INTRODUCTION

Funds management encompasses both the treasury management and asset/liability management functions. The goal of funds management is to achieve an association's targeted risk and return objectives through the effective management of the association's resources. Funds management is the management of an association's balance sheet mix and pricing of assets and liabilities.

Funds management encompasses the coordination and integration of a broad range of functions, policies, and decisions that influence the association's net interest earnings, net interest margin, and net portfolio value, including the following:

- Asset and liability composition
- Loan and deposit pricing
- Funds transfer pricing policies
- Capital structure and capital financing
- Asset securitizations
- Hedging activities.

An effective funds management process should increase the likelihood that an association will achieve its financial objectives. Successful funds management programs typically have four elements:

- Management that understands how to structure the balance sheet and price deposits, loans, and other products to achieve risk and return objectives.
- A clearly defined funds management process that includes sound policies, procedures, and controls.
- Effective information systems that provide the information needed to make sound funds management decisions.
- An effective performance measurement system.

The sophistication of an association's funds management process and systems should be appropriate to the size and complexity of the association.

In assessing an association's funds management, you should:

- Review the policies, procedure, and controls governing the funds management process.
- Determine whether the policies, procedures, and controls are sufficient given the size and complexity of the association.
- Determine whether the association's information/analytical systems are adequate given the size and complexity of the association.
- Review the reports to the board that summarize major decisions and transactions.
- Determine compliance with policies, procedures, and controls governing funds management.

SETTING FINANCIAL GOALS: THE RISK/RETURN PROFILE

The Risk/Return Tradeoff

The board of directors and senior management should define the association's overall financial objectives with clearly defined risk and return measures.

An association usually states its overall financial objectives regarding return with accounting-based earnings and profitability measures or with economic or market value-based performance measures. In specifying these goals, a number of specific measurement gauges may be appropriate, either individually or in combination.

The most common accounting-based measures are:

- Return on assets
- Return on equity
- Net Interest Margin.

The economic/market value-based measures that associations commonly use are:

- Net portfolio value
- Market value capitalization
- Total return.

Associations sometimes seek to achieve short-term earnings and profitability targets by accepting greater risk and in the process compromise long-term earnings and market value objectives.

THE FUNDS MANAGEMENT DECISION-MAKING PROCESS

You should review the funds management policies and procedures.

- Are the policy limits reasonable given the association's financial condition?
- Is management complying with the board-approved policies?
- Are periodic reports to the board adequate?

An integrated, funds management process is important. A piecemeal approach to funds management, or a structure in which one or more of the financial functions are autonomous, will complicate the attainment of a common overall risk/return profile. The funds management process in small associations may be informal, while in larger associations the process may be very formal.

FUNDS MANAGEMENT FUNCTIONS

Presented below are the functions of the typical funds management process:

- Determine financial objectives and set policy for each of the financial functions.
- Provide periodic reports to the board concerning funds management.
- Periodically review the funds management policies with the board.
- Oversee funding activities.
- Coordinate asset and liability product pricing.
- Evaluate proposed strategies and transactions through sound methodology, including simulation and scenario analysis.
- Oversee investment portfolio management activities.
- Monitor the economic and interest-rate environment, including local economic conditions, prepayment trends, and volatility.
- Identify instruments that the board of directors authorized for use to manage the association's risk exposures.
- Oversee funding and capital financing activities, including debt and equity issuance, and dividend policies.

PROCEDURES AND CONTROLS

If the funds management process is not functioning properly, then you should focus on the related operating procedures and internal controls. Typically in a large association, extensive documented procedures are necessary to accommodate a large volume of data flow from numerous functional areas to the manager responsible for funds management. In smaller associations such complex procedures are not necessary.

Internal Procedures

Associations should document and follow procedures that allow for the smooth and timely flow of data to the funds management function. Flow charts documenting the physical flow of data to and from all departments are usually very informative. Other procedures may be necessary to accommodate the funds management function at certain associations.

Internal Control

In small associations, the lack of adequate internal controls may be more of a concern because one individual will often perform multiple functions. For example, the CFO may direct funds management, but may also execute transactions, oversee the disbursement of cash, and authorize the related accounting entries. Associations should segregate these duties to the extent possible to ensure adequate internal control.

You should verify that internal controls are adequate in the following areas:

- Transaction authorizations – both internal (officers authorized to transact business) and external (approved dealers).
- Position and transaction limits, regulatory requirements or limits, and other guidelines.

REFERENCES

Code of Federal Regulations (12 CFR)

§ 563.172	Financial Derivatives
§ 563.176	Interest Rate Risk Management Procedures

Office of Thrift Supervision Bulletins

RB 3a-1	Policy Statement on Growth for Savings Associations
TB 13a	Management of Interest Rate Risk, Investment Securities, and Derivatives Activities
TB 13a-2	Structured Advances

FFIEC Policy Statements

Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities

Financial Accounting Standards Board (FASB)

No. 107	Disclosures About Fair Value of Financial Instruments
No. 115	Accounting for Certain Investments in Debt and Equity Securities
No. 133	Accounting for Derivative Instruments and Hedging Activities

Other References

Standard & Poor's, Inc. Credit Review

Funds Management
Program

Examination Objectives

Ascertain whether the institution has sufficient funds management policies, procedures, and controls.

Verify that management uses appropriate instruments to manage the institution's risk/return profile.

Examination Procedures

Level I

Wkp. Ref.

1. Review scoping materials applicable to funds management. Due to the nature of the funds management review, consult and coordinate with the examiner(s) assigned to review interest rate risk, cash flow and liquidity management, investment management, and related areas. Discuss the scope of the proposed review with the examiner in charge if needed.

2. Review the previous report of examination and all funds management-related exceptions noted and determine if management has taken appropriate corrective action.

3. Identify the institution's return objectives and risk constraints.

4. Review and evaluate trends in the institution's return on equity, return on assets, and net interest margin. Review the interest rate risk exposure report to evaluate trends in net portfolio value.

5. Review the institution's policies, procedures, and controls regarding funds management. Determine whether objectives are reasonable, and whether risk constraints are prudent given the association's capital and earnings characteristics. Determine whether written policies, procedures, and controls are adequate.

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6. Review applicable board or committee minutes and reports.

7. Determine whether the board of directors and management have a comprehensive funds management process and adequately performs the funds management functions.

8. Evaluate senior management's depth of understanding of the funds management process.

9. Study the flow of data from the functional areas. Review any assumptions the association uses.

10. Review output reports from any analytical models used in funds management. Determine whether they are adequate to fulfill the needs of the funds management function.

11. Determine whether the institution relies excessively on outside vendors or consultants for financial modeling.

12. Review the execution and related documentation of the association's strategies. If there are procedural or control concerns, expand scope to include Level II procedures.

13. Determine compliance with board-approved funds management policies.

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14. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

15. Review related internal procedures and controls in detail. Verify the institution follows all procedures and controls.

16. Determine whether any inaccuracies in or misuse of data or assumptions are contributing to inappropriate or poorly executed funds management decisions.

17. Review the assumptions used in any financial modeling systems. Determine whether the models are appropriate given the association's size and complexity. Perform on-site review of vendor or consultant models, if necessary.

18. Recommend changes in structure, functions, and other aspects of the funds management process, if necessary.

19. Ensure that your review meets the Objectives of this Handbook Section. State your findings and recommendations on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

Exam Date: _____
Prepared By: _____
Reviewed By: _____
Docket #: _____

CHAPTER: Liquidity

SECTION: Liquidity Management Section 530

INTRODUCTION

Liquidity management is the ability to meet financial obligations at a reasonable cost in a timely manner. The essence of liquidity is having cash when you need it. Each association must maintain sufficient liquidity to ensure safe and sound operations.

Liquidity can be thought of as a reservoir of funds that management can readily access to meet funding requirements and business opportunities. Primary sources of liquidity include:

- Liquidity assets (surplus cash and assets that can be quickly converted into cash).
- Liquidity liabilities and unused borrowing capacity (an association's capacity to access the markets for deposits and other wholesale funds).

Liquidity risk is the risk of not having sufficient funds to meet deposit withdrawals and other financial commitments when due. As associations have become more dependent on wholesale funding to meet liquidity needs, liquidity risk has become largely synonymous with funding risk, that is, the risk of being unable to maintain or acquire funds at a reasonable price when needed.

Association-specific problems or systemic disturbances can trigger liquidity problems. Association-specific liquidity problems are usually the result of other problems within an association:

- Poor asset quality.
- Excessive interest rate risk.
- Inadequate capital.
- Operational problems.
- Inadequate cash flow planning.

Systemic liquidity problems may result from a major financial debacle, a crisis, or other catastrophic event.

Liquidity management involves balancing the trade-off between profitability and the risk of illiquidity. Although a high degree of liquidity may be a positive sign since it indicates a capacity to meet obligations and take advantage of business opportunities, too much liquidity in the form of cash and low-earning assets or expensive borrowings can reduce profitability. The key is to find the right balance between liquidity and profitability. That balance will change over time as economic and business conditions change.

Finding the right balance depends in part on management's ability to estimate and manage future cash flows. To manage liquidity, effective managers typically employ the following analytical techniques:

- Maturity gap analysis.
- Cash flow forecasting.
- Scenario planning.

Effective liquidity management, however, starts with the development of written policies and procedures, and the establishment of minimum acceptable levels of liquidity. These policies should clearly define an association's strategy for managing liquidity, delineate areas of management responsibility, and establish a process for measuring, monitoring, and managing liquidity. Each association should also have contingency plans for dealing with unanticipated cash flow disruptions or cash flow needs.

This Section provides an overview of the liquidity management process. It includes a brief description of the various sources of liquidity, a basic explanation of the various techniques for measuring liquidity and estimating future cash flow needs, and a guide for assessing the quality of risk management practices. The Section concludes with a list of early warning signals of potential liquidity problems.

SOURCES OF LIQUIDITY

Liquidity Assets

Savings associations often meet liquidity needs through the sale of liquid assets and the planned runoff of loans and investments. While in theory any asset can serve as a source of liquidity, associations must consider the length of time it takes to dispose of an asset and the price at which it can be sold. Unencumbered assets that an association can sell or borrow against with relative ease without appreciable loss are ideal sources of liquidity.

Liquid assets would generally include deposits with other financial institutions, money market instruments, and short-term, investment-grade securities. In addition, associations may consider as liquid assets other securities and loans that can easily be sold or are about to mature. Because of the time dimension of liquidity, an asset may be a source of liquidity if it matures or can be sold within the time horizon of the need for funds. But as a general rule, assets with shorter maturities or those with a higher quality are more liquid.

Cash and Deposits with Other Institutions

While cash is the essence of liquidity, the cash balances reported on an association's balance sheet are not necessarily available to meet a liquidity shortfall. While a minimum level of operating cash balances is needed for day-to-day transactions (for tellers and ATMs), other cash balances may be in the form of checks or drafts in the process of collection, and are unavailable. Typically only excess cash balances – balances over and above those needed for daily operations and scheduled payments – are considered to be a source of liquidity. However, generally associations do not hold large excess cash balances that are nonearning assets.

Money Market Instruments and Securities

As a practical matter, most associations view their portfolios of money market instruments and investment securities as a primary source of liquidity. Statement of Financial Accounting Standards (SFAS) No. 115, Accounting for Certain Debt and Equity Securities, requires institutions to designate investment securities as either available-for-sale, trading, or held-to-maturity. Securities designated as available-for-sale or trading must be carried on the balance sheet at fair value. Securities designated as held-to-maturity are carried at amortized cost. Thrift Activities Handbook Section 540 discusses accounting for securities.

In general, associations may not sell securities in the held-to-maturity portfolio before maturity without "tainting" the entire portfolio – an event that would cause the entire portfolio of held-to-maturity securities to be reported at fair value. Management should be familiar with SFAS No. 115 and understand the circumstances when they may sell held-to-maturity securities without penalty of tainting. Moreover, management should carefully consider its liquidity needs before designating securities as either available-for-sale, trading, or held-to-maturity.

While the designation of a security as available-for-sale, trading, or held-to-maturity has certain consequences for accounting purposes, it has no bearing on whether the security is liquid in an economic sense. Whether an investment is liquid depends on how easily the holder can sell it in the market. Securities with tight bid-ask spreads are more liquid than those with wide bid-ask spreads.

Securitizations

With adequate planning and certain efficiencies, securitizations can create a more liquid balance sheet as well as leverage origination capacity. However, peculiarities related to certain transactions as well as excessive reliance on securitizations as a single funding vehicle may increase liquidity risk. For example, a concentration or over-reliance on securitizations as a funding source may increase liquidity risk if there are disruptions in the market.

Management should consider securitization's implications on its day-to-day liquidity management and on its contingency planning. Management should analyze the potential effect of securitizations on liquidity from an individual transaction perspective and on an aggregate basis. Associations should make the following determinations when contemplating a securitization transaction:

- The volume of securities scheduled to amortize during any particular period.
- The plans for meeting future funding requirements (including when such requirements may arise).
- The existence of early amortization or increased collateralization triggers.
- The alternatives available for obtaining substantial amounts of liquidity quickly.
- Operational concerns associated with reissuing securities.

In particular, associations that use securitizations to fund credit cards and other revolving credit receivables should prepare for the possible return of receivable balances to the balance sheet because of scheduled or early amortization. Such events may result in large asset pools that require balance sheet funding at unexpected or inopportune times. Management should also factor the maturity and potential funding needs of the receivables into short-term and long-term liquidity planning.

Exposure may also increase if an association minimizes securitization costs by structuring transactions at maturities offering the lowest cost, without regard to maturity concentrations or potential long-term funding requirements. Correlating maturities of incidental securitized transactions with overall planned balance sheet growth may somewhat mitigate this risk.

Associations that originate assets for securitizations may depend heavily on securitization markets to absorb its asset-backed security issues. If the association allocates only enough capital to support a "flow" of assets to the securitization market, it may experience funding difficulties if circumstances in the markets or at a specific institution were to force the association to hold assets on its books.

Associations should have adequate monitoring systems in place so that management is aware well in advance of a potential problem.

Mortgage Loans

As noted above, many savings associations view mortgage loans and other receivables that can easily be sold or are about to mature as liquid assets. In addition, associations with active loan securitization programs generally treat loans that they are about to sell as liquid assets. Because of the time dimension of liquidity, associations may consider an asset that matures or can be easily sold at a fair price within the time horizon of the need for funds as a liquid asset.

Pledged Assets

In assessing liquidity, it is important to know which assets have been pledged to secure borrowings or for other purposes. Pledged assets are not liquid. In addition, it is important to determine which assets are currently unpledged, eligible, and available as collateral to secure borrowings.

Liquidity Liabilities

As an alternative to liquid assets to satisfy liquidity needs, these needs may be met through liability sources such as wholesale borrowings and deposits. A savings association's ability to borrow or attract deposits in the markets is generally a function of its size, reputation, creditworthiness, and capital levels. Access to money markets also depends on prevailing market conditions.

Many financial institutions are increasing their use of wholesale funding, replacing lost retail deposits with funds provided by professional money managers. These funds, however, are generally more sensitive to credit risk and interest rates than retail funds, causing them to pose a greater liquidity risk to the association.

Retail Deposits

Deposits play a critical role in an association's ongoing successful operations. Management must protect deposit growth and should have an effective deposit management program. The program should regularly monitor the make-up of accounts to determine the amounts that are stable, fluctuating or seasonal, or volatile. Management should remain knowledgeable of the characteristics of the deposit structure using periodic internal reports. Lack of such knowledge could lead to the unwise use of funds and subsequent related problems.

Retail funding is supplied by the deposits a bank receives from the general public, individuals, and small businesses. Deposits are generally an association's primary (or core) funding source, and are typically a stable source of funds. These accounts usually maintain balances of $100,000 or less, to be fully insured by the FDIC. These accounts include demand deposit accounts (DDAs), negotiable order of withdrawal accounts (NOWs), money market demand accounts (MMDAs), savings accounts, and time certificates of deposit (CDs).

Historically, these accounts have not been very sensitive to an institution's credit quality or interest rates. Sensitivity may occur depending on the level of a customer's financial expertise, previous experiences, geographic location, and investment alternatives. Generally, retail and wholesale depositors behave differently under stress and changing economic conditions. A liquidity manager should distinguish between the two and track trends separately. In addition, a liquidity manager should track accounts that have balances in excess of FDIC insurance limits since those account owners will be more credit-sensitive than those with fully insured accounts.

Wholesale Funding

Borrowing sources that an association can access immediately, at a reasonable cost, and with a high degree of certainty are ideal sources of liquidity. Wholesale borrowings frequently have attractive features, and can, if properly assessed and prudently managed, facilitate the management of interest rate and liquidity risks. The initial cost of the borrowing is often low when compared to other liabilities with similar maturities. If the instrument contains embedded options, however, borrowing costs may increase under certain circumstances, and must be properly evaluated and managed.

Management should take the following actions if engaging in wholesale borrowings:

- Review borrowing concentrations. Determine whether an amount of borrowings from a single source poses an undue risk.
- Review borrowing contracts.
  - — Determine if there are any embedded options or other features that may affect the interest rate or pose liquidity risk.
  - — Review collateral agreements for fees, maintenance requirements, and triggers for increases in collateral.
- Review stress tests.
  - — Determine how to identify and monitor the risks of the various terms of each contract, including penalties and option features.
  - — Perform tests before entering into any agreement and periodically thereafter.
  - — Ensure that the stress test results depict the potential impact of contractual triggers and external events (such as interest rate changes that may result in the exercise of embedded options or the termination of the contract) on the association, as well as on its overall earnings and liquidity position.
- Review the use of complex borrowings on the association's interest rate exposure.
- Ensure that there are management processes in place to control liquidity and interest rate risks, and that they also have in place contingent funding plans.
- Fully inform the board of directors, or the asset/liability management committee about the risks of wholesale borrowing agreements prior to engaging in the transactions, as well as on an ongoing basis.
- Ensure that the instruments are consistent with the association's portfolio objectives and level of sophistication of its risk management practices. Only associations with technical knowledge and risk management systems sufficient to adequately identify, monitor, and control the risks of complex wholesale borrowings should use this type of funding.

Wholesale fund providers are professionals who manage most wholesale funds, and operate under established investment criteria. They may be associated with large commercial and industrial corporations, other financial institutions, governmental units, or wealthy individuals. Because their

responsibility is to preserve their clients' principal, they are sensitive to changes in the credit quality of the institutions where they invest, as well as to changes in interest rates.

An association can use a variety of instruments to tap the wholesale funding markets. A brief description of some of these instruments is provided below. Depending on the side of a transaction that an association takes, some of these instruments may be either a source of asset liquidity or a source of liability liquidity.

Securities Sold Under Repurchase Agreements

Securities sold under repurchase agreements are a means of financing inventories of securities. Under repurchase agreements, securities are temporarily "loaned out," for periods ranging from overnight to one year in return for borrowed funds. The vast majority mature in three months or less. A standard repurchase agreement involves the acquisition of funds through the sale of securities with a simultaneous commitment to repurchase the securities on a specified date at a specified price. The collateral most often used by savings associations is U.S. government and agency mortgage-backed securities (MBS). The repurchase agreement rate is the interest rate that the borrower pays the lender (investor) for the use of funds.

Dollar Rolls

Dollar Rolls (also called dollar repurchase agreements) provide another alternative source of liquidity. Dollar rolls are agreements to sell and repurchase "substantially similar" but not identical securities. To qualify as a financing, these agreements to return "substantially similar" securities cannot exceed 12 months from the initiation of the transaction. Primarily, the dollar roll market consists of agreements that involve mortgage-backed securities.

Federal Home Loan Bank (FHLB) Advances

FHLB advances are an important source of funds for savings associations. Advance is simply another word for a loan. FHLBs offer a wide range of advance products with maturities ranging up to 10 years or longer. These products are primarily two types: collateralized advances and uncollateralized investments.

In general, a FHLB establishes a line of credit for each of its members. A FHLB may, however, limit or deny a member's request for an advance if the member is:

- Engaging in any unsafe or unsound practice.
- Inadequately capitalized.
- Sustaining operating losses.
- Deficient with respect to financial or managerial resources.
- Otherwise deficient.

FHLB advances are generally secured by collateral. Thus, the unused borrowing capacity of an association is a function of both its eligible, unpledged collateral and its unused line of credit with its FHLB.

Some FHLB advances contain embedded options or other features that may increase funding risk. For example, some types of advances, such as putable and convertible advances, provide the FHLB with the option to increase the interest rate on the advance under specified conditions. See TB 13a-2, Structured Advances, for more on the risks associated with certain FHLB advances.

A FHLB can often react quickly, sometimes before market information is available to other funds providers, to reduce its exposure to a troubled institution by not rolling over unsecured lines of credit. Depending on the severity of a troubled institution's condition, a FHLB may discontinue or withdraw (at maturity) its collateralized funding program because of concerns about the quality or reliability of the collateral or other credit-related concerns. This may create significant liquidity problems for an institution, especially if it has large amounts of short-term FHLB funding. Associations should aggregate FHLB funds by type of program to monitor and appropriately limit short-term liability concentrations, just as with any other credit-sensitive funds provider.

For FHLB borrowings, as with all borrowings to meet liquidity needs, an association should evaluate the level of its borrowings from any one

source as well as the quality of the source. Management should perform adequate due diligence in selecting funding sources, and periodically review their quality and stability. An association should have contingency plans in place should a need arise for an alternative funding source.

Lines of Credit

An unused portion of a line of credit with another financial association can be an important source of liquidity, particularly if it represents a binding legal commitment to borrow without major restrictions on its use and the borrowing rate is reasonable.

Federal Reserve Primary and Secondary Credit

The Federal Reserve Board recently revised Regulation A to provide for primary and secondary credit programs at the discount window. Reserve Banks will extend primary credit at a rate above the target Fed Funds rate on a short-term basis (typically, overnight) to eligible depository institutions. Eligibility for primary credit is based largely on an institution's examination rating and capital status. In general, institutions with composite CAMELS ratings of 1,2, or 3 that are at least adequately capitalized are eligible for primary credit unless supplementary information indicates their condition is not generally sound. Other conditions exist to determine eligibility for 4 and 5 rated institutions.

