



FEDERAL RESERVE BANK OF DALLAS

2200 N. PEARL ST.
DALLAS, TX 75201-2272

March 5, 2003

Notice 03-14

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

SUBJECT

Risk Management and Valuation of Mortgage Servicing Assets Arising from Mortgage Banking Activities

DETAILS

The Federal Reserve, along with the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Office of Thrift Supervision, has issued an interagency advisory on mortgage banking. The advisory highlights various supervisory concerns regarding the valuation and hedging of mortgage servicing assets and similar mortgage banking assets. It also provides supervisory guidance on sound risk management practices regarding valuation and modeling processes, management information systems, and internal audit as applied to mortgage banking activities.

ATTACHMENT

A copy of the Board's SR Letter 03-4 dated February 25, 2003, is attached.

MORE INFORMATION

For more information, please contact Gayle Teague, Banking Supervision Department, (214) 922-6151. Paper copies of this notice or previous Federal Reserve Bank notices can be printed from our web site at <http://www.dallasfed.org/banking/notices/index.html>.



BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM
WASHINGTON, D. C. 20551

DIVISION OF BANKING
SUPERVISION AND REGULATION

SR 03-4
February 25, 2003

**TO THE OFFICER IN CHARGE OF SUPERVISION AND APPROPRIATE SUPERVISORY AND EXAMINATION
STAFF AT EACH FEDERAL RESERVE BANK AND TO DOMESTIC AND FOREIGN BANKING
ORGANIZATIONS SUPERVISED BY THE FEDERAL RESERVE**

**SUBJECT: Risk Management and Valuation of Mortgage Servicing Assets Arising from Mortgage Banking
Activities**

The Federal Reserve, along with the Office of the Comptroller of the Currency, the Federal Deposit Insurance Corporation, and the Office of Thrift Supervision (the agencies), issued the attached [Interagency Advisory on Mortgage Banking](#). The advisory highlights various supervisory concerns regarding the valuation and hedging of mortgage servicing assets (MSAs) and similar mortgage banking assets. It also provides supervisory guidance on sound risk management practices regarding valuation and modeling processes, management information systems, and internal audit as applied to mortgage banking activities.

Background

The findings of recent examinations at some banking organizations that engage in mortgage banking and mortgage servicing activities suggest the need for enhanced rigor in the specification and documentation of the underlying assumptions, models, and modeling processes used to value MSAs. The need for improvement in specific areas varies by institution and depends to a large extent on the materiality of the positions involved.

In particular, some institutions may need more rigorous processes for validating their MSA valuation models and underlying model assumptions, incorporating available market data in their valuations, amortizing remaining MSA cost bases, and evaluating MSAs for impairment. In addition, some institutions may require more robust processes in adequately characterizing, supporting the inclusion of, and estimating certain benefits of mortgage servicing activities as ancillary income. Some institutions also may need to enhance the risk management controls surrounding their mortgage banking operations and MSAs. Such improvements may entail greater segregation of duties between valuation, hedging, and accounting functions, and greater consistencies in the assumptions used for valuing, hedging, and pricing in mortgage-related activities.

Risk Management Guidance

As set forth in the attached guidance, the agencies expect institutions to conduct all aspects of their mortgage-banking operations in a safe and sound manner and consistent with sound risk management practices. Institutions are expected to take into account the potential exposure of both earnings and capital to changes in mortgage banking assets and operations under expected and stressed market conditions. The practices advanced in the interagency advisory supplement and expand upon existing Federal Reserve supervisory guidance on interest rate risk management, mortgage-banking, and financial modeling.¹

In general, management should ensure that detailed policies, procedures, and limits are in place to monitor and control mortgage banking activities, including loan production, pipeline (unclosed loans), and warehouse (closed loans) administration, secondary market transactions, servicing operations, and management (including hedging) of MSAs. Institutions are expected to have comprehensive documentation that adequately substantiates and validates both the carrying values of their MSAs and the underlying assumptions used to derive these values. Institutions should have documented analyses and processes that adequately support the amortization and timely recognition of impairment of their MSAs.

Management information reports should provide comprehensive and accurate information on the institution's mortgage banking operations and MSAs. Senior management and the board should be aware of and focus on key risks, profitability and accounting and valuation practices. Given the risks inherent in these activities, internal auditors should review the risks of and controls over an institution's mortgage banking operations on an on-going basis.

