsecured extensions of credit by a Bank to a single counterparty that arise from the Bank's on- and off-balance sheet and derivative transactions, including the amounts of sales of federal funds with a maturity of one day or less and sales of federal funds subject to a continuing contract, shall not exceed twice the limit calculated pursuant to paragraph (a)(1) of this section.

(3) *Limits for certain obligations issued by state, local or tribal governmental agencies.* The term limit set forth in paragraph (a)(1) of this section when applied to the marketable direct obligations of state, local or tribal government unit or agencies that are acquired member assets identified in §955.2(a)(3) of this chapter or are otherwise excluded from the prohibition against investments in whole mortgages or whole loan or interests in such mortgages or loans by §956.3(a)(4)(iii) of this chapter shall be calculated based on the Bank's total capital and the credit rating assigned to the particular obligation as determined in accordance with paragraph (a)(5) of this section. If a Bank owns series or classes of obligations issued by a particular state, local or tribal government unit or agency or has extended other forms of unsecured credit to such entity falling into different rating categories, the total amount of unsecured credit extended by the Bank to that government unit or agency shall not exceed the term limit associated with the highest-rated obligation issued by the entity and actually purchased by the Bank.

(4) *Bank determination of applicable maximum capital exposure limits.* (i) Except as set forth in paragraph (a)(4)(ii) or (a)(4)(iii) of this section, the applicable maximum capital exposure limits are assigned to each counterparty based upon the long-term credit rating of the counterparty, as determined in accordance with paragraph (a)(5) of this section, and are provided in the following Table 4 of this part:

TABLE 4.—MAXIMUM LIMITS ON UNSECURED EXTENSIONS OF CREDIT TO A SINGLE COUNTERPARTY BY COUNTERPARTY LONG-TERM CREDIT RATING CATEGORY

Long-term credit rating of counterparty category	Maximum capital exposure limit (in percent)
Highest Investment Grade .....	15
Second Highest Investment Grade .....	14
Third Highest Investment Grade .....	9
Fourth Highest Investment Grade .....	3
Below Investment Grade or Other .....	1

(ii) If a counterparty does not have a long-term credit rating but has received a short-term credit rating from an NRSRO, the maximum capital exposure limit applicable to that counterparty shall be based upon the short-term credit rating, as determined in accordance with paragraph (a)(5) of this section, as follows:

(A) The highest short-term investment grade credit rating shall correspond to the maximum capital exposure limit provided in Table 4 of this part for the third highest long-term investment grade rating;

(B) The second highest short-term investment grade rating shall correspond to the maximum capital exposure limit provided in Table 4 of this part for the fourth highest long-term investment grade rating; and

(C) The third highest short-term investment grade rating shall correspond to the maximum capital exposure limit provided in Table 4 of this part for the fourth highest long-term investment grade rating.

(iii) If a specific debt obligation issued by a counterparty receives a credit rating from an NRSRO that is lower than the counterparty's long-term credit rating, the total amount of the lower-rated obligation held by the Bank may not exceed a sub-limit calculated in accordance with paragraph (a)(1) of this section, except that the Bank shall use the credit rating associated with the specific obligation to determine the applicable maximum capital exposure limit. For purposes of this paragraph, the credit rating of the debt obligation shall be determined in accordance with paragraph (a)(5) of this section.

(5) *Bank determination of applicable credit ratings.* The following criteria shall be applied to determine a counterparty's credit rating:

(i) The counterparty's most recent credit rating from a given NRSRO shall be considered;

(ii) If only one NRSRO has rated the counterparty, that NRSRO's rating shall be used. If a counterparty has received credit ratings from more than one NRSRO, the lowest credit rating from among those NRSROs shall be used;

(iii) Where a credit rating has a modifier, the credit rating is deemed to be the credit rating without the modifier;

(iv) If a counterparty is placed on a credit watch for a potential downgrade by an NRSRO, the credit rating from that NRSRO at the next lower grade shall be used; and

(v) If a counterparty is not rated by an NRSRO, the Bank shall determine the applicable credit rating by using credit rating standards available from an NRSRO or other similar standards.

(b) *Unsecured extensions of credit to affiliated counterparties.* (1) *In general.* The total amount of unsecured extensions of credit by a Bank to a group of affiliated

counterparties that arise from the Bank's on- and off-balance sheet and derivative transactions, including sales of federal funds with a maturity of one day or less and sales of federal funds subject to a continuing contract, shall not exceed thirty percent of the Bank's total capital.

(2) *Relation to individual limits.* The aggregate limits calculated under this paragraph shall apply in addition to the limits on extensions of unsecured credit to a single counterparty imposed by paragraph (a) of this section.

(c) *Special limits for GSEs.* (1) *In general.* Unsecured extensions of credit by a Bank to a GSE that arise from the Bank's on- and off-balance sheet and derivative transactions, including from the purchase of any subordinated debt subject to the sub-limit set forth in paragraph (c)(2) of this section, from any sales of federal funds with a maturity of one day or less and from sales of federal funds subject to a continuing contract, shall not exceed the lesser of:

(i) The Bank's total capital; or

(ii) The GSE's total capital (as defined by the GSE's principal regulator) or some similar comparable measure identified by the Bank.