An institution eligible for primary credit need not exhaust other sources of funds before coming to the discount window. Institutions may use primary credit to finance the sale of fed funds. However, because of the above-market price of primary credit, the Board expects institutions to mainly use the discount window as a backup source of liquidity, rather than as a routine source.

Generally, Reserve Banks extend primary credit on an overnight basis with minimal administrative requirements to eligible institutions. Reserve Banks may also extend primary credit to eligible institutions for periods of up to several weeks if funding is not available from other sources. These longer extensions of credit are subject to greater administrative oversight.

The Reserve Banks also offer secondary credit to institutions that do not qualify for primary credit. Secondary credit is typically another short-term backup source of liquidity. Long-term secondary credit would be available for the orderly resolution of a troubled institution. In such a case, there are certain limitations and a higher level of Reserve Bank administration and oversight.

Federal Funds Purchased

Federal Funds Purchased are excess reserves held at Federal Reserve Banks that depository institutions may lend to one another. The most common type of federal funds transaction is an overnight, unsecured loan. Transactions that are for a period longer than one day are called term fed funds. In some instances, lenders may require that term fed funds transactions be made on a secured basis. If the borrower's creditworthiness is questionable, lenders may require excess collateral or may choose not to lend. Federal funds that are loaned (sold) are assets. Federal funds that are borrowed (purchased) are liabilities.

Treasury Tax and Loan Funds (TT&L)

TT&L account balances typically are not significant and therefore, do not present a material factor in assessing liquidity.

Brokered Deposits and Other Rate Sensitive Deposits

Brokered deposits and other rate sensitive deposits represent a convenient source of funds for depository associations that are in good financial condition. These deposits (including Internet, certificate of deposit listing services, and other automated services) may increase the volatility of the deposit portfolio if they are rate sensitive. Section 29 of the Federal Deposit Insurance Act (FDIA) generally prohibits any association that is not well capitalized from accessing the market for brokered or high rate deposits. Adequately capitalized institutions that wish to accept renew, or rollover brokered deposits or high rate deposits must first obtain approval from the FDIC. Undercapitalized associations cannot accept brokered deposits or high rate deposits at all. See the discussion in this section under "Troubled

Institutions." See also Handbook Section 560, "Deposits and Borrowings."

Eurodollar Time Deposits

Eurodollar Time Deposits are certificates of deposit issued by banks in Europe, with interest and principal paid in dollars. Interest rates are usually tied to LIBOR. These certificates of deposit usually have minimum denominations of $100,000 and have a short-term maturity of less than two years. An association should limit the volume of Euro-dollar CDs to control the liquidity risks associated with the secondary markets in these instruments.

MEASURING LIQUIDITY

The purpose of liquidity analysis is to measure an association's current liquidity position and its ability to meet future funding needs. An analysis of an association's *current liquidity position* generally involves a review of key balance sheet ratios, while the analysis of an association's ability to meet *future funding needs* involves an analysis of projected cash inflows and outflows.

Financial Ratio Analysis

The measurement of liquidity is an inexact and highly subjective process. This is largely due to the high degree of cash flow uncertainly associated with assets, liabilities, and off-balance-sheet contracts. In practice, analysts use a variety of financial ratios to measure the current liquidity position of an institution. Some ratios that measure liquidity include the following:

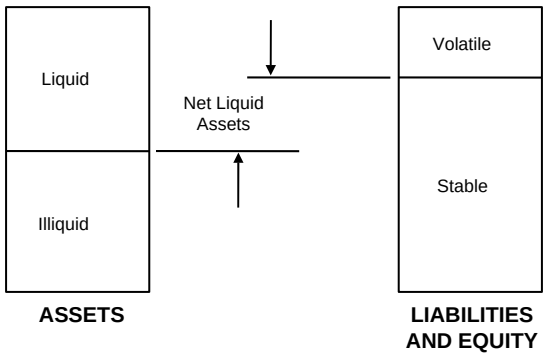
- Loans to deposits.
- Liquid assets to total assets.
- Volatile liabilities to total assets.
- Liquid assets to volatile liabilities.
- Net liquid assets to total assets.
- Unpledged eligible collateral to total assets.
- Net unused FHLB borrowing capacity to total assets.
- Unpledged collateral to net unused FHLB borrowing capacity.
- FHLB advances to FHLB Stock.
- Uninsured deposits to total deposits.

A key issue is defining liquid assets and volatile liabilities. Definitions vary depending on the objective or purpose of the analysis and data limitations. The time horizon of the analysis is particularly important in defining what is and what is not liquid. As a rule, liquid asset definitions include shorter-term assets that are readily saleable and assets that mature over the near-term. Some analysts define liquid assets to include the sum of cash, deposits with other associations, investment securities, and mortgage pool securities.

Volatile liabilities generally include wholesale and rate sensitive deposits and short-term liabilities that are likely to be withdrawn at the first hint of trouble. These forms of "hot money" include brokered deposits, uninsured deposits, federal funds purchased, securities sold under agreements to repurchase, and other borrowings with remaining maturities of less than one year.

The basic model for measuring current liquidity is shown in Figure 1. That model relates liquid assets to volatile liabilities. The difference between liquid assets and volatile liabilities represents the net liquidity position. (Liquid assets less volatile liabilities equals net liquidity position).

Figure 1. Static Balance Sheet Model



An association can improve its liquidity position in a number of different ways. For example, it can take the following actions:

- Increase holdings of high-quality liquid assets.
- Shorten the maturities of assets.
- Lengthen the maturities of liabilities.
- Diversify funding sources by maturity, geographic region, and by lender/depositor.
- Expand core deposits and other stable funding sources.
- Make loans that it can easily sell or securitize.

Successful liquidity management requires accurate measurement and control of the daily inflow and outflow of funds. Advance knowledge of liquidity shortfalls makes it possible to explore alternative ways to deal with them. Two useful techniques for monitoring cash flows are liquidity gap analysis and liquidity forecasting.

Liquidity Gap Analysis

A liquidity gap schedule provides an analytical framework for measuring future funding needs by comparing the amount of assets and liabilities maturing over specific time intervals. Table 1 below presents a sample liquidity gap schedule.

Table 1. Liquidity Gap Schedule

	Less than 10 days	Over 10 days but less than 3 months	Over 3 months but less 6 months	Over 6 months but less than one year	1 to 5 years	Over 5 years and capital	Total
Assets	10	10	10	5	65	0	100
Liabilities & Equity	50	30	15	0	0	5	100
Net outflow (assets minus liabilities)	(40)	(20)	(5)	5	65	(5)	0
Cumulative net outflow	(40)	(60)	(65)	(60)	5	0	0

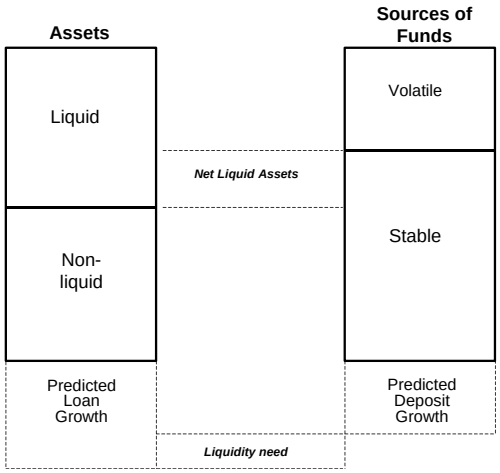
In the liquidity gap schedule, assets and liabilities are slotted into different time intervals according to their remaining time to maturity. As a rule, the assets and liabilities are slotted according to their *effective* maturities rather than their *contractual* maturities. Nonmaturity deposits, for example, are generally treated as long-term liabilities (based on estimated run-off rates) rather than as short-term liabilities. In this example, more liabilities than assets mature in the earlier time intervals, indicating that the association is borrowing short and lending long, which is typical of most savings associations.

Negative gapping at the shorter end of the schedule (that is, borrowing short and lending long) increases the risk that the association will not be able to rollover maturing liabilities as they come due. While such a position is not favorable to liquidity, it tends to enhance profitability over the long-term – provided the association keeps the gaps within manageable bounds and the shape of the yield curve is not inverted.

One shortcoming of the liquidity gap schedule is that it does not capture projected balance sheet changes such as future loan and deposit growth. While it is important to understand the liquidity of

an association's existing balance sheet, it is also important to forecast the growth of key balance sheet components, such as deposits and loans, over time. (See Figure 2.)

Figure 2. Projected Balance Sheet Model



Liquidity/Cash Flow Forecasting

Cash flow forecasting is a critical element in managing liquidity. The objective of cash flow forecasting is to project cash inflows and outflows over future periods. A common practice is to project net funds deficits for short-term (next 5-10 days) and long-term planning intervals (3-6 months, 6-12 months). By projecting cash flows for short- and long-term planning periods, management can significantly reduce the risk that sizable net funds deficits go unnoticed and unattended.

A sample forecast is presented in Table 2.

Table 2. Cash Flow Forecast

	Forecast 0-30 days	Forecast 31 –60 days	Forecast 61-90 days	Forecast 91-365 days
Cash Inflows:				
Deposits	$1,000	$1,200	$1,500	$20,000
Maturing loans and investments	600	1,200	1,800	9,000
Loan sales	0	0	0	0
Other	200	100	200	1,500
Total Inflows	$1,800	$2,500	$3,500	$30,500
Cash Outflows:				
Maturing deposits	800	900	1,000	3,500
Maturing debt	0	0	0	1,000
New Loans	900	1,500	1,600	15,000
Other	200	0	0	1,000
Total Outflows	$1,900	$2,400	$2,600	$20,500
Net Surplus (deficit)	($100)	$100	$900	$10,000
Cumulative net surplus (deficit)	($100)	0	$900	$10,900

LIQUIDITY MANAGEMENT

Each association should have a written strategy for the day-to-day management of liquidity. The liquidity strategy should define the association's general approach to managing liquidity, including various quantitative and qualitative targets. The liquidity strategy should cover specific policies on the composition of assets and liabilities, the use of wholesale funding, and strategies for addressing temporary and longer-term liquidity disruptions.

The sophistication of an association's policies, procedures, and information systems for managing liquidity should be related to the following items:

- Size and complexity of the association.
- Strength and stability of the association's core deposit base.
- The association's dependence on wholesale funding.
- Variability of the association's cash flows.
- Financial condition of the association.

Associations with deteriorating financial condition and/or declining exam ratings should increase attention to liquidity management and contingency planning.

Board and Senior Management Oversight

Effective oversight is an integral part of an effective liquidity management program. The board and senior management should understand their oversight responsibilities.

Board of Directors

The board of directors should establish the association's tolerance for liquidity risk, set liquid requirements, and approve significant policies related to liquidity management. The board should also ensure senior management takes the necessary steps to monitor and control liquidity risk. The board should understand the nature and level of the association's liquidity risk, and management should inform the board regularly of the liquidity position of the association.

Senior Management

Senior management should establish policies, procedures, and guidelines for managing and monitoring liquidity to ensure adequate liquidity at all times. Policies should include internal controls.

In addition, senior management should review the association's liquidity position on a regular basis and monitor internal and external factors and events that could have a bearing on the association's liquidity. Senior management should also prepare contingency funding plans.

Senior management should review periodically the association's liquidity strategies, policies, and procedures.

Policies and Procedures

A savings association should have clearly defined policies and procedures for managing liquidity. The board of directors has ultimate responsibility for the adequacy of policies and procedures; senior management has responsibility for their design and implementation. Polices and procedures should include the following:

- *Delineated lines of responsibility*. Identification of individuals or committees responsible for managing and monitoring liquidity risk.
- *An overall liquidity strategy*. The liquidity strategy should define the general approach the savings association will follow in managing liquidity, including various quantitative and qualitative targets. The liquidity strategy should cover specific policies on the composition of assets and liabilities, including policies on investment in illiquid securities and the use of wholesale funding. There should also be a written strategy for addressing temporary and long-term liquidity disruptions.
- *A process for measuring and monitoring liquidity*. Although associations can use a number of procedures for measuring and monitoring liquidity, the most effective pro-

cedures involve pro-forma cash flow projections. These range from simple calculations to complex models for projecting cash inflows and outflows over different planning periods (time bands) to identify cash shortfalls and surpluses in future periods. While liquidity measures based on balance sheet ratios are useful in measuring an association's current liquidity position and in monitoring trends in liquidity, management should focus its attention on forward looking, pro-forma measures of liquidity.

- *Quantitative guidelines and limits to ensure adequate liquidity*. Guidelines and limits will vary depending on the nature of an association's operations and circumstances. Associations could set guidelines, for example, on the size of cash flow mismatches over specified time horizons. Because of the subjective nature of the numbers in pro-forma cash flow projections, associations may find it impractical to establish precise risk limits or precise rules for addressing cash flow mismatches projected to occur in future periods. Nevertheless, an association should make an effort to define its tolerance for cash flow mismatches and should establish strategies for addressing them. Associations can also tie limits to balance sheet ratios. Examples include the following ratios:
  - — Maximum projected cash flow shortfall tolerated for specified time (for example, one week ahead, one month ahead, one quarter ahead) as a percentage of liquid assets and unused borrowing facilities.
  - — Minimum ratio of liquid assets to total assets.
  - — Maximum overnight borrowings to total assets.
  - — Maximum ratio of FHLB advances to total assets.
  - — Maximum ratio of brokered deposits to total assets.
  - — Maximum ratio of total wholesale borrowings to total assets.
  - — Maximum ratio of pledged assets to total assets.
  - — Maximum ratio of loans to deposits.
  - — Maximum ratio of managed assets to total assets if the association securitizes assets.
- *Internal control procedures* to ensure adherence to policies and procedures that address the integrity of the liquidity risk management process. An effective system of internal control should promote effective operations, reliable financial and regulatory reporting, and compliance with relevant laws and institutional policies. Internal control systems should provide appropriate approval processes, limits, and ensure regular and independent evaluation and review of the liquidity risk management process. Such reviews should address any significant changes in the nature of the instruments acquired, limits, and controls since the last review. Internal control should include the following activities:
  - — Procedures for approvals of exceptions to policies, limits, and authorizations. Positions that exceed established limits should receive the prompt attention of appropriate management and should be resolved according to the process described in approved policies.
  - — A schedule for the periodic review of the liquidity policies and procedures. Periodic reviews of the liquidity management process and related procedures should address any significant changes in liquidity risk limits, liquidity strategy, information systems, and internal controls since the last review.
  - — Contingency Planning. Management should assess its responses to liquidity events in the context of their implications for an association's short-term, intermediate-term, and long-term liquidity profile. Contingency Plans are further discussed in this handbook section.

Management Information Systems

Each savings association should have adequate information systems for measuring, monitoring, and controlling liquidity risk:

- A management information system should provide timely information on the association's current and prospective liquidity position.
- Management should be able to project its liquidity position and liquidity requirements over various time horizons and scenarios.
- Management should clearly define assumptions used in projections so it can evaluate the appropriateness and validity of the projections.
- The information system should provide the data needed by management to determine compliance with the association's liquidity policies, procedures, and limits.

Measuring and Monitoring Liquidity

Each association should have a process for measuring and monitoring its existing liquidity position as well as its net funding requirements. Liquidity measurement involves forecasting cash inflows and outflows over various time horizons to identify potential cash imbalances. A cash flow forecast is a useful device to compare cash inflows and outflows on a daily basis and over future periods. Management should take steps to address projected net funding deficits in a timely manner.

Management and other staff responsible for managing overall liquidity should be aware of any information, such as a pending decline in earnings, an impending legal action, or a downgrade by a rating agency that could have an adverse impact on perceptions about the financial condition of the association.

Management should also consider conducting scenario analysis in estimating liquidity requirements. In conducting an analysis of liquidity, management should consider the following scenarios:

- Range of possible future scenarios, such as optimistic, pessimistic, and most likely. In estimating normal funding needs, some associations use historical data and account for seasonal and other effects believed to determine loan demand and deposit flows. Alternatively, some associations rely on judgmental business projections, or undertake a customer-by-customer assessment for larger customers and apply historical relationships to the remainder.
- Stressful events such as a loss of wholesale funding, a significant run-off of deposits, a sharp increase in funding costs, or a sharp increase in loan demand.
- Cash flow timing differences and the related assumptions among scenarios. For example, in a general market crisis, the capacity to sell assets may deteriorate significantly.
- The potential for unanticipated cash outflows and reduced cash inflows associated with embedded options in various assets, liabilities, and off-balance-sheet contacts. Potential cash outflows include loan commitments; calls on loans sold with recourse and financial guarantees; payments on swap contracts and other financial derivatives; margin calls; early termination agreements; and so forth.

Contingency Planning

Each association should have a contingency plan for handling unanticipated stressful scenarios that could result in a significant erosion of association-specific or general-market liquidity. Management should update the plan on a regular basis. A contingency plan should accomplish the following:

- Consistently planned use of liquidity sources with the association's stated purposes and objectives of its liquidity program.
- Identify and assess the adequacy of financial resources (source of funds) for contingent needs. The plan should identify all back-up facilities (equity lines of credit), the conditions related to their use, and the circumstances where the association might use them. Periodically, management should test all sources of its contingency funding with the goal of ensuring that there are no unexpected impediments or complications in case the association needs to use its contingency lines. Management should understand the various conditions, such as notice periods, that could affect access to back-up funding sources.

- Define responsibilities and decision-making authority so that all personnel understand their role during a problem situation.
- Identify the sequence that the association will mobilize and commit key sources of funds for contingent needs. The degree of uncertainty as to the magnitude and timing of availability of resources may call for different priorities in different situations.
- Address implementation issues such as procedures by which resources are committed for emergency use or released from one use and transferred to another.
- Identify other actions necessary in the event of an unexpected contingency.
- Assess the potential for funding erosion (magnitude and rate of outflow) by source of funds under different scenarios.
- Assess the potential liquidity risk posed by other activities such as asset sales and securitization programs.

A fundamental principle in designing contingency plans for liquidity purposes is to ensure adequate diversification in the potential sources of funds. Such diversification should not only focus on the number of potential funds providers but on the underlying stability, availability, and flexibility of funds sources in the context of the type of potential liquidity event.

Managing Access to Funding Sources

Savings associations should carefully manage their access to available sources of funding and understand their funding options:

- An association should build and maintain relationships with a broad range of depositors and other funding sources. An association should understand how much funding might be available from various sources under normal and adverse circumstances.
- Senior management should be aware of the composition, characteristics, and diversification of its funding sources.
- Management should consider developing or expanding markets for asset sales or exploring arrangements for borrowing against assets.

Liquidity Support Between Affiliates

An association within a holding company structure should be able to rely on liquidity support from other affiliates within the company. Transfers can usually be made quickly and easily, and typically include buying or selling Fed Funds, granting or repaying debt, or selling or participating in loans or other assets. Limitations on transactions with affiliates is an additional consideration.

Liquidity Risk of the Holding Company

The funding structure of a holding company may expose it to more liquidity risk than its subsidiary insured institution. A holding company cannot accept deposits, offer FDIC insurance to its funds providers, or rely on discount window liquidity support. Typically, it has no independent source of revenue, no liquid assets, and a leveraged balance sheet.

In some instances, liquidity may flow from the parent holding company to the subsidiary. Examples include a parent holding company placing excess cash in its subsidiaries or participating in certain loans.

A holding company in a liquidity crisis may not look to its subsidiaries for relief, and any upstreaming of value by a subsidiary to its parent holding company is highly regulated by federal statues and implementing regulations.

An association may not be insulated from its parent holding company's liquidity risks, particularly when both have similar names. If a parent holding company goes bankrupt, it will reflect on the association because depositors probably do not understand the legal distinctions between the two. See also Sections 300 and 600 of the Holding Company Handbook.

SUPERVISORY CONCERNS

OTS requires savings associations to maintain sufficient liquidity to ensure safe and sound operations (12 CFR § 563.161).

Early Warning Signals

Liquidity problems are often symptomatic of other more fundamental problems at an association such as excessive credit risk, excessive interest rate risk, inadequate capital, operational problems, and so forth. Factors that could indicate or precipitate liquidity problems include:

- Over-reliance on wholesale funding.
- A significant increase in the level of wholesale funding.
- Excessive borrowing concentrations.
- A sharp rise in funding costs.
- A ratings downgrade by credit rating agency.
- A sharp drop in earnings.
- An increase in nonperforming assets.
- A decline in capital adequacy category.
- Management problems.
- Adverse publicity.

Mortgage Banking and Loan Sale Activities

Associations engaged in mortgage banking activities and loan origination and sale activities must ensure that adequate lines of credit are available to meet warehousing needs and that there are adequate forward commitments to sell the loans in the pipeline. The association's liquidity planning should consider the effect of recourse and other credit enhancements from loans sold. You should review loan sale and servicing agreements to determine how credit enhancements and recourse obligations affect liquidity.

Federal Home Loan Bank Membership and Liquidity

Federal savings associations are no longer required to maintain membership in a FHLB pursuant to Section 5(f) of the Home Owners Loan Act (12 USC § 1464(f)). An association that voluntarily withdraws from FHLB membership is, however, subject to a prohibition on re-entry into membership for five years.

When examining a savings association that is not a FHLB member, you should determine if the association's existing liquidity position and its ability to borrow funds adequately address any liquidity concerns. As part of this determination you should review written plans, analyze the association's access to sources of funds, and assess management's evaluation of near-term and longer-term anticipated funding needs.

If the savings association is a member of a FHLB you should determine the size of its line of credit with the FHLB and how much unused credit is available under that line. See also discussion of FHLB advances in this handbook section.