Scope and Applicability

The attached guidance applies to the mortgage banking activities conducted by state member banks, bank holding companies, Edge corporations and U.S. branches and agencies of foreign banks.² This guidance builds on, supports, and is fully consistent with existing guidance on risk management issued by the Federal Reserve.³

This letter and the attached interagency guidance developed jointly by the agencies should be distributed to state member banks, bank holding companies, and foreign banking organizations supervised by the Federal Reserve. Questions pertaining to this letter should be directed to David Kerns, Supervisory Financial Analyst, Market & Liquidity Risk Section (202) 452-2428; or Arthur Lindo, Project Manager (202) 452-2695, or Greg Eller, Project Manager, (202) 452-5277, Accounting Policy and Regulatory Reporting Section.

Richard Spillenkothen
Director

Attachment: [Interagency Advisory on Mortgage Banking](#) (72 KB PDF)

Cross References: SR letters [99-37](#), [97-21](#), [96-40](#), [96-14](#), and [95-51](#)
Section 3010 of the *Trading and Capital Markets Activities Manual*
Section 3010 of the *Bank Holding Company Supervision Manual*

Notes:

1. See section 3010, Interest Rate Risk Management, and section 3020, Securitization and Secondary Market Credit Activities, in the *Trading and Capital Markets Activities Manual*, and section 3070, Mortgage Banking, of the *Bank Holding Company Supervision Manual*.
2. This guidance applies to U.S. branches and agencies of foreign banks with recognition that appropriate adaptation may be necessary to reflect that: 1) those offices are an integral part of a foreign bank, which should be managing its risks on a consolidated basis and recognizing potential obstacles to cash movements among branches, and 2) the foreign bank is subject to overall supervision by its home country authorities.
3. For a more detailed discussion of risk management, refer to [SR letter 99-37](#), "Risk Management and Valuation of Retained Interests Arising from Securitization Activities;" [SR letter 97-21](#), "Risk Management and Capital Adequacy of Exposures Arising from Secondary Market Credit Activities;" [SR letter 96-40](#), "Interim Guidance for Purposes of Applying FAS 125 for Regulatory Reporting in 1997 and for the Treatment of Servicing Assets for Regulatory Capital;" [SR letter 96-14](#), "Risk-focused Safety and Soundness Examinations and Inspections;" and [SR letter 95-51](#), "Rating the Adequacy of Risk Management Processes and Internal Controls at State Member Banks and Bank Holding Companies."

**Office of the Comptroller of the Currency
Federal Deposit Insurance Corporation
Board of Governors of the Federal Reserve System
Office of Thrift Supervision**

INTERAGENCY ADVISORY ON MORTGAGE BANKING

Background and Purpose

The purpose of this advisory letter is to highlight concerns and provide guidance regarding mortgage-banking activities, primarily in the valuation and hedging of mortgage-servicing assets (MSAs). While the number of institutions with significant exposure to mortgage-banking assets is limited, mortgage banking is a growing business line for many institutions. Mortgage production volume increased significantly over the past two years as interest rates fell to record lows and refinancing activity reached an all-time high. Many borrowers have been attracted to new lending products by innovative, low-cost lending programs, widespread use of automated underwriting, and increased competition among banks, thrifts, and other financial institutions. This high volume of mortgage activity exposes institutions to a number of risks. This guidance focuses on risks associated with valuation and modeling processes, hedging activities, management information systems, and internal audit processes in connection with mortgage banking.¹

Servicing is inherent in all financial assets; it becomes a distinct asset or liability only when contractually separated from the underlying financial assets by sale or securitization of the assets with servicing retained or by a separate purchase or assumption of the servicing. To help manage the interest rate, liquidity, and credit risks inherent in mortgages, many institutions sell these loans into the secondary market (e.g., to the Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, the Federal Home Loan Banks, and private sector issuers and investors). In such mortgage loan sales, institutions often retain the servicing and recognize MSAs, which are complex and volatile assets subject to interest rate risk. MSAs can become impaired when interest rates fall and borrowers refinance or prepay their mortgage loans. This impairment can lead to earnings volatility and erosion of capital, if the risks inherent in the MSAs have not been properly hedged.

Institutions are expected to follow Financial Accounting Standards Board Statement No. 140, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities"

¹ Mortgage banking activities also present a range of other issues, including credit underwriting and compliance risks, that are not covered by this advisory.