(2) *Sub-limit for subordinated debt.* The maximum amount of subordinated debt issued by a GSE and held by a Bank shall not exceed the term limit calculated under paragraph (a)(1) of this section, except that a Bank shall use the credit rating of the GSE's subordinated debt to determine the applicable maximum capital exposure limit. The credit rating of the subordinated debt shall be determined in accordance with paragraph (a)(5) of this section.

(3) *Limits applying to a GSE after a downgrade.* If any NRSRO assigns a credit rating to any senior debt obligation issued (or to be issued) by a GSE that is below the highest investment grade or downgrades, or places on a credit watch for a potential downgrade of the credit rating on any senior unsecured obligation issued by a GSE to below the highest investment grade, the special limits on unsecured extensions of credit under paragraph (c)(1) of this section shall cease to apply, and instead, the Bank shall calculate the maximum amount of its unsecured extensions of credit to that GSE in accordance with paragraphs (a)(1) and (a)(2) of this section.

(4) *Extensions of unsecured credit to other Banks.* The limits of this section do not apply to unsecured credit extended by one Bank to another Bank.

(d) *Extensions of unsecured credit after downgrade or placement on credit watch.* If an NRSRO downgrades the credit rating applicable to any counterparty or places any counterparty on a credit watch for a potential downgrade, a Bank need not unwind or

liquidate any existing transaction or position with that counterparty that complied with the limits of this section at the time it was entered. In such a case, however, a Bank may extend any additional unsecured credit to such a counterparty only in compliance with the limitations that are calculated using the lower maximum exposure limits. For the purposes of this section, the renewal of an existing unsecured extension of credit, including any decision not to terminate any sales of federal funds subject to a continuing contract, shall be considered an additional extension of unsecured credit that can be undertaken only in accordance with the lower limit.

(e) *Reporting requirements.* (1) *Total unsecured extensions of credit.* Each Bank shall report monthly to the Finance Board the amount of the Bank's total unsecured extensions of credit arising from on- and off-balance sheet and derivative transactions to any single counterparty or group of affiliated counterparties that exceeds 5 percent of:

- (i) The Bank's total capital; or
- (ii) The counterparty's, or affiliated counterparties' combined, Tier 1 capital, or if Tier 1 capital is not available, total capital (as defined by each counterparty's principal regulator) or some similar comparable measure identified by the Bank.

(2) *Total secured and unsecured extensions of credit.* Each Bank shall report monthly to the Finance Board the amount of the Bank's total secured and unsecured extensions of credit arising from on- and off-balance sheet and derivative transactions to any single counterparty or group of affiliated counterparties that exceeds 5 percent of the Bank's total assets.

(3) *Extensions of credit in excess of limits.* A Bank shall report promptly to the Finance Board any extensions of unsecured credit that exceeds any limit set forth in paragraphs (a), (b) or (c) of this section. In making this report, a Bank shall provide the name of the counterparty or group of affiliated counterparties to which the excess unsecured credit has been extended, the dollar amount of the applicable limit which has been exceeded, the dollar amount by which the Bank's extension of unsecured credit exceeds such limit, the dates for which the Bank was not in compliance with the limit, and, if applicable, a brief explanation of any extenuating circumstances which caused the limit to be exceeded.

(f) *Measurement of unsecured extensions of credit.* (1) *In general.* For purposes of this section, unsecured extensions of credit will be measured as follows:

- (i) For on-balance sheet transactions, an amount equal to the sum of the book value of the item plus net payments due the Bank;
- (ii) For off-balance sheet transactions, an amount equal to the credit equivalent

amount of such item, calculated in accordance with §932.4(f) of this part; and

(iii) For derivative transactions, an amount equal to the sum of the current and potential future credit exposures for the derivative contract, where those values are calculated in accordance with §§932.4(g) or 932.4(h) of this part, as applicable, less the amount of any collateral that is held in accordance with the requirements of §932.4(e)(2)(ii)(B) of this part against the credit exposure from the derivative contract.

(2) *Status of debt obligations purchased by the Bank.* Any debt obligation or debt security (other than mortgage-backed securities or acquired member assets that are identified in §§955.2(a)(1) and (2) of this chapter) purchased by a Bank shall be considered an unsecured extension of credit for the purposes of this section, except:

(i) Any amount owed the Bank against which the Bank holds collateral in accordance with §932.4(e)(2)(ii)(B) of this part; or

(ii) Any amount which the Finance Board has determined on a case-by-case basis shall not be considered an unsecured extension of credit.

(g) *Obligations of the United States.* Obligations of, or guaranteed by, the United States are not subject to the requirements of this section.

## PART 933—BANK CAPITAL STRUCTURE PLANS

Sec.

- 933.1 Submission of plan.
- 933.2 Contents of plan.
- 933.3 Independent review of capital plan.
- 933.4 Transition provisions.
- 933.5 Disclosure to members concerning capital plan and capital stock conversion.

AUTHORITY: 12 U.S.C. 1422a(a)(3), 1422b(a), 1426, 1440, 1443, 1446.

SOURCE: 66 FR 8310, Jan. 30, 2001, unless otherwise noted.

### §933.1 Submission of plan.

(a) *In general.* By no later than October 29, 2001, the board of directors of each Bank shall submit to the Finance Board a plan to establish and implement a new capital structure for that Bank, which plan shall comply with part 931 of this chapter and under which, when implemented, the Bank shall have sufficient total and permanent capital to comply with the regulatory capital requirements established by part 932 of this chapter. The Finance Board, upon a demonstration of good cause submitted by the board of