Troubled Associations

There are restrictions on funding sources for troubled and undercapitalized insured institutions. These restrictions serve to reduce the ability of troubled or undercapitalized associations to obtain credit. Two of the restrictions include limited access to brokered deposits (12 CFR § 337.6) and restrictions on the amount of permissible credit exposure to a correspondent association (12 USC § 1831o(f)(2)(G). In addition, there are certain restrictions on borrowing programs available at the Federal Reserve discount window (12 CFR § 201.4).

Brokered Deposits

Section 29 of the FDIA significantly reduced the availability of brokered deposits as a source of liquidity by mandating restrictions on such deposits. The FDIC's implementing regulations, at 12 CFR § 337.6, set forth the following provisions:

- Well-capitalized institutions may accept brokered deposits without restriction.
- Adequately capitalized institutions must receive prior FDIC approval.
- Undercapitalized institutions may not accept brokered deposits.

See Handbook Section 560, Deposits/Borrowed Funds, for a detailed discussion of brokered deposit restrictions.

Limitations on Interbank Liabilities

Under FRB regulation 12 CFR Part 206, Limitations on Interbank Liabilities (Regulation F), insured institutions must establish and maintain written policies and procedures to prevent excessive exposure to any individual correspondent. The prevention of excessive risk exposure relates to the condition of the correspondent. Specifically, the regulation requires institutions to establish policies and procedures that take into account credit and liquidity risks, including operational risks, in selecting correspondents and terminating those relationships.

REFERENCES

Statutes

12 USC 1831f	Federal Deposit Insurance Act
12 USC 1831o	Prompt Corrective Action
12 USC 1467a	Regulation of Holding Companies
12 USC 371c	Banking Affiliates

Code of Federal Regulations (12 CFR)

Part 201	Extensions of Credit by Federal Reserve Banks
Part 206	Limitations on Interbank Liabilities
§ 337.6	Brokered Deposits
§ 561.31	Nonwithdrawable Account
§ 563.80	Borrowing Limitations
§563.140	Capital Distributions
§ 563.161	Management and Financial Policies
§ 563.172	Financial Derivatives
§ 563.176	Interest Rate Risk Management Procedures
§ 563b.520	Post Conversion Dividends
§ 563c.102	Financial Statement Presentation
§ 563d.1	Requirements Under Certain Sections of the Securities Exchange Act of 1934
Part 563g	Securities Offerings

Office of Thrift Supervision Bulletins

RB 34	Examiner Guidance on Wholesale Borrowings
TB 13a	Management of Interest Rate Risk, Investment Securities, and Derivative Activities
TB 13a-2	Structured Advances

Interagency Guidance

CEO Letter No. 141 (July 13, 2001) – Joint Agency Advisory on Brokered and Rate-Sensitive Deposits (May 10, 2001)

Statement of Financial Accounting Standards

SFAS No. 115	Accounting for Certain Debt & Equity Securities

Liquidity Management
Program

Examination Objectives

To determine the adequacy and effectiveness of the association's liquidity policies, liquidity management strategies, and contingency funding plans.

To determine management's ability to measure, monitor, and control the association's liquidity position.

To determine if the association's officers and employees are in compliance with established policies and procedures regarding liquidity management.

To determine the adequacy of the association's liquidity.

To determine the availability of assets readily convertible to cash without undue loss.

To determine access to money markets and other sources of funding.

To determine diversification of funding sources.

To determine reliance on short-term, volatile sources of funds, including borrowings and brokered deposits.

To determine the trend and stability of deposits.

To summarize findings and to initiate corrective action as needed.

Examination Procedures

Wkp. Ref.

Level I

1. Review scoping materials applicable to this program. Review liquidity and funding reports, cash flow forecasts, and new borrowing contracts and indentures. Review liquidity ratios.

2. Determine if the savings association corrected previously identified liquidity-related problems or weaknesses. Review:

   - Prior examination report comments and exceptions.
   - Independent audit exceptions.

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- Any enforcement or supervisory actions and directives.

3. Obtain and review the adequacy of written policies, procedures, business strategies, and contingency plans governing liquidity management.

4. Determine if the association's officers and employees are operating in compliance with established policies and procedures regarding liquidity management.

5. Review the association's internal reports applicable to liquidity management. Determine whether the reports provide the information needed to effectively measure and control the association's liquidity position.

6. Determine the adequacy of liquidity in relation to current and expected cash flow needs:

   - Measure the availability of assets readily convertible to cash without undue loss.
   - Determine the level of access to, and diversification of, funding sources.
   - Determine the degree of reliance on short-term, volatile sources of funds, including wholesale borrowings and brokered deposits.
   - Determine the ability of the association to fund outstanding commitments.
   - Determine the degree of reliance on securitizations.

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7. Review the level of the association's dependence on Federal Home Loan Bank (FHLB) borrowings and determine the amount of its unused borrowing capacity with the FHLB. Determine the amount of unpledged, eligible collateral that is available to secure FHLB borrowing.

8. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

9. Review the contractual terms of borrowing contracts and indentures to assess any liquidity implications. Determine whether the contracts and indentures contain options and other option-like features that could have adverse liquidity implications.

10. Determine the trend and stability of deposits.

11. Determine the ability of the association to securitize and sell certain pools of assets.

12. Review the adequacy of the association's pipeline report for fixed-rate commitments and assess the adequacy of liquidity.

13. Determine the association's contingency plans for short-, intermediate-, and long-term liquidity needs. Review wehther the association has adequate diversification in its potential sources of funds it may use.

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14. Ensure that your review meets the Objectives of this Handbook Section. Present on the appropriate work papers and report pages your findings, conclusions, and recommendations for corrective measures.

Level III

15. Discuss with the EIC additional procedures that you are to do when work in Level II is insufficient to draw conclusions on the adequacy of liquidity management performance.

16. Estimate the amount of cash that the association could raise by selling unpledged marketable securities. Estimate the unrealized gain or loss on those securities as a percentage of earnings and capital.

17. Review cash budget projections for the next year under assumptions of stable, declining, and increasing interest rates.

18. Estimate the effect of a ten percent deposit run on the association. Estimate the effect of the loss of access to the repurchase and dollar roll markets.

Examiner's Summary, Recommendations, and Comments

Exam Date: _____
Prepared By: _____
Reviewed By: _____
Docket #: _____

INTRODUCTION

Savings associations must conduct their investment activities prudently and within the bounds of a clear and well-reasoned investment policy. Associations should have diversified portfolios that achieve an appropriate balance between risk and return. In addition, associations should establish appropriate risk management systems and controls to monitor and control investment portfolio activity and performance.

This section outlines the following areas:

- Role of the investment portfolio
- Permissible investments
- The investment process
- Investment risks
- TB 13a requirements and guidance
- Use of investment consultants
- Reporting and accounting for securities
- Collateralized Mortgage Obligation (CMO) issuances

In addition, this section has three appendices that cover the following areas:

Appendix A — Total Return Analysis

Appendix B — Money Market, Fixed-Income Market, and Equity Market Securities

Appendix C — Mortgage-Related Securities

ROLE OF THE INVESTMENT PORTFOLIO

A savings association's investment portfolio serves as a source of income and liquidity, as well as a tool for asset/liability management. At many associations, the primary influences of loan demand and liquidity needs determine the percentage of assets allocated to the investment portfolio. When loan demand is weak, the association deploys excess cash inflows in the investment account, and when loan demand is strong, the association draws down the investment account.

Since savings associations can change the composition of an investment portfolio with relative ease, many savings associations also use the investment portfolio to adjust their overall interest rate risk exposure. Similarly, some associations use the investment portfolio to manage diversification, asset quality, and risk-based capital levels.

PERMISSIBLE INVESTMENTS

Section 5 of the Home Owners' Loan Act (HOLA) outlines permissible investments for federal savings associations. Applicable OTS regulations include those in Part 560, Lending and Investment.

Subject to certain restrictions and limitations, the following types of investments are permissible investments for savings associations:

- Bankers' bank stock
- Business development credit corporations
- Commercial paper
- Corporate debt securities
- Community development equity investments
- Deposits in insured depository institutions
- U.S. Treasury securities
- Securities and instruments issued by U.S. Government-sponsored enterprises
- Foreign assistance investments
- HUD-insured or guaranteed investments

- Liquidity investments
- Mortgage-backed securities
- National Housing Partnerships Corporation and related partnerships and joint ventures
- Open-end management investment companies registered with the SEC
- Small business investment companies
- Small business-related securities
- State and local government obligations
- State and local housing
- State housing corporations.

See Appendices B, Money Market, Fixed-Income Market, and Equity Market Securities; and C, Mortgage-Related Securities, for information on specific types of investments.

THE INVESTMENT PROCESS

A sound investment program results from clear policies and objectives, and a sound investment process. The savings association should begin the investment process by determining its objectives for return requirements and risk tolerance. Management should have a clear understanding of how much return they expect the investment portfolio to generate and how much risk they can tolerate. Management should determine risk and return objectives in the context of the various investment constraints faced by the savings association, including those that restrict the list of permissible investments. The association's investment objectives and constraints provide the foundation for developing sound investment policies.

Investment Objectives

The savings association should clearly state portfolio objectives. The objectives should focus on the trade-off between risk and return. In formulating risk and return objectives, a savings association should consider the following constraints:

- Liquidity
- Interest rate risk
- Investment horizon
- Taxes
- Laws and regulations
- Other needs.

The investment objectives should be internally consistent and supportive of other efforts such as the interest rate risk policy, funds management, capital plan, and profit plan. The investment policy should fit into the association's overall direction as described in the business plan.

INVESTMENT RISKS

Investment Risk Versus Portfolio Risk

While management should understand the risks associated with individual securities, the decision of whether to buy a security should not rest on the risk of a security alone. Management should evaluate how the addition of the security to the portfolio affects the overall risk and return of the portfolio. The addition of a risky security to a portfolio can either raise or lower portfolio risk depending on the characteristics of the security and the portfolio.

Management should have a clear understanding of how changes in the composition of the investment portfolio affect the risk of the investment portfolio and the overall risk of the savings association. In a sense, the investment portfolio is a portfolio within a larger portfolio that includes all the assets, liabilities, and off-balance sheet contracts of the savings association. The overall risk of the savings association should be the primary consideration of management.

All investments, even U.S. Treasury securities, carry some elements of risk. The primary risks associated with investments are:

- Market risk (including interest rate risk)
- Credit risk

- Prepayment risk
- Liquidity risk
- Operational risk.

Market Risk

We define market risk as the potential that the market price of a security will fall due to changes in interest rates, exchange rates, commodity prices, or other market or political conditions.

A primary market risk faced by investors in fixed income securities is interest rate risk. Simply put, interest rate risk is the risk that the price of a security will change when interest rates rise or fall. Almost all fixed income securities decline in price when interest rates rise.

A savings association can control the degree of interest rate risk in its investment portfolio by managing the weighted average maturity of the securities in its portfolio. In general, the longer the weighted average maturity of a portfolio, the greater the interest rate risk. Similarly, a savings association can also control interest rate risk exposure by managing the duration of the portfolio. Duration is a more precise measure of the interest rate sensitivity of a security or a portfolio of securities than weighted average maturity. Duration is a measure of the average time required to receive all the cash flows (interest and principal) from a security or a portfolio of securities. The higher a portfolio's duration, the greater the losses when interest rates rise. In general, bonds with longer maturities and higher durations carry more risk. For more information on interest rate risk, see Section 650.

Credit Risk

Credit risk is the risk that an issuer may default (fail to pay) on principal or interest payments. Savings associations can manage the credit risk of an investment portfolio by using the following techniques:

- Portfolio diversification — investing in a variety of securities with differing credit risks.
- Investment selection — managing the quality of securities in the portfolio.

Savings associations can assess the overall quality of individual bonds by analyzing the financial condition of the issuer and other related factors. Such factors include the quality of management, competitive conditions in the industry, economic conditions, and so forth.

Many investors rely on credit rating agencies to measure the quality of corporate and municipal bonds. The most widely used bond rating agencies are Standard & Poor's Ratings Services and Moody's Investors Service.

Savings associations may only invest in investment grade bonds. Investment grade bonds are those in one of the four highest rating categories by a nationally recognized investment rating service such as Standard & Poor's and Moody's. Savings associations, by statute, may not invest in non-investment grade bonds. The table below shows investment-grade and non-investment-grade ratings of these agencies.

Bond-Quality Ratings

Moody s	Standard & Poor s
Investment Grade: Aaa Highest Quality Aa A Baa	Investment Grade: AAA Highest Quality AA A BBB
Non-Investment Grade (Junk Bonds) Ba and below	Non-Investment Grade (Junk Bonds) BB and below

Savings associations that invest in corporate bonds should obtain current bond ratings before purchase and should review the ratings of their holdings on a regular basis. For more detailed information on bond ratings, see Appendix B, Money Market, Fixed-Income Market, and Equity Market Securities.

For both rated and non-rated issues, associations should develop a system of periodic credit review. Refer to Thrift Activities Regulatory Handbook Section 260, Classification of Assets,

for classification of non-investment-grade corporate debt securities.

Prepayment Risk

Prepayment risk is the risk that an issuer may repay all or part of the principal on a bond prior to maturity. Prepayment risk is a particular concern with mortgage-backed securities (MBS). Issuers back MBS by mortgages that borrowers can prepay or refinance. When this occurs, the principal of the MBS is reduced and the issuer returns the cash flows from prepayments to the holders of the MBS. The risk is that the bonds will repay at an inopportune time, such as when interest rates are falling. Periods of falling interest rates usually generate widespread prepayments. If the investor wants to reinvest the proceeds from the prepayments, the prevailing yields on newly issued bonds are generally lower than the investor previously earned on the bond that prepaid.

Liquidity Risk

Liquidity risk is the risk that a security will be difficult to sell at a reasonable price within a reasonable time. On occasion, the liquidity of entire securities markets can seize up due to financial crisis or panic. Certain types of securities, however, such as those of small firms and securities with unusual features, are inherently illiquid.

By law, savings associations may not invest in corporate securities that they cannot sell with reasonable promptness at a price that corresponds reasonably to the fair value of the security. See 12 CFR §541.7.

Operational Risk

Operational risk is the risk that deficiencies or failures in personnel, technology, or systems will result in unexpected losses.

Settlement Risk

Settlement is an arrangement between parties for payment or receipt of cash or securities. Settlement risk is the possibility that a counterparty will fail to honor its obligation to deliver cash or securities at settlement, and is a key operational risk in managing investment portfolios.

The careful selection of brokers and dealers can mitigate settlement risk. The selection process should include a review of each firm's financial statements and an evaluation of its ability to honor its commitments.

An inquiry into the general reputation of the dealer is also appropriate. This includes review of information from state or federal securities regulators and industry self-regulatory organizations. For example, the National Association of Securities Dealers provides public information concerning any formal enforcement actions against the dealers, their affiliates, and associated personnel.

TB 13a REQUIREMENTS

You should ensure that the savings association conducts its investment activities in accordance with Thrift Bulletin 13a. Part III of TB 13a identifies, in broad terms, the types of analysis a savings association should undertake before making securities investments. A savings association should exercise diligence in assessing the risks and returns associated with investment securities, including expected total return. For a discussion of total return, see Appendix A, Total Return Analysis. As a matter of sound practice, before taking an investment position, an institution should:

- Ensure that the investment is legally permissible. Review the terms and conditions of the investment. Ensure that the investment is allowable under the institution's investment policies and is consistent with the institution's objectives and liquidity needs. Exercise diligence in assessing the market value, liquidity, and credit risk of the investment.
- Conduct a pre-purchase portfolio sensitivity analysis for any significant investment (see TB 13a for details).
- Conduct a pre-purchase price sensitivity analysis of any complex security before taking a position (see TB 13a for details).

TB 13a states that, "Investments in complex securities and the use of financial derivatives by associations that do not have adequate risk measurement, monitoring, and control systems may be viewed as an unsafe and unsound practice."

Risk Reduction

In general, savings associations should limit investments in complex securities with high price sensitivity (see TB 13a) to transactions and strategies that lower interest rate risk. Any savings association that invests in such securities for a purpose other than that of reducing portfolio risk should do so in accordance with safe and sound practices.

Sound Practices for Market Risk Management

You should assess the overall quality and effectiveness of the savings association's risk management process as it relates to investment activities. In making this assessment, you should review TB 13a, Appendix B, *Sound Practices for Market Risk Management*. This section summarizes the key elements of that Appendix.

Board and Senior Management Oversight

The board and senior management should understand their oversight responsibilities regarding the management of investment activities. Board oversight need not involve the entire board, but may be carried out by an appropriate subcommittee of the board. In particular, the board, or an appropriate subcommittee of board members, should take the following steps:

- Approve broad objectives and strategies and major policies governing investment activities.
- Provide clear guidance to management regarding the board's tolerance for risk.
- Ensure that senior management takes steps to measure, monitor, and control risk.
- Review periodically information that is sufficient in timeliness and detail to allow the board to understand and assess the institution's investment activities.
- Assess periodically compliance with board-approved policies, procedures, and risk limits.
- Review policies, procedures, and risk limits at least annually.

Senior management should ensure the effective management of the institution's operations, establish and maintain appropriate risk management policies and procedures, and ensure that resources are available to conduct the institution's activities in a safe and sound manner. In particular, senior management should take the following steps:

- Ensure that effective risk management systems are in place and properly maintained.
- Establish and maintain clear lines of authority and responsibility for managing investment activities.
- Ensure that competent staff with technical knowledge and experience consistent with the nature and scope of their activities conducts the institution's operations and activities.
- Provide the board of directors with periodic reports and briefings on the institution's investment activities and risk exposures.
- Review periodically the institution's investment risk management systems, including related policies, procedures, and risk limits.

Adequate Policies and Procedures

Savings associations should have written policies and procedures governing investment activities. Such policies and procedures should be consistent with the institution's strategies, financial condition, risk-management systems, and tolerance for risk. An institution's policies and procedures (or documentation issued pursuant to such policies) should do the following:

- Identify the staff authorized to conduct investment and derivatives activities, their lines of authority, and their responsibilities.

- Identify the types of authorized investments and investment instruments.
- Specify the required type and scope of pre-purchase analysis for various types or classes of investment securities.
- Define, where appropriate, position limits and other constraints on each type of authorized investment, including constraints on the purpose(s) for which such instruments may be used.
- Identify dealers, brokers, and counterparties that the board or a board-designated committee authorizes the institution to conduct business with and identify credit exposure limits for each authorized entity.
- Ensure that contracts are legally enforceable and documented correctly.
- Establish a code of ethics and standards of professional conduct applicable to personnel involved in investment and derivatives activities.
- Define procedures and approvals necessary for exceptions to policies, limits, and authorizations.

Monitoring and Reporting

Savings associations should have accurate, informative, and timely management information systems, both to inform management and to support compliance with investment policy. The board of directors and senior management should receive reports for monitoring investment risk on a timely basis.

The board of directors and senior management should monitor investment activities on a regular basis. The types of reports prepared for the board and various levels of management will vary depending on the size and complexity of the saving's associations operations.

Record Keeping

Savings associations must maintain accurate and complete records of all securities transactions according to 12 CFR § 562.1. In particular, savings associations should retain any analyses (including pre- and post-purchase analyses) relating to investment transactions. A savings association should make these records available to you upon request.

Internal Controls

Savings associations should have adequate internal controls over investment activities. A fundamental component of the internal control system involves regular independent reviews and evaluations of the effectiveness of the system.

Internal controls should promote effective and efficient operations, reliable financial and regulatory reporting, and compliance with relevant laws, regulations, and institutional policies. An effective system of internal control should include the following elements:

- Effective policies, procedures, and risk limits.
- An adequate process for measuring and evaluating risk.
- Adequate risk monitoring and reporting systems.
- A strong control environment.
- Continual review of adherence to established policies and procedures.

Savings associations should review their system of internal controls at least annually. Individuals independent of the function being reviewed should conduct the review. Reviewers should report results directly to the board. You should consider the following factors when reviewing an institution's internal controls:

- Does the association maintain risk exposures at prudent levels?
- Does the association employ the risk measures that are appropriate to the nature of the portfolio?
- Does the association have board and senior management actively involved in the risk management process?

- Does the association document policies, controls, and procedures adequately?
- Do association personnel follow the established policies and procedures?
- Does the association adequately document the assumptions of the risk measurement system?
- Does the association accurately process data?
- Is the risk management staff adequate?
- Has the association changed risk limits since the last review?
- Have there been any significant changes to the institution's system of internal controls since the last review?
- Are internal controls adequate?

Analysis and Stress Testing

Management should thoroughly analyze the various risks associated with investment securities before making an investment. (See TB 13a, Part III.) In addition, management should periodically review the portfolio.

Before taking a position in any complex securities, management should analyze how the future direction of interest rates and other changes in market conditions could affect the instrument's cash flows and market value. In particular, management should understand the following elements of the complex security:

- The structure of the instrument.
- The best case and worst-case interest rate scenarios for the instrument.
- How the existence of any embedded options or adjustment formulas might affect the instrument's performance under different interest rate scenarios.
- The conditions, if any, under which the instrument's cash flows might be zero or negative.
- The extent to which price quotes for the instrument are available.
- The instrument's universe of potential buyers.
- The potential loss on the instrument (that is, the potential discount from its fair value) if sold prior to maturity.
- That the issuer, together with any guarantors, has the financial capacity, and willingness to meet the repayment terms of the investment.
- That analysis of the legal structure of the investment affirms the institution's authority to make such investment.
- How the investment is expected to perform under various loss and interest rate scenarios, the impact on the overall risk profile of the institution and how all covenants of any trust agreement apply to the senior tranches.
- The effect of the payment priority should the security be divided into separate tranches with unequal payments.
- That a review and analysis of the collateral managers includes historical performance to document investment prudence.

Evaluation of New Products, Activities, and Financial Instruments

New investment products and activities can entail significant risk. Senior management should evaluate the risks inherent in new products and activities to ensure that they are subject to adequate review procedures and controls. The board, or an appropriate committee, should approve major new initiatives involving new products and activities.

Before authorizing a new initiative, the review committee should review the following items:

- A description of the relevant product, activity, or instrument.
- An analysis of the appropriateness of the proposed initiative in relation to the institution's overall financial condition and capital levels.