(FAS 140), when accounting for MSAs. In summary, FAS 140 requires the following accounting treatment for servicing assets (including MSAs):²

- Initially record servicing assets at fair value, presumably the price paid if purchased, or at their allocated carrying amount based on relative fair values if retained in a sale or securitization;³
- Amortize servicing assets in proportion to, and over the period of, estimated net servicing income; and
- Stratify servicing assets based on one or more of the predominant risk characteristics of the underlying financial assets, assess the strata for impairment based on fair value, and report them on the balance sheet at the lower of unamortized cost or fair value through the use of valuation allowances.

Fair value is defined in FAS 140 as the amount at which an asset could be bought or sold in a current transaction between willing parties, that is, other than in a forced or liquidation sale. Quoted market prices in active markets for similar assets provide the best evidence of fair value and must be used as the basis for the measurement, if available. If quoted market prices are not available, the estimate of fair value must be based on the best information available. The estimate of fair value must consider prices for similar assets and the results of valuation techniques to the extent available.

Examination Concerns

The banking agencies expect institutions involved in mortgage-servicing operations to use market-based assumptions that are reasonable and supportable in estimating the fair value of servicing assets. Although consolidation in the mortgage-servicing industry has reduced the number of MSA purchase and sale transactions, a significant volume of MSAs continue to be traded, which can provide an indication of comparable fair value for similar assets. Specifically, bulk, flow, and daily MSA/loan pricing activities observed in the market should be evaluated to ensure that an institution's MSA valuation assumptions are reasonable and consistent with market activity for similar assets. Many financial institutions also use models to estimate the fair value of their MSAs and substantiate their modeled estimate of MSA fair value by comparing the model output to general or high-level peer surveys. Such a comparison, however, is often

² Further guidance on the accounting for servicing assets and liabilities can be found in the instructions for the Reports of Condition and Income (Call Report) and Thrift Financial Report (TFR); FAS 140 FASB Staff Implementation Guide; AICPA Statement on Auditing Standards 101, "Auditing Fair Value Measurements and Disclosures"; and the Office of the Comptroller of the Currency's Bank Accounting Advisory Series.

³ FAS 140 indicates: "Typically, the benefits of servicing are expected to be more than adequate compensation to a servicer for performing the servicing, and the contract results in a servicing asset. However, if the benefits of servicing are not expected to adequately compensate a servicer for performing the servicing, the contract results in a servicing liability."

performed without adequate consideration of the specific attributes of the institution's own MSAs. The following concerns have been noted in recent examinations of mortgage-banking activities; examiners should consider these items as an indication that additional scrutiny is necessary:

- The use of unsupported prepayment speeds, discount rates, and other assumptions in MSA valuation models. Assumptions are unsupported when they are not benchmarked to market participants' assumptions and the institution's actual portfolio performance across each product type.
- Questionable, inappropriate, or unsupported items in the valuation models. Examples include retention benefits,⁴ deferred tax benefits, captive reinsurance premiums, and income from cross-selling activities. The inclusion of these items in the MSA valuation must be appropriate under generally accepted accounting principles (GAAP) and must also be consistent with what a willing buyer would pay for the mortgage-servicing contract. For example, when the inclusion of retention benefits as part of the MSA valuation is not adequately supported with market data, such inclusion will result in an overstatement of reported mortgage-servicing assets, and therefore will be deemed an unsafe and unsound practice.
- Disregard of comparable market data coupled with over-reliance on peer group surveys as a means of supporting assumptions and the fair value of MSAs. Management may use survey data for comparative purposes; however, it is not a measure of or substitute for fair value.
- Frequent changing of assumptions from period to period with no compelling reason for the change, and undocumented policies and procedures relating to the MSA valuation process and oversight of that process.
- Inconsistencies in MSA valuation assumptions used in valuation, bidding, pricing, and hedging activities as well as, where relevant, in mortgage-related activities in other aspects of an institution's business.
- Poor segregation of duties from an organizational perspective between the valuation, hedging, and accounting functions.
- Failure to properly stratify MSAs for impairment testing purposes. FAS 140 requires MSAs to be stratified based on one or more of the predominant risk characteristics of the underlying mortgage loans. Such characteristics may include financial asset type, size, interest rate, origination date, term, and geographic location. Institutions are expected to identify a sufficient number of risk characteristics to adequately stratify each MSA and provide for a reasonable and valid impairment assessment. Stratification practices that ignore predominant risk characteristics are a supervisory concern.