- Descriptions of the procedures to measure, monitor, and control the risks of the proposed product, activity, or instrument.

Management should ensure that adequate risk management procedures are in place before undertaking any significant new initiatives.

USE OF INVESTMENT CONSULTANTS

Some savings associations use consultants in the investment process. The association should limit the role of consultants and brokers to advising management and executing transactions approved by management. The savings association should not delegate investment decision-making authority to third parties, including brokers or consultants. Ceding decision-making power to a consultant or broker represents an unsafe and unsound practice.

Any savings association that engages a consultant must have a formal written contract that covers the following elements:

- The types of assets that the consultant or broker can buy and sell on a pre-approved basis.
- The requirement for authorization from the board or senior management for any transactions not pre-approved in the contract.
- The documentation and rationale for each trade made for the savings association.
- The requirement of the consultant or broker to maintain records and submit evidence that they obtain prices from several brokers for all transactions, particularly if the consultant is a broker.
- Compensation programs that do not encourage churning (excessive trading activity) of portfolios or short-term strategies that are not in the savings association's best interest.
- The right of the savings association or its agent to audit the records of transactions executed for the savings association.
- The authority of OTS to examine the records of the consultant or broker that pertain to the transactions for the savings association.

If a savings association uses consultants, it should establish internal policies, controls, and procedures that include the following criteria:

- Establish limitations on the assets managed by consultants with consideration to the types and level of risk of the assets authorized for purchase.
- Monitor compliance with the limitations established by the board.
- Require senior management personnel or an independent agent to periodically audit the consultant or broker to ensure that the firm is buying and selling securities at the most favorable price for the savings association.
- Guarantee that the savings association always has a perfected security interest on securities bought for its account.

The savings association should measure the performance of the consultant against a relevant benchmark (for example, a standard bond index). In measuring the performance (total return) of the consultant against a benchmark, the association should factor in fees and expenses charged by the consultant. Savings associations should note that consultants and contractors may be subject to OTS enforcement actions as provided for by Section 8 of the FDIA, as amended by FIRREA.

Senior management personnel should supervise the activities of the consultant to ensure conformity to the savings association's investment, liquidity, and interest rate risk management plan. Management must keep the board of directors informed of the performance of the consultant, through periodic reports.

REPORTING AND ACCOUNTING FOR SECURITIES

Part 562 of the OTS regulations, require savings associations to record and report their financial condition according to GAAP. This responsibility includes the obligation to properly account for the savings association's securities under GAAP.

Savings associations must categorize each security as trading, available-for-sale (AFS), or held-to-maturity consistent with FASB Statement No. 115, Accounting for Certain Investments in Debt and Equity Securities, as amended. A savings association should determine whether securities are for its trading accounts, AFS, or held-to-maturity at the time it purchases or originates the securities. The savings association should not record securities in a suspense account until it determines the appropriate category. Management should periodically reassess its security categorization decisions to ensure they remain appropriate.

Trading Assets

Savings associations should classify as trading assets securities that the association intends to hold principally for the purpose of selling them in the near term. Trading activity includes active and frequent buying and selling of securities for the purpose of generating profits on short-term fluctuations in price. Savings associations must report securities held for trading purposes at fair value; and recognize unrealized gains and losses in current earnings and regulatory capital.

Held-to-Maturity

Held-to-maturity securities are debt securities that the savings association has the positive intent and ability to hold to maturity. Savings associations generally report held-to-maturity securities at amortized cost.

Available-for-Sale

Savings associations must report securities not categorized as trading or held-to-maturity as available-for-sale. Savings associations must report AFS securities at fair value on the balance sheet. Savings associations must exclude unrealized gains and losses from earnings and report them in a separate component of equity capital.

Section 260, Classification of Assets, states that savings associations holding noninvestment grade securities with maturities of July 1, 1994, or later must classify these securities as held for sale since they do not have the ability to hold them to maturity.

Changes in Categorization

If a savings association judges a decline in fair value of a held-to-maturity or AFS security to be other than temporary, the cost basis of the individual security shall be written down to fair value as a new cost basis and include the amount of the write-down in earnings. For example, if it is probable that a savings association will be unable to collect all amounts due according to the contractual terms of a debt security not impaired at acquisition, an other-than-temporary impairment has occurred.

Sales from the held-to-maturity portfolio could call the intent to hold to maturity into question and result in tainting the remaining portfolio. The savings association may need to redesignate the portfolio as AFS and be subject to mark-to-market adjustments. As a result, savings associations normally limit portfolio restructuring activities to AFS portfolios.

Proper Categorization of Securities

The proper categorization of securities ensures that savings associations promptly recognize trading gains and losses in earnings and regulatory capital.

Trading Activity

While designating certain assets for trading can be consistent with prudent investment securities management, you may consider certain practices speculative or otherwise abusive. OTS and the other banking agencies consider the following practices to be trading activities.

Gains Trading

Gains trading is the purchase of a security and the subsequent sale of the same security at a profit after a short holding period. Savings associations typically retain securities acquired for this purpose that the association cannot sell at a profit in the AFS or held-to-maturity portfolio. Savings associations may use gains trading to

defer recognition of losses because unrealized losses on AFS and held-to-maturity debt securities do not directly affect regulatory capital. Generally, savings associations do not report unrealized losses in income until the security is sold. A pattern of selling above-market securities at a gain while retaining below-market securities overstates the institution's financial health.

When-Issued Securities Trading

When-issued securities trading is the buying and selling of securities in the period between the announcement of an offering and the issuance and payment date of the securities. A purchaser of a when-issued security acquires the risks and rewards of owning a security and may sell the when-issued security at a profit before having to take delivery and pay for it. Because savings associations intend such transactions to generate profits from short-term price movements, savings associations should categorize such transactions as trading.

Pair-offs

Pair-offs are security purchase transactions that are closed-out or sold at, or prior to, settlement date. In a pair-off, a savings association commits to purchase a security. Then, prior to the predetermined settlement date, the savings association will pair-off the purchase with a sale of the same security. Pair-offs are settled net when one party to the transaction remits the difference between the purchase and sale price to the counter party. Pair-offs may also involve the same sequence of events using swaps, options on swaps, forward commitments, options on forward commitments, or other off-balance sheet derivative contracts.

Extended Settlements

In the U.S., regular-way settlement for federal government and federal agency securities (except mortgage-backed securities and derivative contracts) is one business day after the trade date. Regular-way settlement for corporate and municipal securities is three business days after the trade date. For mortgage-backed securities, it can be up to 60 days or more after the trade date. Securities dealers may offer the use of extended settlements to facilitate speculation on the part of the purchaser, often in connection with pair-off transactions. Savings associations should report as trading assets securities acquired through the use of a settlement period in excess of the regular-way settlement periods to facilitate speculation.

Repositioning Repurchase Agreements

A repositioning repurchase agreement is a funding technique offered by a dealer in an attempt to enable a savings association to avoid recognition of a loss.

A repositioning repurchase agreement occurs when a savings association enters into a when-issued trade or a pair-off (which may include an extended settlement) that the savings association cannot close out at a profit on the payment or settlement date. The dealer provides financing in an effort to fund its speculative position until the security can be sold at a gain. The savings association purchasing the security typically pays the dealer a small margin that approximates the actual loss in the security. The dealer then agrees to fund the purchase of the security, typically by buying it back from the purchaser under a resale agreement. The savings association should report as trading assets any securities acquired through a dealer financing technique such as a repositioning repurchase agreement that the association uses to fund the speculative purchase of securities.

Short Sales

A short sale is the sale of a security that the savings association does not own. The purpose of a short sale generally is to speculate on a fall in the price of a security.

Adjusted Trading

Adjusted trading is not acceptable under any circumstances. Adjusted trading involves the sale of a security to a broker dealer at a price above the prevailing market value. Simultaneously, the savings association purchases and books a different security, frequently a lower-rated or lower quality issue or one with a longer maturity, at a price

above its market value. Thus, the savings association reimburses the dealer for losses on the purchase from the savings association and ensures the dealer a profit. Such transactions inappropriately defer the recognition of losses on the security sold and establish an excessive cost basis for the newly acquired security. Consequently, the banking agencies prohibit such transactions. In addition, these transactions may be in violation of 18 USC §§ 1001, False Statements or Entries, and 1005, False Entries.

Limits on MBS Trading Activity

Savings associations may buy and sell securities to manage risk or to improve profitability. Active management of an MBS portfolio may presume an ability to anticipate changes in market interest rates. In practice, interest rates are notoriously difficult to predict. Active portfolio management requires outguessing the market consensus sufficiently to cover transaction costs. Historical data suggests that very few investment professionals can outperform a passive fixed income indexing strategy with active portfolio management.

OTS allows savings associations to use an MBS portfolio for trading purposes only in limited cases and subject to certain safeguards. The institution should have the core earnings and capital to absorb potential trading losses. The savings association should also possess the financial expertise and management information systems to monitor and evaluate trading activity effectively.

You should determine the amount of MBS trading activity by reviewing the volume of trades transacted since the previous examination. You should quantify the volume and compare it with the change in portfolio balances since the previous examination. Calculate portfolio turnover ratio by comparing the dollar amount of securities sold, by type, with the balance of the portfolio at the beginning of a period. For example, if the savings association sold $10 million of MBSs all with the same coupon rate during the quarter, compared with the balance of $10 million of this coupon rate at the beginning of the quarter, the turnover ratio would be 100 percent. You can make these comparisons on a monthly or annual basis.

There is no threshold of turnover that automatically indicates that the MBS portfolio is part of a trading portfolio. You should review the composition of the trades and determine the rationale for the transactions.

While designating certain assets for trading can be consistent with prudent portfolio management, you may consider certain practices speculative or otherwise abusive.

COLLATERALIZED MORTGAGE OBLIGATION (CMO) ISSUANCES

Some savings associations issue CMOs. The issuer may retain a subordinate interest in the CMO as a credit enhancement to outside investors. The gain recognized on the sale depends on the relative fair values assigned to the sold and retained tranches. The higher the value assigned to the retained pieces, the lower the cost basis for the securitized assets, and the larger the recognized gain on sale. There is often no liquid market for the retained securities, so their fair values may be difficult to verify. You must analyze the savings association's valuation assumptions to ensure that the savings association bases its gain on sale upon the economics of the transaction rather than merely an inflated value assigned to retained tranches. Particularly important variables include the assumed prepayment rate, loss rate on the underlying mortgages, and required rate of return (discount rate).

Consult Appendix C of this section and Section 560, Deposits/Borrowed Funds, for a more detailed discussion of CMO issuances.

REFERENCES

United States Code (12 USC)

§ 1464(c)(1)	Loans for Investments Without Percentage of Asset Limitation
§ 1464(c)(2)	Loans or Investments Limited to Stated Percentage of Assets or Capital
§ 1464(c)(4)	Other Loans and Investments

Code of Federal Regulations (12 CFR)

§ 560.40	Commercial Paper and Corporate Debt Securities
§ 560.42	Government Obligations
§ 560.93	Lending Limitations
§ 562.2	Regulatory Reports
§ 563.172	Financial Derivatives
Part 566	Liquidity

Office of Thrift Supervision Bulletins and Memoranda

RB 3b	Policy Statement on Growth for Savings Associations
TB 13a	Management of Interest Rate Risk, Investment Securities, and Derivative Activities
TB 13a-2	Structured Advances

FFIEC Policy Statement

Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities (April 23, 1998)

Financial Accounting Standards Board, Statement of Financial Accounting Standards (SFAS)

No. 91	Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Mortgages with Initial Direct Cost of Leases
No. 107	Disclosures about Fair Value of Financial Instruments
No. 115	Accounting for Certain Investments in Debt and Equity Securities
No. 140	Accounting for Securitizations

Emerging Issues Task Force (EITF)

No. 86-38	Implications of Mortgage Prepayments on Amortization of Servicing Rights

Other References

Committee on Sponsoring Organizations of the Treadway Commission (COSO), Internal Control Issues in Derivatives Usage: An Information Tool for Considering the COSO Internal Control – Integrated Framework for Derivatives Applications.

Investment Securities Program

Examination Objectives

To determine the adequacy of the savings association's policies, procedures, and internal controls regarding its investments.

To determine if the savings association's investment policy, interest rate risk policy, funds management policy, and business plan adequately describe the type and level of authorized investments.

To determine if the savings association documents and describes the rationale for all investments.

To determine if the savings association adequately analyzes its investments prior to purchase.

To determine if these investments are appropriate based on the savings association's current portfolio, interest rate risk structure, and regulatory capital position.

To determine the prudence of risk management strategies through evaluation of practices and procedures.

To determine if the savings association's officers and employees are operating in conformance with the established policies and whether these individuals have the necessary expertise to execute the authorized strategies.

To determine the overall quality of the savings association's investments and assess the effect of the portfolio quality on the overall soundness of the savings association.

To determine if the savings association is in compliance with the regulations and whether the savings association records transactions according to generally accepted accounting principles (GAAP).

To determine the scope and adequacy of the internal and external audit functions considering the type and complexity of the savings association's investments.

To determine if the savings association incurred any significant prepayment risk from its investment in mortgage-backed securities (MBSs) or mortgage-derivative products (MDPs).

To determine if the savings association actively monitors its investments.

To determine if the savings association, at least quarterly, obtains or performs analysis of each complex security purchased with board of director approved techniques demonstrating that the security reduces overall interest rate risk.

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Investment Securities Program

To determine if the savings association engages in speculative trading.

To evaluate investment and trading activities to determine if the volume and number of transactions have any broad and potentially adverse effect on the savings association's financial health.

To summarize findings and initiate corrective actions when there are deficiencies.

Examination Procedures

Level I

Wkp. Ref.

1. Review scoping materials applicable to this program. If another examiner performed the review of scoping materials, obtain a written or oral summary of the review(s) of items concerning this program.

2. Determine if the savings association corrected any transactions or policies and procedures subject to any of the following:

   - Previous examination report comments and previous examination exceptions.
   - Independent audit exceptions.

3. Review the current written investment policy and business plan.

4. Review all procedures related to investment activities.

5. Ascertain whether the board adopted any policy revisions since the previous examination.

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6. Judge the adequacy of the guidance in the written investment policy.

7. Evaluate the objectives of the savings association's investment activities as stated in the investment policy and business plan. Discuss any apparent conflicting objectives with management.

8. Evaluate whether management has the expertise necessary to carry out the objectives of the policy. Identify any backup expertise available to management.

9. Review management's reports to the board for accuracy and completeness.

10. Review board meeting minutes to determine the following:

    - Did the board approve the broad objectives, strategies, and major policies for investment activities?
    - Do the investment strategies contain an adequate amount of detail?
    - Did the board establish appropriate dollar and percentage limits on investment securities?
    - Do the reports to the board accurately and adequately detail the returns from the investment activity?

11. Review the securities transactions in the context of the savings association's funds management structure and current interest rate risk profile, profitability, capital, and liquidity positions. Discuss findings with examiners working on liquidity, funds management, earnings, operations, interest rate risk, and capital.

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12. Evaluate whether the savings association classifies transactions appropriately in the portfolio as held-to-maturity, available-for-sale (AFS), or trading.

13. Assess policies and procedures for reviewing investment securities for asset classification purposes or coordinate with the examiner reviewing classifications.

14. Identify methods used to estimate prepayments for investment securities.

    - Determine if prepayment assumptions differ markedly from those of securities with similar underlying collateral.
    - Determine the yield and estimated maturity of the investment portfolio.

15. Examine the documentation of the analysis of investment securities.

16. Considering a review of the information gathered through procedures, observations, and discussions with management and other personnel, determine the following:

    - The adequacy of internal controls.
    - Proper authorization of all trades.
    - Compliance with regulations and conformance with GAAP.
    - Management's level of expertise and conformance by management with the savings association's policies and procedures.
    - The adequacy of the management report and information system used to provide management and the directors with accurate decision-making information and the ability to monitor compliance with established guidelines.

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17. Summarize findings, obtain management responses, and update programs and the continuing examination file (CEF), if applicable, with any information that will facilitate future examinations. File exception sheets in the general file.

18. Determine that investment securities meet applicable regulatory and policy requirements, including:

    - 12 CFR 560.40, Commercial Paper and Corporate Debt Securities.
    - 12 CFR 560.32, Pass-Through Securities.
    - TB 13a, Management of Interest Rate Risk, Investment Securities, and Derivatives Securities.

19. Determine that investment securities are suitable to the institution's operational and strategic goals and that the securities are safe and sound.

20. Determine that the institution performed thorough underwriting analyses prior to purchase.

21. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

22. Obtain a listing of all investment securities held. The list should contain, at a minimum, the following information:

    - Description of the security.

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- Classification as held-to-maturity, AFS, or trading.
- Committee on Uniform Securities Identification Procedures (CUSIP) number.
- Purchase price or cost.
- Date of purchase.
- Par value and principal amount purchased.
- Current book value including any unaccreted discounts or unamortized premiums.
- Maturity date and call provisions, if any.
- Current market value.

23. Ascertain whether management shifted its risk posture. Also determine if the association is taking on riskier investments.

- Obtain a list of securities purchased, sold, and matured between examinations.
- Categorize the securities by type, for example, U.S. Government, agency, state and municipal obligations, corporate debt.
- Review the analysis of municipal and corporate issues by rating classification. For non-U.S. Government securities, obtain most recent bond ratings by an independent bond rating service.
- Determine the total in each rating class and total of unrated issues.
- Determine the total of unrated investment securities issued by obligors located outside the savings association's trade area.

24. Identify any changes in the portfolio composition from the previous examination by type and rating.

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25. Ascertain whether any concentration of credit exists by type, area, or in any one entity.

26. Ascertain whether market value depreciation is significant in comparison with capital and total investment portfolio.

27. Evaluate the overall effectiveness of investment activities and the portfolio's contribution to the income stream.

    - Analyze yields and spreads of the investment portfolio. Ascertain whether investment strategies are effective in maintaining targeted yields and spreads.
    - Review net trading gains/losses, taking into consideration broker/dealer commissions.

28. Compare the coupon rates and yields of recently acquired investments with similar instruments. Discuss with management the appearance of any differences where coupon rates or yields may be significantly higher or lower.

29. Evaluate the savings association's transactions to determine if securities are held to maturity, AFS, or for trading. Ascertain if the savings association records trading and AFS portfolios at fair value.

30. Determine if the association's trading activity is speculative or abusive. Also determine if the association makes adjusted trades.

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31. Review any transfers or swaps of securities from the trading or AFS portfolios to the held-to-maturity portfolio.

32. Evaluate the adequacy of credit analysis procedures. Review the savings association's credit analysis of the following:

    - The obligor on securities purchased under agreement to resell, when the readily marketable value of the security is not sufficient to satisfy the obligation or when collateral custody procedures are inadequate to ensure the association's unassailable right to the collateral.

    - All money market instruments acquired since the previous examination.

33. Determine if management identifies credit and default risk; and all defaulted issues.

34. Ascertain any changes in the credit rating after the savings association purchased the security.

35. Review the savings association's classification of securities in accordance with asset classification regulations. Indicators of the extent of credit deterioration include credit rating downgrades or market value depreciation (excluding that caused by interest-rate shifts). The savings association should classify the market value depreciation of defaulted issues as Loss.

36. Review the use of outside investment consultants:

    - Determine the extent of the capacity in which the consultant serves.

    - Review the consultant's contract.

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- Determine the consultant's background and expertise.
- Determine the consultant's investment powers and authority.
- Evaluate the supervision, level of control over, and degree of dependence upon outside consultants.

37. Review safekeeping of records to determine location of securities held by third parties. Determine if management has procedures to verify that securities are being held in safekeeping.

38. If the savings association's stock trades publicly, review the applicable reports filed with the Securities and Exchange Commission, including the 10K (Annual) and 10Q (Quarterly) for any mention of investments. Determine the accuracy of these references and report any discrepancies to OTS Washington pursuant to procedures in Section 110, Capital Stock and Ownership.

39. Determine if the savings association's investment in MBSs or MDPs exacerbated or caused any deficiencies noted in areas such as:

- The purchase of excessive quantities of low-coupon rate or discount securities that would increase interest rate risk.
- Reliance on nonrecurring gains from the sale of MBSs or MDPs to sustain profitability.
- Inadequate capital to sustain adverse fluctuations in the returns from stripped mortgage-backed securities (SMBSs) or the residual interest in multiple-class securities.

40. Obtain a detailed listing of the mortgage securities as of the examination date. Determine the following:

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- The type, coupon rate, and maturity of the securities in the portfolio.
- The dollar amount of these investments as a percentage of total assets.
- If there was a significant increase in the portfolio, identify the funding source and the cause of the increase.

41. For MDPs, also ascertain the following:

- The particular class of the security purchased and the terms of that class.
- The characteristics of the collateral underlying the MDP, for example, the type of security, weighted average coupon (WAC), and maturity.
- If the savings association performed an analysis of the MDPs.

42. Obtain the contract registers, general and subsidiary ledgers, and trade confirmations from brokers to determine:

- The extent of trading activity by reviewing the amount and composition of the portfolio turnover and existence of margin accounts.
- If the savings association obtained documented comparative price quotes from brokers/dealers other than the broker/dealer that executed the transaction.
- If the savings association's contract register and general and subsidiary records correspond to the information detailed on confirmations from brokers.
- The location of all investment securities in safekeeping with other parties or pledged as collateral for any transaction.

43. Assess the effect of these transactions on the viability of the savings association. Identify the cause of the problems that could involve inadequate management expertise or lack of adequate research prior to execution of the strategy. Obtain management's intended

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corrective action.

44. Review the adjustable-rate MBSs purchased since the previous examination. Determine the following:

- The index, margin, interest rate caps, and any other adjustment features of the adjustable-rate MBS portfolio.
- The dollar amount of the adjustable-rate MBSs retained in portfolio with a large portion of the underlying collateral having teaser rates.
- The inerest rate risk of this portfolio by comparing the current interest rate with the lifetime cap and the frequency of interest-rate adjustments.

45. Determine if the savings association purchased the residual interest in an MDP. If so, determine the following:

- If the board of directors approved the transaction and if management updates the board regularly on the actual yield.
- If, prior to purchase, the thrift analyzed the effect on yield and potential value changes under varying prepayment assumptions.
- The expected return and prepayment assumptions the savings association based this yield upon.
- The underlying structure of the MDP.
- The characteristics of the collateral that underlies the MDP, such as the type of securities (GNMA, Freddie Mac, or Fannie Mae) or whole mortgages, the weighted average remaining maturity (WARM), the coupon rate, and the actual prepayment experience.
- If the issuer based the security upon real estate mortgage investment conduit (REMIC) authority.

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- If the savings association intended the investment to be a hedging vehicle, and if so, the identity of the matched item and the estimated amount of interest-rate protection provided by the residual.

- If the savings association classifies a residual interest in securitized assets properly and accounts for them as AFS or trading securities in accordance with SFAS 125 and SFAS 115.

46. Determine if the savings association purchased a SMBS or any security with similar characteristics. If so, determine the following:

- If the board of directors approved the investment and if management updates the board regularly on the investments actual yield and market value.

- If, prior to purchase, the savings association analyzed the expected yield based on various changes in interest and prepayments.

- If the interest only (IO) or principal only (PO) comprises most of the interest.

- The expected yield from the investment and the prepayment assumptions used to determine this yield.

- If the savings association intended to use the SMBS as a hedging vehicle, and if so, the matched item and the estimated amount of interest-rate protection provided by the SMBS.

47. Determine if the savings association purchased MBSs backed by commercial real estate. If so, determine the following:

- The type of property.

- The rating of the security, if any.

- If management reviewed the prospectus and supplement with particular attention to the risks of the underlying loans and the nature and quality of credit supports.

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48. Determine if the savings association purchased an interest in a senior/subordinated security. If so, determine the following:

- If the savings association acquired the senior or subordinated interest.
- The types of mortgages underlying the security.
- The investment rating.
- The potential risk of default if the savings association purchased the subordinated interest.
- If the savings association is properly reporting its interest in the senior/subordinated securities in accordance with the recourse provisions in OTS regulatory capital guidelines.

49. Determine whether the savings association securitized assets and retained a residual interest in those securitized assets or subordinated interests. If so, determine the following:

- If the savings association calculates the gain or loss on the sale in accordance with GAAP.
- If the savings association bases the fair value assigned to the retained tranche(s) upon reasonable assumptions concerning prepayments and defaults on the underlying loans.
- Whether the savings association uses a reasonable discount rate that reflects the risk of the securities.
- The sensitivity of value of the retained tranches to changes in interest rates, prepayments, defaults, or discount rates.

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50. Ensure that your review meets the Objectives of this Handbook Section. State your findings and conclusions, and appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Level III

51. Reconcile the trial balances to general ledger accounts. Cross check investment trial balances with other schedules or records to determine if securities exist.

52. Verify the accuracy of registers by comparing broker advices with trade tickets. Send confirmation to brokers, if necessary.

53. Review pledged securities reports. Identify securities that may be overpledged or cross-collateralized with other securities.

54. Review the maturity distribution schedule and determine if the association is extending or shortening the portfolio's maturity in line with policy objectives.

55. Test for proper accounting for premiums and discounts.

56. Determine proper accounting for gains and losses.

Examiner's Summary, Recommendations, and Comments

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Investment Securities Questionnaire

General Questionnaire	Yes	No
1. Did the board of directors approve a written investment policy?		
2. Does the savings association update its investment policy annually and whenever unanticipated conditions dictate?		
3. Does the investment policy address the assignment of responsibilities and duties?		
4. Do the investment policy and business plan confirm the following requirements:		
• Safety and soundness?		
• Regulatory limitations?		
• The board of director's requirements?		
5. Does the savings association monitor adherence to the policy?		
• How often?_____		
6. Is the investment strategy appropriate based upon the savings association's investment portfolio, interest rate risk, profitability, and regulatory capital position?		
7. Does the policy define the acceptable level of risk?		
8. Does the association take the following considerations into account when looking at the composition of the portfolio:		
• Investment objectives?		
• Investment strategy		
• Types and level of allowable investments?		
• The decision-making process?		
• Monitoring of investments?		
• Record keeping and documentation requirements?		
9. Does the savings association engage in speculative trading strategies?		
10. Does the savings association engage in any unsuitable investment practices?		
11. Is the savings association's trading activity appropriate based on the type and amount of activity?		
12. Does the composition of the investment securities portfolio take into consideration the following items:		
• Quality levels?		
• Diversification?		
• Maturity structure?		
• Liquidity?		
13. Does the savings association have procedures in place to prevent over-collateralization?		
14. Does the savings association maintain an adequate control register for its investment securities clearly showing the following information:		
• Types of securities?		
• Outstanding position?		
• Volume of purchases and sales?		
• Realized and unrealized gains or losses on these positions?		
15. Do subsidiary records of investment securities show all pertinent information, including the following items:		
• A description of the security?		

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Investment Securities Questionnaire

	Yes	No
• The safekeeping location of the security?		
• Pledged or unpledged status of the security?		
• Premium amortization?		
• Discount accretion?		
• Interest earned, collected, or accrued?		
16. Does the savings association perform a price sensitivity analysis of complex securities prior to purchase?		
17. Does the savings association perform an internal analysis of its investment securities at least quarterly?		
18. Does the savings association obtain periodic market valuations for the following investment securities:		
• Thinly traded investments?		
• Issues not quoted daily on major markets?		
19. Does the savings association perform credit analyses independently of the investment department?		
20. Does the association obtain bond ratings from any of the well-known bond rating services?		
• Which services? _____		
21. Does the savings association appropriately classify investment securities?		
22. Did the savings association purchase any SMBSs or the residual interest in an MDP? If so:		
• Did the board of directors approve the investment?		
• Does the savings association analyze the investment prior to purchase, including the estimated yields under various interest-rate and prepayment scenarios?		
• Does the savings association document the expected yield and the prepayment assumptions used?		
• Are the initial prepayment assumptions reasonable considering the interest rate on the underlying collateral when compared with prevailing mortgage interest rates?		
23. Does the savings association periodically adjust the yield or book value of an MBS or MDP based upon changes in the prepayment experience of the underlying collateral?		
24. Does the savings association purchase commercial MBSs? If so, review the following question:		
• Do any of these securities have teaser rates?		
• If so, how close was the current interest rate to the lifetime cap: _____ _____		
25. Does the savings association issue CMOs or MDPs through a subsidiary?		
26. Did the savings association purchase the senior interest of a senior/subordainted security structure? If so, answer the following questions:		
• What was the investment rating? _____		

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Investment Securities Questionnaire

	Yes	No
• What was the underlying collateral?		
_____		
27. Did the savings association purchase the subordinated interest in the security?		
28. Is there adequate segregation between the individuals responsible for executing the transactions, accounting for the transactions and transferring funds?		
29. Do trade tickets contain the following information:		
• Trade date?		
• Settlement date?		
• Purchase or sale transaction?		
• Contract description?		
• Quantity?		
• Price?		
• Reason for trade?		
• Identity of person conducting transaction?		
30. Does someone other than the person who authorizes, executes, or controls the securities record the transaction?		
31. Does someone other than the person with custody or control of securities post transaction records?		

	Yes	No
32. Does the savings association reconcile subsidiary records at least monthly?		
• How often?_____		
• Does the savings association test them for accuracy?		
33. Does an independent party, not connected with the transaction, review commitments and advices?		
34. Does the savings association verify delivery or safekeeping records?		
35. Who has custody or control of securities?		
_____		
36. Does the savings association obtain comparative price quotes from at least two broker/dealers other than the broker/dealer that executed the transaction?		
37. Does the savings association use reputable dealers?		
38. Is there a concentration of activity with one broker/dealer?		
39. Does the association properly safeguard the physical securities?		
40. Does the savings association have procedures in place to ensure proper access and control?		
41. Does the savings association review safe keeping records for accuracy?		

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Investment Securities
Questionnaire

Comments

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TOTAL RETURN ANALYSIS

This appendix discusses total return analysis and shows how to measure the expected return of fixed-income securities. In evaluating the expected return of an individual fixed-income security or portfolio of fixed-income securities, investors typically use internal rates of return, such as yield to maturity (YTM) or yield to call (YTC), as selection criteria. These two yield measures, however, are unlikely to reflect the correct expected investment return. Instead, total return provides a better measure of prospective investment return.

Investment decisions made using YTM or YTC can lead to investments with lower total returns depending on the following variables:

- Changes in reinvestment rates.
- End-of-period required yields.
- Length of the investment horizon.

However, there is an important caveat. In computing total returns based on scenario analysis, investors should be aware that total return estimates will only reflect investment returns if expectations regarding reinvestment rates and end-of-period yields turn out to be correct.

Background

Both the Federal Financial Institutions Examination Council (FFIEC) and the Office of Thrift Supervision (OTS) issued policy guidance that recommends institutions conduct a total return analysis in assessing the effects of interest rate changes on the returns associated with investment securities and financial derivatives prior to taking a position in these financial instruments. The 1998 FFIEC policy statement states: "The agencies agree that the concept of total return can be a useful way to analyze the risk and return tradeoffs for an investment. This is because the analysis does not focus exclusively on the stated yield to maturity. Total return analysis, which includes income and price changes over a specified investment horizon, is similar to stress testing securities under various interest rate scenarios. The agencies' supervisory emphasis on stress testing has, in fact, implicitly considered total return. Therefore the agencies endorse the use of total return analysis as a useful supplement to price sensitivity analysis for evaluating the returns for an individual security, the investment portfolio, or the entire institution." In Thrift Bulletin 13a, issued December 1998, OTS states: "Management should exercise diligence in assessing the risks and returns (including expected total return) associated with investment securities and financial derivatives."

Conventional Measures of Investment Return

The price of a bond is equal to the present value of the bond's expected cash flows. By definition, the yield, or internal rate of return, is that interest rate that equates the present value of a bond's cash flows to its current market price. As stated earlier, YTM and YTC are two frequently used measures of return (or yield) on fixed-income securities. YTM is used to price and trade non-callable bonds, while YTC is used to price and trade callable bonds.

YTM is the internal rate of return on a non-callable bond that is held until maturity. In using this yield measure, one assumes that the security is held until maturity and that all cash flows can be reinvested at the same constant YTM. YTC is the internal rate of return on a callable bond that is held until either the first call or first par call date. In using this yield measure, one assumes that the security is held until being called by the issuer and that all cash flows can be reinvested at the same constant YTC.

Both of these return measures have several important drawbacks:

- Investors typically do not hold fixed-income investments until these investments mature or are called.
- Interim cash flows cannot be reinvested at the assumed constant yields.
- It is not possible to compare the likely returns on investments with different maturities or more complex return/risk profiles.

Total Return Analysis in Theory

Total return analysis avoids the shortcomings associated with using the two conventional yield measures, YTM and YTC, and provides an investor with a better measure of the expected return on fixed-income investments. The total return (also known as the horizon or total holding-period return) accounts for the three sources of potential dollar return on a bond:

- Coupon interest payments,
- Capital gain or loss when bond matures, is sold, or called, and
- Income from reinvestment of coupon interest payments (interest-on-interest income).

Therefore, to calculate the total return for a non-callable bond, an investor chooses an investment horizon or holding period, a reinvestment rate, and a selling price for the bond at the end of the investment horizon (that is, end-of-period required return). Based on the values chosen for these parameters, the total return calculation is straightforward. First, calculate total coupon payments plus interest-on-interest income for the assumed reinvestment rate over the given investment horizon using the following expression:

where

$$\text{Coupon plus interest - on - interest} = \text{Coupon}\left[\frac{[(1+r)^{h}-1}{r}\right]$$

h = length of investment horizon, and
r = assumed reinvestment rate.

Second, calculate the predicted sales price of the bond at the end of the investment horizon. Third, calculate total future dollars derived from the bond over the holding period by summing total coupon payments, reinvestment income, and the predicted sales price. Finally, substitute this value into the following expression to obtain the total return:

$$y_h = \left[\frac{\text{Total future dollars}}{\text{Purchase price of bond}}\right]^{1/h} - 1$$

where r and h are defined as above, and
Total future dollars = Coupon payments + Interest-on-interest income + Sales price.

For example, to obtain the total return on a bond-equivalent basis for a bond with semiannual coupon payments, the semiannual total return calculated using the above expression would be multiplied by a factor of two.[1]

Total Return Analysis in Practice

There are three different approaches an investor or portfolio manager can use to calculate total return:

- Subjective forecasts of the reinvestment rate and required yield at the end of the investment horizon.
- Implied forward rates from the yield curve (for instance, U. S. Treasury or LIBOR yield curves) to determine the reinvestment rates and the yield on a bond at the end of the investment horizon. This approach to total return analysis produces *an arbitrage-free total return* because the calculation is based on the market's expectations of the reinvestment rate and end-of-period required yield.
- Scenario analysis. Scenario analysis involves specifying different possible values for the reinvestment rate and the required yield at the end of a given investment horizon, and then calculating the total return associated with each scenario.

Of the three approaches, total return analysis based on scenario analysis is the best approach because it allows an investor, or portfolio manager, to measure how sensitive a bond's expected performance is to differing reinvestment rates and end-of-period required yields. One can also use total return analysis to compare the expected returns of a bond for investment horizons of varying lengths. In the two examples that follow, scenario analysis is used to compare:

- The total returns for a bond using two different investment horizons.
- The total returns for two bonds of different maturities.

Assess the effect on a bond's total return by varying the length of the investment horizon using scenario analysis. Assume Bond A is a 9 percent coupon, 20-year non-callable bond with a current market price of $109.90 and a yield to maturity of 8 percent. Tables 1 and 1A show scenarios for the reinvestment rate and end of period required yields for Bond A for a three-year and ten-year investment horizon, respectively.

Table 1
Scenario Analysis for Bond A's Total Return

Required Yield at End of 3-Year Investment Horizon (%)			
	6.0	**8.0**	**10.0**
Reinvestment Rate (%)			
4.0	13.36	7.78	3.06
5.0	13.44	7.87	3.16
6.0	13.53	7.97	3.26

[1] This discussion draws on material from Frank J. Fabozzi, editor, *The Handbook of Fixed Income Securities*, 5th Edition, 1997, Chapter 4. See this chapter for further discussion of the total return concept.

Table 1A
Sensitivity of Bond A's Total Return to Investment Horizon

	Required Yield at End of 10-Year Investment Horizon (%)		
	6.0	**8.0**	**10.0**
Reinvestment Rate (%)			
4.0	7.59	6.88	6.24
5.0	7.85	7.16	6.53
6.0	8.11	7.43	6.82

As shown in the tables, there are three different reinvestment rates, 4, 5, and 6 percent, and three different end-of-period required yields, 6, 8, and 10 percent. In both tables, for each combination of reinvestment rate and end-of-period yield, there is a total return estimate for Bond A. As shown in the two tables, the total return estimates vary substantially across the two investment horizons. The differences in the total return estimates illustrate the effect that the choice of investment horizon has on a bond's expected return since the relative importance of the reinvestment rate and end-of-period required return change is related to investment horizon. For short investment horizons, reinvestment income is small, but it increases in size as the investment horizon lengthens.

The second example compares the total returns for two bonds of different maturities. The first bond, Bond A, is the same bond used in the previous example. The second bond, Bond B, is a 7.25 percent coupon, 14-year non-callable bond with a current market price of $94.55 and a yield to maturity of 7.9 percent.[2] In comparing the total returns for the two bonds below, the investment horizon is set to three years. Based on yield to maturity, Bond A appears to be a better investment than Bond B because of Bond A's higher yield to maturity. However, as the example shows convincingly, yield to maturity is not a reliable measure of expected investment return.

Table 1 and Table 2 show various scenarios for the reinvestment rate and end of period required yields for Bond A and Bond B, respectively. There are three different reinvestment rates, 4, 5, and 6 percent, and three different end of period required yields, 6, 8, and 10 percent. These are the same values used in the previous example.

Table 2
Scenario Analysis for Bond B's Total Return

	Required Yield at End of 3-Year Investment Horizon (%)		
	6.0	**8.0**	**10.0**
Reinvestment Rate (%)			
4.0	12.00	7.50	3.48
5.0	12.08	7.58	3.57
6.0	12.16	7.67	3.67

The total return estimates for both bonds vary substantially across the different rate scenarios. For Bond A, these estimates range from a maximum value of 13.53 percent to a minimum value of 3.06 percent. For Bond B, these estimates range from a maximum value of 12.16 percent to a minimum value of 3.48 percent. This example shows the high degree of sensitivity of a bond's expected return to different values for reinvestment rates and end-of-period required yields.

[2] This example is adapted from Fabozzi, *The Handbook of Fixed Income Securities*, 5th Edition, pages 72-75.

If a portfolio manager currently owned Bond B, the higher yield to maturity on Bond A might induce the manager to swap Bond A for Bond B in a pure yield pickup swap transaction. However, Tables 1 and 2 show that the likely returns on both bonds are sensitive to what happens to interest rates, despite the higher promised yield to maturity for Bond A. To see this more clearly, Table 3 shows the total return for Bond A minus the total return for Bond B in basis points.

Table 3
Bond A's Total Return Minus Bond B's Total Return (in Basis Points)

Required Yield at End of 3-Year Investment Horizon (%)			
	6.0	**8.0**	**10.0**
Reinvestment Rate (%)			
4.0	136	28	-42
5.0	137	29	-41
6.0	137	30	-41

Table 3 shows that for required yields of 6 and 8 percent, Bond A's total return exceeds that of Bond B's for all three reinvestment rates. However, for a required yield of ten percent, the situation reverses dramatically, with Bond B's total return exceeding that of Bond A. These results suggest that investment decisions based only on stated yield to maturity will not produce the best total returns as interest rates change. The results of this simple example demonstrate the importance of conducting a stress test over various interest rate scenarios when evaluating the expected return on investment securities before taking positions in these financial instruments.

MONEY MARKET, FIXED-INCOME MARKET, AND EQUITY MARKET SECURITIES

There are investment opportunities in each of the three major areas that make up the money and capital markets:

- Money market
- Fixed-income market
- Equity market.

Money Market

The money market is the arena where financial institutions and other businesses adjust their liquidity positions. This primarily consists of debt instruments with a remaining maturity of one year or less. Money market securities generally have a high degree of liquidity and low risk to principal. The money market operates through dealers, money center banks, and the Open Market Trading Desk of the New York Federal Reserve Bank.

Federal Funds

Federal funds are balances at the Federal Reserve that financial institutions lend to one another and are not subject to reserve requirements. The purchasing institution uses these funds to meet reserve requirements or for a special arbitrage funding arrangement. Federal funds sold are subject to default risk, as with any unsecured loan. The shorter the term of the transaction, the less default risk is a primary concern. The majority of federal funds transactions are for overnight or over weekends. Term federal funds, however, are not uncommon. They transact at a fixed rate for a period longer than one day, typically 30, 60, or 90 days. Term federal funds are subject to loans-to-one-borrower and other lending limitations.

Negotiable Certificates of Deposit

These certificates are usually issued by money center or large regional banks in denominations of $1M or more and the issuing institution may issue them at face value with a stated rate of interest, or at a discount similar to U.S. Treasury bills. These certificates are widely traded and offer substantial *liquidity*.

Eurodollar Time Deposits

Eurodollar time deposits are certificates of deposit issued by banks in Europe, with interest and principal paid in dollars. Such certificates of deposit usually have minimum denominations of $100,000 and short-term maturities of less than two years. Usually they have interest rates pegged to LIBOR.

Certificates of Deposit

Certificates of deposit are time deposits in banks or savings associations with maturities longer than 30 days. Most certificates of deposit have an original maturity of one to three months. Variable-rate certificates of deposit are also available, typically either six-month with a 30-day roll or one year with a three-month roll. In general, certificates of deposit have a slightly higher return, are slightly riskier, and are slightly less liquid than Treasury bills. A prudent investment manager should limit holdings in any depository institution to amounts covered by federal deposit insurance.

REPURCHASE AGREEMENTS

In a repurchase transaction, an institution loans funds and, in effect, buys securities from a counterparty. They also commit to resell the same securities back to the counterparty, at a later date at a specified price. In a reverse repurchase transaction an institution receives funds from and sells securities to a counterparty. They also promise to repurchase the same securities at a specified price and date. Repurchase agreements are short-term in nature; therefore, the transaction takes place in the money market.

Treasury Bills

U.S. Treasury bills are U.S. Government securities with three-month, six-month, and one-year maturities. The government issues them in minimum denominations of $10,000 and multiples of $5,000 thereafter. The government issues treasury bills at a discount from face value. They are exempt from state and local taxation, and are backed by the full faith and credit of the U.S. Government.

Municipal Notes

Short-term municipal bond with a maturity of one year or less.

Municipal Bonds

Municipal bonds based on the general taxing authority of the issuer or general obligation bonds have certain factors that may adversely affect the creditworthiness of these types of bonds. These factors include the following:

- Declining property values and an increasing number of delinquent taxpayers.
- Increasing tax burden relative to other regions.
- Increasing property tax rate in conjunction with declining population.
- Actual general fund revenues consistently falling below budgeted amounts.
- Budget expenditures increasing annually in excess of inflation rate.
- General obligation debt increasing while property values remain static.
- Declining economy as measured by increased unemployment and declining population.
- Investment activities that involve excessive leveraging to achieve enhanced yields.

Floating-rate notes usually have a maturity of five to seven years, and interest payments periodically adjust, often every six months. A money market index, usually Treasury bills or Eurodollar rates determine the interest rate. State, municipal, and other political subdivisions, including independent school districts, issue municipal bonds that are usually dependent upon the general taxing authority of the locality or on specific revenue generating projects for repayment. Interest income generated by state and municipal obligations is not subject to federal income taxes and is usually exempt from taxation by the issuing state and local authorities. Other state and municipal obligations include Bond Anticipation Notes (BANs), Tax Anticipation Notes (TANs), and Revenue Anticipation Notes (RANs). These notes are short-term obligations to finance current expenditures pending receipt of proceeds from expected bond offerings or revenues.