⁴ Retention benefits arise from the portion of the serviced portfolio that is expected to be refinanced with the institution in the future.

- Inadequate amortization of the remaining cost basis of MSAs, particularly during periods of high prepayments. Inadequate amortization often occurs because prepayment models are not adequately calibrated to periods of high prepayments. When these models underestimate runoff, the amount and period of estimated net servicing income are overstated.
- Continued use of a valuation allowance for the impairment of a stratum of MSAs when repayment of the underlying loans at a rate faster than originally projected indicates the existence of an impairment for which a direct write-down should be recorded.
- Failure to assess actual cash flow performance. The actual cash flows received from the serviced portfolio must be established in order to determine the benefit of MSAs to the institution.
- Failure to validate or update models for new information. Inaccuracies in valuation models can result in erroneous MSA values and affect future hedging performance. Models should be inventoried and periodically revalidated, including an independent assessment of all key assumptions.

Risk Management Activities

The banking agencies expect institutions to perform mortgage-banking operations in a safe and sound manner. Management should ensure that detailed policies and procedures are in place to monitor and control mortgage-banking activities, including loan production, pipeline (unclosed loans) and warehouse (closed loans) administration, secondary market transactions, servicing operations, and management (including hedging) of mortgage-servicing assets. Reports and limits should focus on key risks, profitability, and proper accounting practices.

MSAs possess interest rate-related option characteristics that may weaken an institution's earnings and capital strength when interest rates change. Accordingly, institutions engaged in mortgage-banking activities should fully comply with all aspects of their primary federal regulator's policy on interest rate risk.⁵ In addition, institutions with significant mortgage-banking operations or mortgage-servicing assets should incorporate these activities into their critical planning processes and risk management oversight. The planning process should include careful consideration of how the mortgage banking activities affect the institution's overall strategic, business, and asset/liability plans. Risk management considerations include the potential exposure of both earnings and capital to changes in the value and performance of mortgage banking assets under expected and stressed market conditions. Furthermore, an institution's board of directors should establish limits on investments in mortgage banking assets and evaluate and monitor such investment concentrations (on the basis of both asset and capital levels) on a regular basis.

⁵ For national banks, state member banks, and insured state nonmember banks, refer to the Joint Agency Policy Statement on Interest Rate Risk, 61 Fed. Reg. 33166, June 26, 1996. For savings associations, see Thrift Bulletin 13a, "Management of Interest Rate Risk, Investment Securities, and Derivatives Activities," December 4, 1998.

During examinations of mortgage banking activities, examiners should review mortgage banking policies, procedures and management information systems to ensure that the directors, managers, and auditors are adequately addressing the following matters:

Valuation And Modeling Processes

- Comprehensive documentation standards for all aspects of mortgage banking, including mortgage-servicing assets. In particular, management should substantiate and validate the initial carrying amounts assigned to each pool of MSAs and the underlying assumptions, as well as the results of periodic reviews of each asset's subsequent carrying amount and fair value. The validation process should compare actual performance to predicted performance. Management should ensure proper accounting treatment for MSAs on a continuing basis.
- MSA impairment analyses that use reasonable and supportable assumptions. Analyses should employ realistic estimates of adequate compensation,⁶ future revenues, prepayment speeds, market servicing costs, mortgage default rates, and discount rates. Fair values should be based upon market prices and underlying valuation assumptions for transactions in the marketplace involving similar MSAs. Management should avoid relying solely upon peer group surveys or the use of unsupported assumptions. The agencies encourage institutions to obtain periodic third-party valuations by qualified market professionals to support the fair values of their MSAs and to update internal models.
- Comparison of assumptions used in valuation models to the institution's actual experience in order to substantiate the value of MSAs. Management should measure the actual performance of MSAs by analyzing gross monthly cash flows of servicing assets relative to the assumptions and projections used in each quarterly valuation. In addition, a comparison of the first month's actual cash received on new MSAs to the projected gross cash flows can help validate the reasonableness of initial MSA values prior to the impact of prepayments and discount rates. "Economic value" analysis is a critical tool in understanding the profitability of mortgage-servicing to an institution; however, it is not a substitute for the estimation of the fair value of MSAs under GAAP.
- Review and approval of results and assumptions by management. Given the sensitivity of the MSA valuation to changes in assumptions and valuation policy, any such changes should be reviewed and approved by management and, where appropriate, by the board of directors.
- Comparison of models used throughout the company including valuation, hedging, pricing, and bulk acquisition. Companies often use multiple models and assumption sets in

⁶ As defined in FAS 140, "adequate compensation" is "the amount of benefits of servicing [i.e., revenues from contractually specified servicing fees, late charges, and other ancillary sources] that would fairly compensate a substitute servicer should one be required, which includes the profit that would be demanded in the marketplace."

determining the values for MSAs depending on their purpose (pricing versus valuation). Any inconsistencies between these values should be identified, supported, and reconciled.