Section 560.42 permits savings associations to invest in obligations of state or political subdivisions. The obligations must meet the following requirements:

- Rated in one of the four highest grades.
- Issued by a public housing agency.
- Backed by the full faith and credit of the United States.

The regulation limits investments in state or political subdivisions ten percent of capital for any one issuer, excluding general obligations of any one issuer. A savings association may invest, in the aggregate, up to one percent of its assets outside of the rating requirements and guarantee provisions within the state or political subdivision where the savings association's home or branch office is located.

Revenue Bonds

Revenue bonds are dependent upon the income generated by specific projects established by government authority. A type of revenue bond often held by savings associations are public housing authority revenue bonds. Although they have corporate debt characteristics, the FDIC does not consider such public entity issues to be corporate debt securities and are not subject to the FDIC divestiture requirements. The credit quality of these issues varies greatly and is dependent upon the revenue source, any guarantees, sinking funds, and market value of collateral, if any.

Because the taxing authority does not support revenue bonds, unless rated, you should classify them the same as other commercial credits. Other factors that negatively affect their creditworthiness include:

- Decreasing coverage of debt service by net revenues.
- Regular use of debt reserves and other reserves by the issuer.
- Growing financial dependence of the issuer on unpredictable federal and state aid appropriations for meeting operating budget expenses.
- Unanticipated cost overruns and schedule delays on capital construction projects.
- Frequent or significant user rates increases.
- Deferred capital plant maintenance and improvement.
- Shrinking customer base.
- New and unanticipated competition.

Commercial Paper

Top-rated corporations issue commercial paper with 2- to 270-day maturities. Commercial paper is unsecured, usually discounted and possibly backed by bank lines of credit. Standard and Poor's rates commercial paper ranging from A, the highest quality, to D, the lowest quality. Moody's uses designations of Prime-1 to Prime-3, and Not Prime (issuers that do not fall within any of the Prime rating categories).

Banker's Acceptances

Banker's acceptances arise mostly out of foreign trade transactions and are similar to commercial paper in form. They are noninterest-bearing notes sold at a discount and redeemed by the accepting bank at maturity for full face value. Banker's acceptances are short-term instruments with maturities of nine months or less. Most banker's acceptances are for very large amounts, although some are available for as low as $5,000.

Liquidity risk varies considerably based on the size of the security. There is no secondary market for the very low denomination instruments. Banker's acceptances have very low credit risk since the accepting bank and the ultimate borrower both guarantee payment.

Federal Agency Discount Notes and Coupon Securities

Although they are only a small portion of the money market, federal agency securities are second highest in credit quality. The purposes, maturities, and types of agency securities issued vary widely. Typically the government backs these issues with collateral such as cash, U.S. Government securities, and debt obligations the issuing agency acquires through its lending activities. The more common types of federal agency securities include obligations of the following agencies:

- Federal Home Loan Banks (FHLBs)
- Farm Credit System (FCS)
- Federal National Mortgage Association (Fannie Mae)
- Federal Home Loan Mortgage Corporation (Freddie Mac)
- Government National Mortgage Association (GNMA)
- Student Loan Marketing Association (SLMA).

Obligations of the U.S. Government and federal agencies are safe and liquid. Federal agency securities (except for GNMAs) generally do not bear the full faith and credit of the U.S. Government. They do bear the full faith and credit of the U.S. Government agency or government sponsored enterprise that sponsors them.

Structured Notes

Federal agency notes include structured notes that are securities with derivative-like characteristics. Structured notes are fixed-income securities with embedded options where the bond's coupon, average life, or redemption value are dependent on a reference rate, an index, or formula. Fannie Mae, Freddie Mac, and the FHLBs are the primary issuers of structured notes. OTS considers structured notes a complex security and they require a price sensitivity analysis. See TB 13a-2 for more information.

Structured notes take various forms. The term structured notes includes the following securities:

- Dual-indexed floaters
- De-leveraged floaters
- Inverse floaters
- Leveraged inverse floaters
- Ratchet floaters
- Range floaters
- Leveraged cap floaters
- Stepped cap/floor floaters

- Capped callable floaters
- Stepped spread floaters
- Multi-step bonds
- Indexed amortization notes.

The major type of structured note owned by financial institutions are step-up bonds. These bonds have successively higher coupons over their life and the issuer may call them. Institutions should carefully evaluate the purchase of a step-up bond. See the explanation of the call feature of step up bonds immediately below in the description of corporate bonds.

OTS does not consider standard, non-leveraged, floating rate securities (where the interest rate is not based on a multiple of the index) to be structured notes.

Shares in Money Market Funds

The combined money of many entities that is jointly invested in high yield financial instruments including U.S. government securities, certificates of deposits, and commercial paper. A money market fund is a mutual fund that makes its profit by buying and selling various forms of money rather than buying and selling shares of ownership in corporations.

Fixed-Income Investments

The bond (or debt) market represents debt instruments with maturities of longer than one year and includes longer-term U.S. Government and federal agency bonds and notes, corporate debt securities, and municipal bonds.

Bond Ratings

Bond ratings are good threshold indicators of the probability of default, but savings associations should conduct a thorough credit analysis of the security issuer before buying a security. Savings associations should also monitor the security after the purchase. The issuer should have the capacity to meet principal and interest payments as they become due. Failure to do so results in a default. Credit analysis should, at a minimum, encompass a review of the issuing entity's financial statement, level of capitalization, management, earnings, business reputation, and other relevant factors. Other relevant factors may include: adequacy of sinking funds, collateralization, refinancing needs, and callability.

Besides performing the very basic credit analysis, each type of bond or industry has a unique set of factors. The institution should also review these factors when performing a credit review.

<u>Rated Securities</u>

We identify Moody's ratings first, and Standard & Poor's ratings in parentheses.

Investment Grade

- Aaa (AAA): Bonds judged to be of the best quality that carry the smallest degree of risk. The capacity to pay interest and repay principal is extremely strong.

- Aa (AA): Bonds judged to be of high quality by all standards. These securities have a very strong capacity to pay interest and repay principal. They differ from the higher-rated issues only in a small degree.
- A (A): Bonds of upper-medium-grade obligation with many favorable investment attributes. These securities have a strong capacity to pay interest and principal. However, they are somewhat more susceptible to the adverse effects of changes in circumstance and economic conditions than debt in higher-rated categories.
- Baa (BBB): Bonds considered to be of medium-grade obligation. They are not highly protected nor poorly secured. These securities have an adequate capacity to pay interest and repay principal. Normally, debt in this category exhibits adequate protection limits. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity to pay interest and repay principal than in higher-rated categories.

Below Investment Grade

- Ba (BB): Bonds judged to have speculative elements. Often the protection of interest and principal payments may be moderate and thereby not well safeguarded.
- B (B): These bonds generally lack the characteristics of a desirable investment. Assurance of principal and interest payments or maintenance of other contract terms over a long period may be suspect.
- Caa, Ca, C (D): These bonds are of poor standing. Such issues may be in default or have other shortcomings.

The rating agencies (Moody's or Standard & Poor's) may append a designation of Provisional (Moody's) or Conditional (Standard & Poor's) to a rating. For example, the provisional or conditional description is when the issuer does not specify an offering date.

Subquality debt is, on balance, predominantly speculative regarding capacity to pay interest and repay principal according to the terms of the obligation. Large uncertainties on major risk exposures to adverse conditions outweigh any quality and protective characteristics. Debt rated D is in payment default. Rating companies use the D rating category when issuers do not make interest or principal payments on the date due. They assign the D rating even if the applicable grace period has not expired, unless the rating agency believes that the issuer will make such payments during the grace period.

Institutions should obtain current bond ratings or credit analysis before any purchase. Associations invested in corporate bonds should regularly review the current ratings of their holdings for any adverse changes, and management should report the result of these credit reviews to the board of directors.

Non-Rated Securities

For non-rated securities, institutions should establish guidelines to ensure that the securities meet legal requirements and that the institution fully understands the risk involved. Institutions should establish limits on individual counterparty exposures. Policies should also provide credit risk and concentration limits. Such limits may define concentrations relating to a single or related issuer or counterparty, a geographical area, or obligations with similar characteristics.

U.S. Treasury Securities

Treasury Notes

A U.S. government long-term security, sold to the public and having a maturity of one to ten years.

Treasury Bonds

A U.S. government long-term security, sold to the public and having a maturity longer than ten years.

Zero-Coupon Treasuries or STRIPS

Zero-coupon bonds, although they can be U.S. Government or agency securities, are most frequently corporate bonds. The market sells zero-coupon bonds at a deep discount from par value. They accumulate and compound interest and pay full face value at maturity. Zero-coupon bonds are highly sensitive to interest rates and tend to exacerbate interest rate risk in the majority of savings associations. As a result, it may be an unsafe and unsound practice for savings associations with excessive exposure to interest rate risk to invest in zero-coupon bonds. Moreover, taxable zero-coupon securities receive unfavorable tax treatment. Even though the savings association receives no cash, thrifts must pay taxes annually on accrued interest.

Corporate Bonds

Corporate bonds can consist of subordinated debentures, collateralized or mortgage bonds, and floating-rate notes. Corporate debt securities face the same risks as loans to a business entity. Section 560.40 restricts investments in corporate obligations that sets forth requirements for minimum credit quality and loan-to-one-borrower limitations. Federal institutions may only invest in investment grade corporate bonds. Investment grade corporate debt securities are those that, at the time of their purchase, were in one of the four highest rating categories by at least one nationally recognized statistical rating organization.

Collateralized Bonds

Corporate bonds come in many varieties with differing features and characteristics such as being secured or unsecured. The real estate mortgage or capital equipment that the bond money purchases usually collateralizes the bond. The bondholder can sell the collateral to satisfy a claim if the bond issuer fails to pay principal and interest when due. The full faith and credit of the issuer, but not any specific collateral backs an unsecured bond or debenture.

Debenture Bonds

A bond that has no specific security set aside or allocated for repayment of the principal. A debenture bond is secured only by the general credit of the issuer.

Callable Bonds

Institutions should carefully evaluate provisions that permit the issuer to modify the maturity of a bond. Many corporate bonds contain call privileges that permit the issuer to redeem the bond, either fully or partially, before the scheduled maturity. Call provisions are generally detrimental to investors since they run the risk of losing a high-coupon bond when rates begin to fall. Call provisions also tend to limit the price appreciation of the bond that might otherwise occur when interest rates decline. The presence of call protection,

however, limits the right of the issuer to call the bond to a specified number of years early in the life of the bond.

Sinking Fund Bonds

Sinking fund provisions are a form of maturity modification most often found in industrial bonds but increasingly found in other types of bonds as well. A sinking fund provision can take either of two forms. In one form, the issuer makes periodic payments to a segregated fund that is sufficient to retire the bonds upon maturity.

The other form mandates the issuer to retire some portion of the debt in a prearranged schedule during its life and before the stated maturity. Sinking funds are beneficial because they assure an orderly retirement of debt and enhance liquidity. Sinking funds can also be disadvantageous to investors. In particular those investors holding one of the early bonds to be called for a sinking fund are disadvantageous to the investor.

Equity Instruments

The equity markets are the primary exchanges for the trading of stocks. The shares of common stock and preferred stock bought and sold in these markets represent actual ownership interest in a corporate entity. The major markets are the New York Stock Exchange, the American Stock Exchange, and the over-the-counter market. Savings associations may not generally invest in or retain equity securities. The Home Owners' Loan Act permits the following investments:

Federal Agency Securities

Savings association may invest in certain equity securities of FHLBs, Freddie Mac, Fannie Mae, SLMA and GNMA.

Banker's Banks

A federal savings association may purchase for its own account shares of stock of a bankers' bank, provided the following conditions are met:

- The institution is insured by the Federal Deposit Insurance Corporation or a holding company that owns or controls such an insured institution, if the stock of such institution or company is owned exclusively by depository institutions or depository institution holding companies.
- Such bank or company and all subsidiaries are engaged exclusively in providing services to or for other depository institutions, their holding companies, and the officers, directors, and employees of such institutions and companies, and in providing correspondent banking services at the request of other depository institutions or their holding companies.
- The total amount of such stock held by the association in any bank or holding company must not exceed at any time ten percent of the association's capital stock and paid in and unimpaired surplus.
- The purchase of such stock must not result in an association's acquiring more than five percent of any class of voting securities of such bank or company.

Trust-Preferred Securities

Savings associations may invest in trust-preferred securities in accordance with the limitations established in 12 CFR § 560.40. Trust preferred securities are non-perpetual cumulative preferred stock issued by a wholly

owned trust subsidiary of a corporation. Revenue from the sale of the trust-preferred securities is exchanged for junior subordinated debentures issued by the parent corporation. These debentures feature coupon payment and term to maturity identical to those of the trust preferred securities. See Thrift Bulletin 73 for a complete discussion of trust secured preferred securities.

MORTGAGE-RELATED SECURITIES

Mortgage-Backed Securities

High default rates on mortgage bonds during the Great Depression inhibited demand for these instruments until the introduction of the Government National Mortgage Association (GNMA) pass-through security in 1970. Even with the federal government guarantee there was considerable skepticism about the acceptance of mortgage securities in the investment community when GNMA first issued its securities.

The mortgage-backed securities (MBSs) introduced by GNMA in 1970, consisted only of Federal Housing Administration (FHA) and Veteran's Administration (VA) mortgages. Conventional lenders had indirect access to the capital markets only through the Federal Home Loan Mortgage Corporation (Freddie Mac) beginning in 1971. Originators could sell mortgages to Freddie Mac, which pooled and sold the resulting securities as Participation Certificates (PCs).

In 1981, Freddie Mac began a swap program, Guarantor I, that allowed lenders to exchange conventional mortgages for pass-through securities. In the first Freddie Mac swap of mortgages for securities, no cash exchanged hands. The seller received payment as PCs representing ownership in the mortgages sold. In this exchange or swap of assets, the savings association believed it could sell its low-rate mortgages more easily and at a higher price in security form rather than mortgage form. Soon after, the Federal National Mortgage Association introduced its Mortgage-Backed Security program. This restructuring of savings association mortgage portfolios was the major factor in the rapid growth of conventional mortgage securities.

As the mortgage securities market grew, lenders began to recognize that the swap programs provided an attractive alternative method for mortgage sales. In addition, many lenders began to securitize their portfolio mortgages to add both value and liquidity. Most issuers now issue the securities through the swap programs. Fannie Mae, Freddie Mac, and GNMA all collect a small guarantee fee throughout the life of the mortgages for the service.

The term mortgage security describes a variety of mortgage-related financial instruments. Although characteristics can vary widely, there are only two basic types of mortgage securities:

- A certificate representing ownership of an undivided interest in a proportionate share of each mortgage in a pool, referred to as a mortgage pass-through security or a mortgage-backed security (MBS).
- A debt obligation secured by a specified pool of mortgages, referred to as a mortgage derivative product (MDP).

Within each type, the market designed variations to appeal to certain investor classes or to reduce the cost of security financing.

Some mortgage derivative products (MDPs) exhibit considerably more price volatility than mortgages or ordinary mortgage pass-through securities and can expose investors to significant risk of loss if not managed in a safe and sound manner. Uncertain cash flows that result from changes in the prepayment rates of the underlying mortgages cause this price volatility.

Because these products are complex, savings associations need a high degree of technical expertise to understand how their prices and cash flows may behave in various interest-rate and prepayment environments. An institution's management should understand the risks and cash flow characteristics of its investments. This is particularly important for products that have unusual, leveraged, or highly variable cash flows. Moreover, because the secondary market for some of these products is relatively thin, they may be difficult to liquidate

should the need arise. Finally, there is additional uncertainty because the market continues to introduce new variants of these instruments. Savings associations are not able to test their price performance under varying market and economic conditions because the products are too new.

Savings associations should ensure that levels of activity involving MDPs are reasonable and appropriately relate to a savings association's capital, capacity to absorb losses, and level of in-house management sophistication and expertise. OTS considers investments in complex securities and the use of financial derivatives by institutions that do not have adequate risk measurement, monitoring, and control systems to be an unsafe and unsound practice. Appropriate managerial and financial controls must be in place and the savings association must analyze, monitor, and prudently adjust its holdings of MDPs in an environment of changing price and maturity expectations.

Secondary Mortgage Market

Through this market, original lenders are able to sell loans in their portfolios to build liquidity to support additional lending. Mortgage agencies, such as Freddie Mac, Fannie Mae, and investment bankers buy mortgage loans. In turn, these agencies and investment bankers create pools of mortgages that they repackage as mortgage-backed securities, which they sell to investors. Mortgage-backed securities or mortgage pass-through certificates provide investors with payments of interest and principal on the underlying mortgages. Since the underlying issuer guarantees the mortgage pass-through certificate, the default risk is low for this type of security.

The buying, selling, and trading of existing mortgage loans and mortgage-backed securities constitutes the secondary mortgage market. This has become a significant activity for many savings associations.

The payments for MBSs resemble mortgage payments but without delinquencies. Principal and interest payments, less guarantee and servicing fees, pass through to the investor whether or not the issuer collects them. The servicer advances the delinquencies to the investor until the mortgage either becomes current or foreclosure is complete. Prepayments pass through to the investor as received.

The servicer collects mortgage payments on a monthly basis from the mortgagor and remits those funds less its servicing fee to a central collection point, or directly to the investors for GNMA I. Fannie Mae, Freddie Mac, and GNMA II collect their guarantee fee either directly from the payments that they pass through or from the servicer.

Fannie Mae and GNMA have always guaranteed the timely payment of both principal and interest to investors for their MBSs, requiring the servicer to advance its own funds to the investor to make up for delinquencies. Freddie Mac only guaranteed the timely payment of principal until they developed their Gold PC and now it, too, guarantees the timely payment of both principal and interest. The following characteristics determine the structure of an MBS:

- Types of mortgages in the pool.
- Weighted-average coupon on the pool of underlying mortgages.
- Pass-through rate on the MBS.
- Weighted-average remaining maturities of the mortgages.
- Number and size of the mortgages.
- Geographic distribution of mortgages.

Weighted-Average Coupon and Pass-Through Rate

The weighted-average coupon (WAC) of the mortgage pool is an important factor in determining prepayment speeds. In general, higher WACs relative to current mortgage rates result in faster prepayments because homeowners have an incentive to refinance at lower market rates. Lower WACs relative to current mortgage rates lead to slower prepayments because lower refinancing rates are not readily available.

The average interest rate on the underlying mortgages of an MBS usually exceeds the pass-through rate. The spread between the WAC and the pass-through rate represents guarantee fees and servicing fees. A savings association that originates and packages loans for securitization can set limits on the permissible range of interest rates in a pool. These limits must be within the guidelines established by the guarantor of the MBS for each specific program.

Original Term and Weighted-Average Remaining Maturity

The original term and the weighted-average remaining maturity (WARM) also affect the rate of repayment. Longer terms to maturity mean that amortization of principal will spread out over a longer period. This means the security passes through less principal during the early years of the security. In addition, prepayment patterns vary by original terms such as 30 years or 15 years. Loan age, which represents the difference between original and remaining maturity, also affects the rate of repayment. Payments on older mortgages allocate more to principal than to interest. Prepayments on a mortgage pool also tend to increase as the mortgages age, or become more seasoned. Eventually, prepayments slow down, or burn out. This occurs when most of the mortgagors remaining in the pool are either unwilling or unable to prepay. The maturity date of an MBS is generally the date on which the last mortgage in the pool repays in full. Each guarantor of an MBS sets limits on the permissible range of interest rates and maturities for each specific program.

Geographic Distribution

The location of the mortgages comprising the pool affects the likelihood and predictability of prepayments. Different areas of the country prepay at much different rates. Geographical diversity permits greater predictability of cash flows as the mortgage pool is less subject to regional economic conditions and other local influences. More mortgages in a given pool tend to diversify risks and make cash flows more regular and predictable.

Types of Mortgage-Backed Securities

Agency-Issued MBS

Agency-issued MBSs are attractive to certain investors because of their minimal credit risk, ease of trading, and liquidity. The low credit risk of MBSs results from the guarantees that Fannie Mae, Freddie Mac, or GNMA places on its mortgage securities.

Non-Agency MBSs

Other issuers, including mortgage bankers, insurance companies, investment banks, and other financial institutions that issue MBSs, also create and issue securities from a pool of loans. Non-agency MBSs include both pass-through and pay-through structures.

These securities typically have more credit risk and less liquidity than agency MBSs but still often carry AA or AAA ratings due to various credit enhancements. These credit enhancements include primary mortgage insurance and reserve funds. Some issuers split the security into a senior/subordinated structure. The sen-

ior/subordinated structure splits the security into low-credit risk (senior) and high-credit risk (subordinated) pieces or tranches. The subordinated tranche(s) absorb the first wave of losses. Only after exhausting the subordinate class(es) does the senior tranche(s) incur losses. The credit risk of the subordinated tranches depends on the credit risk of the underlying mortgages and the deal structure. Therefore, the credit risk depends on the amount of loss exposure assigned to the tranche. Investors should monitor the credit ratings on MBSs and CMOs issued by private conduits.

Non-agency MBSs often include nonconforming mortgages that are too large or otherwise ineligible for securitization by the agencies. Non-agency MBSs also tend to be more geographically concentrated than Fannie Maes, Freddie Macs, and GNMAs.

Fixed-Rate MBSs

Fannie Mae, Freddie Mac, and GNMA issue fixed-rate MBSs with terms of 30 years, 20 years, and 15 years. They also issue pools of balloon mortgages that follow a 30-year amortization schedule but mature after five or seven years. Graduated Payment Mortgages (GPMs) and Tiered Payment Mortgages (TPMs) pay a preestablished but increasing rate over time.