- Appropriate amortization practices. Amortization of the remaining cost basis of MSAs should reflect actual prepayment experience. Amortization speeds should correspond to and be adjusted to reflect changes in the estimated remaining net servicing income period.
- Timely recognition of impairment. Institutions must evaluate MSAs for impairment at least quarterly to ensure amounts reported in the Call Report⁷ or TFR⁸ are accurately stated. Institutions will generally be expected to record a direct write-down of MSAs when, and for the amount by which, any portion of the unamortized cost of a mortgage-servicing asset is not likely to be recovered in the future.

Mortgage Banking Hedging Activities

- Systems to measure and control interest rate risk. Hedging activities should be well developed and communicated to responsible personnel. Successful hedging systems will mitigate the impact of prepayments on MSA values and the effects of interest rate risk in the mortgage pipeline and warehouse.
- Approved hedging products and strategies. Management should ensure appropriate systems and internal controls are in place to oversee hedging activities, including monitoring the effectiveness of hedging strategies and reviewing concentrations of hedge instruments and counterparties.
- Hedge accounting policies and procedures. Institutions should ensure their hedge accounting methods are adequately documented and consistent with GAAP.

Management Information Systems

- Accurate financial reporting systems, controls, and limits. At a minimum, the board should receive information on hedged and unhedged positions, mark-to-market analyses, warehouse aging, valuation of MSAs, various rate shock scenario and risk exposures, creation of economic value, and policy exceptions whenever material exposure to MSAs exists.
- Systems that track quality control exceptions. With many institutions processing record volumes of mortgages, transaction risk has increased. Quality control reports should be analyzed to determine credit quality, loan characteristics and demographics, trends, and sources of problems. Sound quality control programs are also beneficial in the early

⁷ Schedule RC-M - Memoranda, Item 2.a.

⁸ Schedule SC - Line SC642.

detection of deteriorating production quality and salability, as well as in the prevention and detection of fraudulent activities.

- Systems that track and collect required mortgage loan documents. As a seller in the secondary market, it is important for institutions to ensure that their mortgage products are salable and comply with investor requirements. Management should ensure adequate control processes are in place for both front-end-closing and post-closing loan documents. If mortgages are not properly documented, an institution may be forced to hold unsold mortgages for extended periods or repurchase mortgages that have been sold. Further, management should ensure that adequate analyses are performed and allowances are established for estimated probable losses arising from documentation deficiencies on closed loans.
- Systems that monitor and manage the risks associated with third-party originated loans. Institutions often originate loans through broker and correspondent channels. Management should ensure prudent risk management systems are in place for broker and correspondent approvals and ongoing monitoring, including controls on the appraisal and credit underwriting process of third-party originated loans. Adequate due diligence of third-party relationships is necessary to help prevent the origination of loans that are of poor credit quality or are fraudulent. Delegated underwriting to brokers or correspondents warrants close supervision from senior management.

Internal Audit

- Adequate internal audit coverage. Because of the variety of risks inherent in mortgage-banking activities, internal auditors should evaluate the risks of and controls over their institution's mortgage banking operations. They should report audit findings, including identified control weaknesses, directly to the audit committee of the board or to the board itself. Board and management should ensure that internal audit staff possesses the necessary qualifications and expertise to review mortgage-banking activities or obtain assistance from qualified external sources.

Summary

In supervising mortgage-banking operations, the primary objective of the banking agencies is to ensure that institutions implement satisfactory policies, procedures, and controls addressing the risks inherent in mortgage-banking activities. Institutions with significant exposures to mortgage-related assets, especially MSAs, should expect greater scrutiny of their mortgage-related activities during examinations. The banking agencies may also require additional capital for institutions that fail to exercise the sound practices set forth in this advisory.