Adjustable-Rate MBSs

The issuance of MBSs backed by adjustable-rate mortgages (ARMs) provides an additional type of pass-through security in the secondary market. An adjustable-rate MBS offers protection against rising rates by linking its interest rate to a market-based index, like the one-year Constant Maturity Treasury (CMT) rate or the Eleventh District Cost of Funds. Periodic and lifetime caps along with teaser rates limit that protection by constraining the extent of rate adjustment. A teaser ARM features a low introductory interest rate designed to induce borrowers to select ARMs over fixed-rate mortgages.

ARMs often have periodic caps, lifetime caps, or both. A typical periodic cap on a one-year ARM limits the increase or decrease in the coupon to two percent per year. While an annual cap limits the amount of rate adjustment during any given year, the lifetime cap establishes a maximum coupon on the ARM throughout the life of the mortgage. Some ARMs without periodic caps still have payment caps that limit the increase in monthly payments rather than the interest rate. Negative amortization can occur, that is, the principal balance increases, if the mortgage reaches its payment cap.

You should determine the effect of teaser rates, periodic caps, and lifetime caps on the savings association's ARM MBS portfolio. The interaction between teaser rates and periodic caps is particularly important. Consider an ARM with a teaser rate of five percent, a fully indexed rate of eight percent, and an annual cap of two percent. This ARM offers the investor no protection against rising rates for at least two years. The rate at the start of the second year will be the same (seven percent) if rates fall one percent or rise four percent. The ARM only reaches its fully indexed rate in the third year if the index rate increases by 100 basis points or more. A teaser rate affects the lifetime cap as well. With a five percent teaser rate, the lifetime cap will typically be 11 percent, or only 300 basis points above the current, fully indexed rate.

Mortgage-Backed Security Considerations

MBS Yields and Prices

Present value analysis discounts the future cash flows of mortgages by their required rate of return, which equals the rate available in the market for investments of similar risk. This process calculates an MBS's present value or estimated market value. Alternately, given a market price, it is possible to determine the rate of

return or yield that would make the sum of the discounted cash flows equal to the market price. Two common measures of yield are the cash flow yield and the option-adjusted yield.

Cash Flow Yield

To determine the cash flow, or static yield of an MBS, discount the sum of all future cash flows back to the current market price. The cash flow yield calculation requires two major inputs: the current price of the security and a projection of future cash flows. Issuers usually base prepayment estimates upon Wall Street forecasts for similar MBSs and incorporate those prepayment estimates into the analysis.

The cash flow yield assumes cash flows will follow projections. Actual prepayments may exceed or fall short of projections, depending largely on the future course of interest rates. Falling market interest rates encourage homeowners to prepay their mortgages and refinance them at the new, lower rate. Rising interest rates encourage homeowners to retain mortgages, which would then have below-market rates. The cash flow yield does not take the variability of future interest rates and, therefore, prepayments into account. While cash flow yield may be an adequate measure (particularly for MBSs at or near par), it is less accurate than the option-adjusted yield measure described below.

Option-Adjusted Yield

The option-adjusted yield method can provide a more accurate comparison of the yield on investments with embedded options, like the prepayment option on a mortgage, to investments without embedded options such as noncallable corporate bonds. The option-adjusted yield does not rely on a single projected cash flow using a single prepayment estimate. The option-adjusted yield derives from many projected cash flows and prepayment estimates. The option-adjusted yield equals the discount rate (internal rate of return) that makes the average present value of the cash flows equal to the market price of the security. As shown in the example below, option-adjusted yields are typically lower than nominal yields. The difference between nominal and option-adjusted yields is greatest when prepayments are most interest-rate sensitive.

Example: Nominal Yield Vs. Option-Adjusted Yield

Compare an MBS with a seven percent coupon and a five-year base case weighted average life to a five-year noncallable corporate bond also with a seven percent coupon and of similar credit risk and liquidity. Both are priced at par. Consider three possible interest-rate scenarios: rates rise 100 basis points (25 percent probability), rates fall 100 basis points (25 percent probability), and rates stay the same. The weighted average life of the MBS increases to seven years if rates go up 100 basis points and decreases to three years if rates fall 100 basis points. The discount rate (internal rate of return) needs to equal 6.84 percent for the average present value of the cash flows to equal the current market price.

Rate Scenario	Probability	Present Value	Discount Rate
Flat	.50	100.668	6.84%
Up 100 basis points	.25	95.54	7.84%
Down 100 basis points	.25	103.15	5.84%
Weighted Average	1.00	100.00	6.84%

Although the bond and MBS provide the same nominal yield (seven percent), the bond outperforms the MBS by an average of 16 basis points once the investor considers interest rate and cash flow volatility. The option-adjusted yield is usually superior to cash flow yield as a measure of the yield of financial instruments

with embedded prepayment options. This is because the option-adjusted yield considers the estimated probability distribution of potential prepayment rates instead of using a single estimate.

MBS Accounting

The interest method is the required accounting measurement for recording the yield for MBSs. Savings associations should amortize or accrete into income premiums and discounts using the interest method over the expected life of the mortgage security. This should result in a constant rate of interest (level-yield) when applied to the amount outstanding at the beginning of any given period.

Account for differences between anticipated and actual prepayments by recalculating the effective yield to reflect actual payments to date and anticipated future payments. This adjusts the net investment in the MBS to the amount that would have existed had the new effective yield been applied since acquisition.

For adjustable-rate MBSs, savings associations may base the effective yield on either the rate in effect at acquisition or recalculate the effective yield each time the rate on the MBSs change. Solicit comparable market quotes from at least two brokers other than the broker that executes the transactions. Even if a savings association does not have significant volume, they should obtain comparable price quotes.

Mortgage-Backed Bonds

A mortgage-backed bond is unlike a mortgage-backed pass-through security because they do not convey ownership of any portion of the underlying pool mortgages. However, mortgage-backed bonds do offer a more predictable maturity and thus offer a form of call protection. The bond issuer retains nearly all the risk associated with the security, including the interest rate risk and the credit risk. A pay-through bond has less risk exposure for the issuer than a straight bond, but greater risk than a pass-through security.

Mortgage Derivative Products

OTS defines a financial derivative in § 563.172. A financial derivative is a financial contract whose value depends on the value of one or more underlying assets, indices, or reference rates. The most common types of financial derivatives are futures, forward commitments, options, and swaps. OTS does not consider certain mortgage derivative securities such as collateralized mortgage obligations (CMOs) or real estate mortgage investment conduits (REMICs) as financial derivatives.

Collateralized Mortgage Obligations

Freddie Mac first issued collateralized mortgage obligations (CMOs) in 1983. Freddie Mac designed CMOs in the early 1980s to broaden investor demand. They do this by splitting an underlying pool of mortgages and MBSs into different classes, or tranches, that appeal to different types of investors. For example, Freddie Mac splits a pool of 30-year, fixed-rate MBSs into short-term, intermediate-term, and long-term tranches. Listed below are various types of CMO tranches found in savings association portfolios.

A major initial drawback to widespread use of the CMO was the substantial size of the mortgage pool; $100 million or more was necessary to support the cost of issuance. The appearance of CMO conduits, however, made CMO issues feasible for smaller lenders. The conduit achieves the economies of scale needed to make the issue cost-effective for the lender by pooling collateral supplied by a number of lenders. Only a few of the conduits survived and, as a result, Fannie Mae, Freddie Mac, GNMA, and investment bankers that have access to large volumes of collateral dominate the list of issuers.

CMOs demand higher yields than other investments of similar quality and maturity because the actual life of the bond is uncertain. Some CMOs, like PACs, offer more predictability of prepayments than mortgages or other types of mortgage-backed bonds because of the large collateral pools backing each type of issue and the prioritization of cash flows.

The market's assumptions regarding the average life and average life volatility of each investor class determine CMO yields and yield spreads over comparable treasuries. Short-term agency PACs, which have little average life volatility, often trade at spreads of less than 50 basis points over Treasury. More volatile tranches earn significantly wider spreads. As with mortgage investments, the actual prepayment of the mortgages will determine the actual yield to maturity.

Prepayments on a CMO tranche are a function of prepayments on the underlying mortgages and the tranche structure. Faster or slower prepayments on the underlying mortgages can affect the weighted average life of an individual CMO tranche, but not necessarily proportionately. As noted above, PACs usually have much more stable cash flows than the underlying mortgages, but support tranches have much more volatile cash flows.

Geographic concentrations, loan size, and market interest rates affect prepayments on non-agency MBSs. If the MBS consists of mortgages concentrated in a particular state, prepayments on the MBS may differ substantially from national prepayment patterns. Prepayments on the large loans that characterize many non-agency MBSs tend to accelerate more quickly when market interest rates fall.

CMO Risks

The tranche structure of CMOs allocates rather than eliminates the risk of the underlying mortgages. The creation of tranches with shorter average lives than the underlying mortgages requires the creation of tranches with longer average lives. Stable PAC tranches require volatile support tranches. Investment-grade senior classes create speculative-grade subordinated tranches. The yield and market value of subordinate interests in CMOs are extremely sensitive to prepayment fluctuations. These kinds of riskier tranches can still attract investors in one of two ways. They may appeal to investors with different risk profiles; for example, long-term CMOs can match the long-term liability structure of insurance companies. Issuers may also attract investors by offering higher yields.

CMO structures can also present risks that are less obvious. These risks include PAC drift, cap risk, basis risk, and illiquidity.

- PAC Drift

The industry designed PACs to provide a predictable stream of cash flows across a range of prepayments, known as a PAC band. Many investors incorrectly assume that PAC bands remain fixed. In fact, faster-than-predicted prepayments can cause the band to narrow or drift. The support tranches will shrink or prepay entirely. The planned amortization rate guarantee disappears without a support tranche available to cushion future prepayment volatility. Investors often refer to these securities as busted PACs.

The amount of protection afforded by the PAC depends on the following factors:

* Width of the PAC band – wider bands provide more protection.
* Relative sizes of the PACs and supports in the deal – more supports provide greater insulation against prepayment volatility.

* Prepayment volatility of the underlying mortgages.

The consequences of a PAC's drifting or "busting" depend on the security type. For a traditional PAC, the CMO merely assumes the prepayment characteristics of the underlying mortgages. Narrowing or eliminating the PAC band causes Type II PACs to assume the prepayment characteristics of a support tranche and can be much more volatile than the underlying mortgages.

- Cap Risk

Lifetime caps limit the extent to which floating-rate CMOs can adjust to rising market interest rates. One can consider a lifetime cap an embedded option and, as the value of the option increases, the price of the security falls. As with any option, the effect of a lifetime cap on price and price volatility depends on the following factors:

* The option's intrinsic value, that is, the distance between the cap and the current rate on the CMO.
* The volatility of the index.
* The time to expiration (the average life of the CMO).

Many issuers use floaters as support tranches. With floaters, an increase in market interest rates causes a reduction in the distance to the lifetime cap and an extension (sometimes dramatic) of the average life of the CMO. Savings associations must fully incorporate the effect of lifetime caps on price sensitivity when self-reporting the price sensitivity of floating-rate CMOs on Schedule CMR.

- Basis Risk

Mismatched floaters can expose institutions to considerable basis risk if the index rate on the floater diverges significantly from short-term market interest rates, such as LIBOR. Such a divergence can arise from a nonparallel shift in the yield curve (if the index is the Ten-Year CMT) or from a lag between current market rates and the index rate (if the index is COFI). Basis risk is most significant for mismatched floaters with long or volatile average lives. Savings associations should evaluate the potential effect of nonparallel yield curve shifts on mismatched floaters.

- Liquidity Risk

Volatile or exotic CMO tranches tend to be the least liquid. Illiquidity places both purchasers and sellers at a disadvantage. The lack of an available market makes the asset difficult to sell without considerable price concessions. Illiquidity also makes it difficult to determine the true market value for a security and increases the possibility that the savings association will overpay. Illiquidity imposes transaction costs on buyers and sellers of securities. The broker receives the difference between the amount paid by the buyer and received by the seller, known as the bid-ask spread. A wide bid-ask spread means the buyer pays more and the seller receives less.

Types of CMOS

- Sequential Pay

Issuers often structure CMO deals as a series of Sequential Pay bonds. Each investor class generally receives monthly interest payments on the outstanding principal balance of its class. The bond allocates principal payments to each investor class in the order of maturity. The shortest outstanding maturity receives all principal payments until that class is fully retired, then holders of the second class begin to receive principal payments, and so forth. Most CMO issues have a compound interest or accrual class (called the Z Bond) that receives no interest or principal payments until the retirement of all other investor classes. The accrual bond's coupon rate compounds during the accrual phase and converts to an interest-paying instrument following retirement of all shorter maturity classes.

- Planned Amortization Class

A CMO innovation that was very popular in the late 1980s is the Planned Amortization Class (PAC). The PAC structure reduces cash flow uncertainty by guaranteeing a specific cash flow stream, provided that prepayments on the underlying mortgages remain within an established range or band. The increased certainty of PAC tranches causes other tranches in the issue (known as companion or support tranches) to have more uncertain cash flows. A Type II PAC represents a hybrid between a PAC and a support tranche. Type II PACs offer predictable cash flows, but within a narrower range of prepayments. If prepayments fall outside that range, Type II PACs assume the cash flow volatility of a support tranche.

- Floating-Rate CMOs

The market developed floating-rate tranches to attract investors more concerned with interest rate risk. Floaters typically adjust monthly or quarterly based on some index, such as LIBOR. Rate adjustments are usually subject to a lifetime cap, but periodic caps are unusual.

- Mismatched Floaters

A further innovation involves mismatched floating-rate CMOs that may adjust monthly or quarterly. Their rate adjustment ties either to a longer-term index, such as the Ten-Year Constant Maturity Treasury (CMT), or to a lagging index, such as COFI. These CMOs offer higher yields than traditional floaters but present basis risk from lack of perfect correlation between the index rate and short-term market interest rates.

- Kitchen Sink Bonds

Typically, a homogeneous pool of MBSs creates a diverse group of CMO tranches. A kitchen sink bond (also called a re-REMIC or a Matched Principal Bond) reverses the process by creating a single CMO from a dissimilar group of mortgage securities. Risky individual securities make up kitchen sink bonds. The resulting bond may not necessarily be volatile due to offsetting risks (that is, combining IOs and POs) but is usually difficult to analyze due to its complex composition.

Real Estate Mortgage Investment Conduits

Congress passed Real Estate Mortgage Investment Conduit (REMIC) legislation in 1987. This legislation provided a new vehicle for issuing MBSs. Issuers structure REMICs much like CMOs and other securitized receivables but REMICs offer certain tax advantages. The government does not generally tax the special purpose entity formed to issue the pass-through or pay-through certificate at the entity level. Also, the savings association does not typically consolidate the special purpose entities. This allows for increased securitizations in REMIC form and leveraging of savings association capital because the assets are off-balance sheet. Nearly all CMOs are REMICs, as are most non-agency MBSs, including those with a pass-through structure.

Futures, Forwards, and Options

In the futures market, investors buy and sell contracts for the future delivery of a commodity or security. The forward market is a market in which participants trade some commodity, security, or instrument at a fixed price at a future date. The proper use of derivatives such as futures, forwards, swaps, and options can reduce an institution's exposure to interest rate risk and can provide a framework for hedging strategies. Improper use of these securities can generate extreme losses. See the discussion of swaps in this section under Mortgage Derivative Products. See also Sections 650, Interest Rate Risk Management; and 660, Derivative Instruments and Hedging.

Stripped Mortgage-Backed Securities

In 1986, Fannie Mae issued the first stripped mortgage-backed securities (SMBSs). This instrument created two new classes of investors or security holders. Each class received a percentage of the principal and interest payments from either the MBS or from the whole mortgages that served as the underlying collateral. For example, one class of the SMBS may receive 99 percent of the interest payments and one percent of the principal payments from the underlying MBS. Investors in different classes of SMBSs buy a derivative mortgage instrument that has significantly different characteristics from the underlying mortgages or the MBSs. The industry also refers to these classes as tranches.

In 1987, Fannie Mae introduced an SMBS composed of an interest only (IO) class and a principal only (PO) class. The holder of the IO receives all the interest payments from the underlying MBS while the holder of the PO receives all the principal payments.

Investment bankers also create their own version of SMBSs both through private placements and public offerings. Investment bankers normally create the private placement through a participation agreement that entitles the holder to a certain predefined percentage of the principal and interest payments from the underlying mortgages or the MBS. These private placements are similar to the original Fannie Mae SMBSs in that holders receive varying percentages of the principal and interest payments rather than a percentage of all the interest or principal. In addition, Freddie Mac issues its own version of IOs and POs using participation certificates rather than MBSs.

Fallen Angels

Examiners refer to securities not performing as expected due to changes in either tranche structure or market conditions as fallen angels. Savings associations may continue to account for fallen angels as held-to-maturity. You should consider unrealized losses on these securities in your evaluation of the institution's capital adequacy.

Mortgage Swaps

Mortgage swaps are off-balance sheet transactions designed to replicate the purchase of MBSs with reverse repurchase agreements or some other short-term or floating-rate source of funding. In essence, the transaction combines a forward commitment to purchase MBSs with an amortizing interest-rate swap. Unlike the traditional purchase of mortgage securities, however, the issue makes no cash payment at the outset of the agreement.

Mortgage swaps are an alternative to a straight purchase of MBSs. They involve a great deal of leverage because the initial collateral on the transaction is a small fraction (typically four points) of the par value of the mortgage securities and the transaction is off-balance sheet. They also may enable the investor to effectively

finance mortgage securities at a rate tied to a floating-rate index below LIBOR on a guaranteed multiyear basis.

Collateralized Loan Obligations

Collateralized loan obligations (CLOs) are securities primarily collateralized by commercial loans of varying quality. Some issues may also be collateralized in part by high-yield corporate debt securities.

CLOs are generally sold in several progressively risky tranches. The first tranche often has a high investment rating, such as AAA, due to its payment priority and the initial overcollateralization of the security. The collateral also sequentially supports the next tranche(s). CLOs typically have a revolving period and an amortization period. During the revolving period, principal payments are reinvested in other assets in accordance with the terms of the agreement. During the amortization period, any principal payments are used to first repay the Class A note holders in full, then any remaining principal is used to pay junior tranche investors in order of their priority.

The middle tranches are often rated at the lower investment grade ratings, such as BBB. The lowest priority tranche, or the residual interest tranche, is generally not rated. It is typically subordinated not only to senior tranches, but also to expenses of the issuing trust. These residual tranches are typically difficult to value and are illiquid investments by themselves. To make the residual tranche more marketable, the CLO issuer or trustee may swap the residual interest tranche for certificates guaranteed by a AAA-rated counterparty as to the principal amount at maturity (generally up to 12 years).

While the swap creates a guarantee of the full principal at maturity, the amount guaranteed must be discounted to its present value if terminated early. In that respect, the guaranteed portion of the security is similar to a zero-coupon Treasury bond. Therefore, the credit support provided by the guarantor may cover less than 50 percent of the face value of the certificate at purchase. Unlike zero-coupon bonds, however, these certificates are generally sold at par. Investors must rely on the performance of the reference asset (the residual tranche in this case) to return the remaining portion of their investment and provide any yield. The performance of the reference asset is not, however, guaranteed. Therefore, these investments are not, and should not be considered, fully rated.

Apparently, the motivation to purchase such certificates is the high yield projected if the CLO collateral pool (and thereby the reference asset) performs well. However, there is no guarantee of residual cash flows, and the certificates will not default if no cash flows are paid to the investors. These investments are speculative, and are clearly not intended to hedge interest rate risk or credit risk. Based on discussions with rating agencies, and the lack of supporting cash flow analysis, it is difficult to assess the likelihood that a particular return could be achieved on these investments. In essence, an institution should not be misled by split ratings where only a part of the security is either guaranteed or rated investment grade.

It is imperative that institutions properly underwrite investment securities for quality, applicable regulatory and policy compliance, and suitability to operational and strategic plans.

INTRODUCTION

Deposits/borrowed funds, liquidity management, and funds management are integrally related. It is recommended that Handbook Sections 530, Cash Flow and Liquidity Management, and 510, Funds Management, be reviewed in conjunction with this Section.

The OTS reinvented its deposit rules October 22, 1997. This regulatory reinvention streamlined the regulations by eliminating outdated provisions as well as provisions that duplicated or overlapped other applicable requirements such as the Truth in Savings Act, and Federal Reserve Board Regulations D (Reserve Requirements) and DD (Truth in Savings), which apply to savings associations as well as banks. Additionally, OTS codified its long-standing position on federal preemption of state laws affecting deposit-related activities. OTS also consolidated all deposit-related regulations, except definitions, in a new Part 557.

DEPOSITS

Deposits typically represent the largest source of a thrift's funds. Therefore, it is important that the thrift implement policies and procedures to generate and retain its deposit base as well as to monitor its overall deposit structure. An effective deposit management program should include all of the following elements:

- A clearly defined marketing strategy within the business plan that identifies the desired market share in terms of growth or shrinkage, market niche, and present and potential competition.
- Identification of core and volatile deposits and analysis of the cost of core and volatile deposits, including operating costs to maintain the various deposit products and deposit branches, and targeted spreads between deposit costs and earnings on assets funded by deposits.
- Periodic analysis of present and anticipated funding and liquidity needs, and comparative analysis of costs of deposits versus alternative sources of funds to meet those needs.
- Frequent review of deposit pricing, volume, sources, volatility, and trends in relation to overall funds management goals, interest rate risk exposure, spread, net interest margin, and profitability.

Core deposits are important in evaluating the stability of funding sources and costs, and in measuring liquidity risk. Core deposits may include regular and passbook savings, certificates of deposit (CDs), and various types of retirement and special savings. Typically, core accounts carry high average operating expenses and low deposit balances. Although, by definition, a stable source of funds, some core deposits will be lost over time if interest rates paid become noncompetitive.

Types of Deposit Accounts

The regulator's efforts to analyze the character of the overall deposit structure should be directed to types of deposit accounts shown by experience to be significant in presenting problems to management. The following paragraphs discuss common types of deposit accounts and practices that, under certain circumstances, can become problems.

- *Brokered and Money Desk-Originated Deposits*: Brokered deposits are usually obtained through a broker acting as an intermediary between the thrift and the depositor. Money desk operations are usually staffed by in-house personnel. Brokered and money desk-solicited deposits are a volatile and usually high-cost source of deposits. The cost is usually high because of higher interest rates needed to attract volume. Operating costs such as the fees paid to brokers and salaries or commissions paid to money desk personnel also contribute to the cost of these deposits. The depositors have no loyalty to the thrift. Brokered and money desk deposits are highly susceptible to withdrawal if interest rates paid become noncompetitive or the solvency of the thrift is threatened.

  A high volume of high interest rate, short-term brokered or money desk-originated deposits

usually indicates excessive risk. Active solicitation of such deposits without the benefit of a well-designed risk management program is unsafe and unsound.

- *Bank Investment Contracts* (BIC): BICs are a deposit contract between a financial institution and its customer that permits the customer to deposit funds over a period of time and obligates the "bank" to repay the amounts deposited plus interest at a guaranteed rate to the end of the contract. A BIC is the counterpart of the insurance industry's Guaranteed Investment Contract (GIC). The customers for BICs and GICs are, in most cases, sponsors of employee benefit plans such as pension plans or deferred compensation plans that qualify under section 401(k) of the Internal Revenue Code (commonly referred to as "401(k) Plans").

Brokered Deposit Restrictions

Section 301 of the Federal Deposit Insurance Improvement Act (FDICIA) of 1991 mandated that the Federal Deposit Insurance Corporation (FDIC) place limitations on brokered deposits and deposit solicitations. Section 337.6 of the FDIC regulations applies to all thrifts and restricts the use of brokered deposits on the basis of capital adequacy. Under the regulation, institutions are divided into categories of well-capitalized, adequately capitalized, and undercapitalized condition. Only well-capitalized institutions may continue to accept brokered deposits without restrictions. Adequately capitalized institutions must now obtain a waiver from the FDIC in order to continue accepting brokered deposits. Undercapitalized institutions are prohibited from accepting brokered deposits.

Well-capitalized institutions are defined in the regulation based on § 38 of the Federal Deposit Insurance Act dealing with prompt corrective action.

A well-capitalized institution has:

- a ratio of total capital to risk-weighted assets of not less than 10 percent;
- a ratio of tier 1 capital to risk-weighted assets of not less than 6 percent;
- a ratio of tier 1 capital to total book assets of not less than 5 percent; and
- not been notified by the Office of Thrift Supervision (OTS) that it is in troubled condition.

An adequately capitalized institution is defined as neither well-capitalized nor undercapitalized.

An undercapitalized institution fails to meet minimum OTS regulatory capital requirements.

Adequately capitalized institutions must now obtain an FDIC waiver in order to accept, renew, or roll over brokered deposits. An adequately capitalized institution that needs a waiver should contact the appropriate OTS regional office to coordinate filing the waiver application with the FDIC. A copy of the waiver application should be submitted to the OTS regional office.

Adequately capitalized institutions are restricted as to the interest they may pay on brokered deposits. Any adequately capitalized institution that has been granted a waiver to accept, renew, or roll over a brokered deposit may not pay an effective yield on the deposits that exceeds the following yield by 75 basis points: (1) the effective yield paid on deposits of comparable size and maturity in such institution's normal market area for deposits accepted from within its normal market area or (2) the national rate paid on deposits of comparable size and maturity for deposits accepted outside the institution's normal market area. The FDIC has established that the national rate shall be 120 percent of the current yield on similar U.S. Treasury obligations; or in the case of any deposit that is at least half uninsured, 130 percent of such yield.

A deposit broker may not solicit or place any deposit with an insured depository institution unless it provides a notice to the FDIC that it is acting as a deposit broker.

OTS staff should refer to definitions and provisions of § 337 of the FDIC regulations to determine compliance with the brokered deposits provisions.

Deposit development and brokered deposit retention policies should recognize the following issues:

- Restriction on accepting, renewing or rolling over brokered deposits.
- Limits imposed by prudent competition.
- The risks of over-reliance on brokered deposits as a funding source.

Regulators should monitor their caseload of undercapitalized thrifts to identify violations of the prohibition on brokered deposits. If a thrift is in violation of the prohibition, staff should communicate this fact to the FDIC, request progress reports from the thrift regarding its disposition of brokered deposits, and initiate corrective action to ensure that the thrift ceases its violation.

- *Out-of-Area Accounts*: A high volume of deposits from customers who reside or conduct their business outside of the normal market area should be monitored by the thrift and reviewed by the regulator regarding their volatility and pricing. Such deposits may be the product of personal relationships or good customer service. However, large out-of-area deposits sometimes are related to liberal credit accommodations or have been attracted by paying significantly higher rates of interest than offered by competitors. Such deposits might prove costly in terms of excessive credit risks taken to generate sufficient revenue to pay for volatile, overpriced deposits.

  Only well-capitalized institutions may accept, renew, or roll over such deposits without restriction. Adequately capitalized institutions are subject to the interest rate caps described above.

- *Public Funds*: Public funds deposits should be reviewed because of their size and potential volatility. Public funds normally fluctuate on a seasonal cycle following the timing differences between tax collections and expenditures. Government officials controlling public deposits have a responsibility to ensure that such deposits are placed with a financial institution that can provide or arrange the best service at the least cost, and often place deposits with the highest bidder. Frequently, state laws require financial institutions to pledge collateral against public funds deposits. Public funds deposits acquired through political influence should always be regarded as volatile.

- *Stock Market-Indexed Certificates of Deposit*: Certificates of deposit with interest rates tied to a stock market index where a deposit brokerage firm covers the risk of increasing index values still entail certain risks. The movements of such indexes are subject to fluctuations that are unpredictable and, compared with the usual indexes used for variable-rate certificates of deposit, extraordinary. Pursuant to safety and soundness concerns, a savings association issuing such accounts must take precautionary measures. Accordingly, savings associations that offer variable-rate certificates of deposit tied to a stock market index must:

  — Have the skills required to effectively analyze the potential interest expenses of the account.

  — Take precautionary measures to ensure that it will not be subject to the payment of unrestrained interest expenses.

  — Analyze the creditworthiness and financial strength of the brokerage firm, including the broker’s specific plans to cover its interest rate risk exposure due to both upward or downward movements in the index.

  — Have on file a record (for example, a broker's periodic status report) sufficient to disclose the broker's ongoing interest rate risk exposure from the date the association paid its "fixed fees" for receipt of the savings to the date of such a report.

  — Ensure that the brokerage firm is contractually obligated to appropriately reimburse it in the event of an early withdrawal in view of an association's initial payment of a "fixed fee," representing prepaid interest costs paid on the assumption that the certificates will be held to maturity.

- Comply with the safety and soundness requirements of § 563.174 and § 563.175 of the OTS regulations and TB 13 if engaged in the interest rate futures or financial options transactions to cover interest rate risk exposure resulting from the issuance of these market-indexed accounts.
- Document the board of directors' approval of the form of account. The form must comply with the requirements of applicable law and regulations and the association's charter and bylaws; the minutes must include a detailed explanation as to how the interest rate risk exposure is to be covered. Otherwise comply with the requirements in §563.7.
- Comply with all other potentially applicable laws or regulations, such as those that the Securities and Exchange Commission and the Commodity Futures Trading Commission enforce. In light of this requirement, savings associations must consult with those agencies regarding the issuances of stock market-indexed certificates of deposit, or obtain for the file a legal opinion stating that the market-indexed CDs comply with all applicable law.

- *Large Deposits*: Large deposits are defined as those concentrations of funds under one control, or payable to one entity, that aggregate two percent or more of the institution's total deposits.

- *Demand Deposits*: Both bank and savings associations are prohibited from paying interest on demand deposits. The banking agencies (FDIC and FRB) have issued interpretations that permit premiums to be paid and describe when premiums will not be considered to be interest. Institutions may pay any premium that is not, directly or indirectly, related to or dependent on the balance in a demand deposit account and the duration of the account balance. OTS agrees that such premiums are not interest and generally follows the banking agencies interpretations on this point.

- *Sweep Accounts*: These are cash managed services that permit customers to earn interest on otherwise idle cash balances. Many institutions, particularly large, commercial banks and some savings associations, now offer these services to retail commercial and trust companies. Sweep accounts automatically "sweep" cash balances out of a checking or non-interest bearing deposit account into short term, typically overnight, investments outside the depository institution. A widely used vehicle by depository institutions is to "sweep" funds out of checking accounts into money market mutual funds that operate independently of the bank/savings association. Funds are swept from checking accounts into a money market mutual fund as frequently as every day after the close of business at the depository institution. The "sweep" is triggered by the amount of cash in the deposit account, which can be set by the depositor. The "sweep" also may be reversed so that shares in the money market mutual fund are redeemed and cash is deposited into the checking or non-interest bearing account at certain times or when certain dollar limits are reached. Depository institutions receive a fee for the "sweep" service.

  The impetus for "sweep" accounts results from the statutory and regulatory prohibition on the payment of interest on demand accounts. Commercial checking accounts are non-interest bearing demand deposits owned by commercial entities, and against which checks may be written. Negotiable order of withdrawal (NOW) accounts are available only to individuals, including sole proprietorships or an unincorporated business owned by a husband and wife; non-profit organizations and for the deposit of public funds. While not technically demand deposits, NOW accounts permit the payment of interest on accounts which are subject to check writing but only for entities that qualify to use them. Because individuals and certain other non-corporate entities may hold NOW accounts which function as checking accounts, "sweep" arrangements for non-corporate entities do not necessarily raise legal questions. Since interest may be paid on NOW accounts held by individuals and certain non-corporate entities, "sweep" accounts are geared

heavily toward corporations. It is essential that depository institutions have systems in place to ensure that "sweep" accounts comply with regulatory requirements.

Federal savings associations, unlike national banks, do not have the authority to directly invest customers' funds in mutual funds. Federal savings associations may, however, accomplish the same result for their customers through service corporations or with third-party broker-dealers. The service corporation or third party, pursuant to an agreement with the customer/depositor, could in turn buy mutual fund shares for the customer and sell those same investments the next day. Upon sale, the sale proceeds belong to the depositor, who may deposit the proceeds back into the checking account at the federal savings association. "Sweeps" using mutual funds may involve more steps for federal savings associations than for national banks, but are permissible under applicable law.

Federal savings associations that wish to offer mutual fund "sweeps" through a service corporation have two options. Either the service corporation never holds mutual fund shares in its own name, so the type of mutual fund investments are unrestricted. Or, the service corporation holds the mutual funds in its own name and restricts the investments to those that savings associations can make. Savings associations may invest only in investment grade corporate debt securities.

An alternative method to structure a "sweep" is to invest excess cash of a checking account into repurchase agreements ("repos"). Such arrangements must comply with the Government Securities Act of 1986, as amended. See Thrift Activities Handbook, Section 563, Government Securities Act. Although permissible, this method is somewhat cumbersome because it requires substantial disclosures and a perfected security interest under state law for each sale subject to repurchase.

The simplest and most practical "sweep" arrangement is the so-called linked account "sweep" using two accounts at the same depository institution, one a checking account and the other some type of interest-bearing, non-checking account, such as a savings account or money market deposit account. However, the federal banking agencies have not allowed linked account "sweep" arrangements, either because these "sweeps" appear to evade the prohibition on paying interest on commercial checking accounts or, in the Federal Reserve Board's ("FRB's") case, because they interfere with the "FRB's" monetary policy.

BORROWED FUNDS

Borrowings provide thrifts with a complementary and often attractive alternative to deposits as a source of funds. Generally, thrifts pursuing a strategy of moderate growth find borrowing an attractive funding alternative to retail deposits. However, rapid growth based on short-term borrowed funds, without well-established risk management controls, has also contributed to the failure of several financial institutions.

The thrift's present and anticipated use of borrowed funds should be integrated into the overall goals and objectives of the business plan and its funds management strategy. Borrowing is subject to criticism if precipitated by poorly planned funds management practices**.** Prudent management of borrowed funds should include:

- The clear identification of the purpose of the borrowing;
- Analysis of present and anticipated funding and liquidity needs;
- Analysis of the cost of the borrowing (including the desired spreads between the cost of the borrowing and the earnings from the assets funded, and, if issuing securities, the cost of issuance);
- Analysis of the availability of collateral;
- Comparative analysis of the costs of various alternative types of borrowings and deposits; and
- Frequent monitoring of the borrowing activity to ensure that it remains appropriate to the thrift's overall goals of interest rate risk man-

agement, liquidity management, funds management, and near-term and longer-term profitability.

Many thrifts have become active solicitors of funds in the financial markets through transactions such as reverse repurchase agreements and various debt security issuances. Access to the financial markets and the cost of such borrowings is related to the thrift's credit reputation, which is primarily based upon the thrift's financial condition and adequacy of capital.

Although borrowings in the financial markets can be an attractive alternative to deposits, they have certain costs and risks that must be considered. Borrowings through debt issuance have operating costs that should be considered such as issuance expenses and investment banker fees. A more important consideration is that thrift borrowings typically are collateralized. The amount that a thrift can borrow is related to the market value of the collateral. When interest rates increase, the market value of most financial collateral declines. Consequently, rising interest rates often require a thrift to pledge additional collateral or repay some debt. Such rising-rate scenarios can place a considerable strain on the thrift's liquidity. In a rising-interest rate environment, the thrift's financial condition will also be negatively affected if it has a significant mismatch of short-term borrowings financing long-term assets that are required to be held as collateral for borrowings.

Securities that are collateralized by direct obligations of or are fully guaranteed as to principal and interest by the United States or any agency thereof should not be "sold" in repurchase agreements under $100,000 with maturities of 90 days or more unless they meet the requirements under § 563.84 of the OTS regulations. In addition, the OTS considers the following to be "agencies" for the purposes of government repurchase agreements:

1. Federal Home Loan Bank(s) (FHLB) (including time deposits and overnight deposits). Note: FHLB overnight deposits are eligible collateral for retail repos only if a security interest may be perfected in such account as required in § 563.84(b)(3).
2. Federal National Mortgage Association
3. Government National Mortgage Association
4. Bank(s) for Cooperatives, including the Central Bank of Cooperatives*
5. Federal Land Bank(s)*
6. Federal Intermediate Credit Bank(s)*
7. Tennessee Valley Authority
8. Export-Import Bank of the United States
9. Commodity Credit Corporation
10. Federal Financing Bank
11. Federal Home Loan Mortgage Corporation
12. Student Loan Marketing Association

* Federal Farm Credit Banks

Major Sources of Borrowed Funds

Federal Home Loan Bank Advances

A traditional source of borrowing has been FHLB advances. The FHLB policies determine the types of advances, terms available, and any commitment fees. FHLB advances may be short- or long-term and may be secured or unsecured. An institution may use mortgages or other assets including notes secured by loans, funds on deposit with the FHLB, and obligations issued, insured, or guaranteed by the U.S. Government as security for an advance. Whether an advance is otherwise unsecured or secured, the institution's FHLB stock is pledged against all advances.

The Federal Housing Finance Board (FHFB) also determines the availability of FHLB advances to member institutions. An FHLB will not make new advances available to a tangibly insolvent member without advance request to the FHLB and notification of the FHFB. Such advances may be renewed for up to 30 days at the discretion of the FHLB. Requests from the OTS or FDIC that an FHLB not renew advances will be honored and must be submitted through the FHFB. For an institution that fails one or more capital requirements, an FHLB may make new advances as long as the institution

is tangibly solvent. Such a member institution's access to advances may be limited or eliminated by an FHLB at the written request of the OTS or FDIC through the FHFB.

Reverse Repurchase Agreement

Reverse repurchase agreements (reverse repos) with investment broker/dealers are commonly used by thrifts as a short-term source of funds. Reverse repos are collateralized borrowings wherein the thrift "sells" securities to a broker, agreeing to repurchase the same securities at a specified price and date.

Any repurchase agreement program should be authorized by a savings association's board of directors only after consideration of the association's financial plan, operational system, and risk controls. An association must create and maintain a system of appropriate internal control procedures similar to those instituted for other debt securities issuances and structured financings. Associations must comply with the federal securities laws, as well as with other regulatory and fiduciary requirements. Board minutes relating to the initial approval and subsequent review of such programs should also reflect compliance with all applicable OTS and Securities and Exchange Commission (SEC) requirements. As a result, any repurchase program authorization should document the board of directors' consideration of these matters and the conclusions should be recorded in the board's minutes. An association's repurchase agreement program must also be monitored closely by association management with appropriate expertise and experience in managing repurchase agreement programs.

As with any securities offering, the thrift should follow the regulatory requirements found in 12 CFR §§ 563.76, 563.80, 563.84 and Part 563g of the OTS regulations.

In order to satisfy the requirements of §563.84(b)(3) that the interest of a repurchase agreement purchaser in the security or securities underlying the repurchase agreement constitutes a perfected security interest under applicable state law, an issuing institution must structure its repurchase agreement program as a secured lending transaction. Repurchase agreement programs structured as a sale by the institution of undivided fractional interests in a government security or a pool of government securities, subject to the institution's obligation to repurchase those interests, do not satisfy the requirements of § 563.84(b)(3).

The issuance of repurchase agreements constitutes securities offerings and are subject to the requirements of the federal securities laws. These requirements include registration under the Securities Act of 1933, the Securities Exchange Act of 1934, and the Investment Company Act of 1940, unless exempted or the association's program is operating within the parameters of a "no action" position. Thrifts must comply with the OTS requirements related to securities offerings set forth in 12 CFR Part 563g, which applies the Securities Act and Securities Exchange Act specifically to thrifts under OTS jurisdiction.

The anti-fraud provisions of the federal securities laws also are applicable to repurchase agreement programs and may result in the imposition of severe sanctions against an association's directors and managers, including civil and criminal liability. These anti-fraud provisions prohibit fraudulent conduct, including making false or misleading representations in offering materials, advertisements, or otherwise if related to repurchase agreements.

If similar but not identical securities are sold and repurchased, they are referred to as dollar reverse repurchase agreements (dollar reverse repos) or dollar rolls. Reverse repos, wherein identical securities are exchanged, are accounted for as financing transactions. Depending on the terms of the agreement, dollar reverse repos are accounted for either as financings or as purchase and sales. For accounting purposes, dollar reverse repos can be considered financings if the securities returned at the repurchase date are "substantially the same" as the securities "sold" at the origination date. If the returned securities are not substantially the same, the transaction becomes a sale for accounting purposes.

Substantially the Same. Securities are considered substantially the same when they have similar characteristics and similar yields. The issuer, coupon interest rate, maturity, and anticipated

prepayments of the underlying loans must all be consistent to be considered substantially the same. The issuer of the security (e.g., GNMA or FHLMC) is important because differences exist in relative creditworthiness. Loans packaged into a pool security must yield the same composite interest rate and have similar maturities. For example, GNMA issues two general types of securities: GNMA I's (characterized by loans with little deviation in individual interest rates with 30-year terms and from a similar geographic area) and GNMA II's (characterized by loans with a wider spread in their individual interest rates with 15- or 30-year terms and with more geographic diversity). Therefore, because of differing characteristics, a GNMA I generally cannot be exchanged for a GNMA II and fulfill the substantially same criteria. Exchanges of GNMA I's for GNMA II's must be reviewed individually to determine that the securities have similar yields and maturities in order to be considered substantially the same.

Over-Collateralization. One of the primary sources of risk in reverse repos is required over-collaterization. Excessive over-collateralization of reverse repos is an unsafe and unsound practice that poses a serious risk to the earnings and assets of the institution. Should the purchaser be unable for any reason to redeliver the securities upon maturity of the repurchase agreement, large losses would result. The term of the agreement, the type of collateral transferred, and the likelihood of market value fluctuations in the value of the collateral are the primary determinants of the collateralization level necessary for reverse repos. The percentage of collateralization is based on the market value, not the face value, of the securities at the time of the transaction.

Typical collateralization levels required by reputable broker-dealers approximate the following:

Type of Security/ Term of Agreement	
U.S. agency securities/	
less than 1 month	2%
1 month	3-4%
2 month	4-5%
3 month	5-6%
U.S. government notes/	
1 month	1/4%
2 month	1/2%
3 month	3/4%
U.S. government bonds/	
1 month	1/2%
2 month	1%
3 month	1-1/2%
Collateralized mortgage obligations*	
1 month	5-7%
2 month	6-8%
3 month	7-9%

Riskier securities, such as stripped mortgage-backed securities, planned amortization class, targeted amortization class, and collateralized mortgage obligation residuals, have substantially higher and wider-ranging collateralization requirements.

Collateralization levels in excess of these for U.S. agency or government securities should necessitate further review and comment by the regulator and the board of directors' awareness and involvement in the transaction. For all such transactions, thrifts should attempt to minimize the necessary collateralization requirements by contacting several reputable brokers to obtain quotes. These quotes should be documented.

Counter-Party Risk. Excessive over-collateralization is not the sole risk factor affecting reverse repurchase agreements. The strength of the counter-party is also critical to minimizing risks to the thrift. Thrifts should routinely monitor the creditworthiness of counter-parties. At a minimum, this should include

* For institutions with capital (excluding goodwill) exceeding $16 million. Smaller institutions would require a minimum of 20 percent, and often much more, to effect these transactions.

determining whether the counter-party is a primary dealer and length of time in business, reviewing counter-party reports filed with the SEC, reviewing financial statements of the counter-party with respect to capital levels, evaluating previous experience with the dealer, and researching the reputation of the counter-party with the SEC and the National Association of Securities Dealers.

Regulators should also review provisions for the assignment of collateral, rights to rehypothecate, and collateral maintenance practices for reverse repurchase agreements.

To satisfy the requirements of § 563.84(b)(3) -- that the interest of a repurchase agreement purchaser in the security or securities underlying the repurchase agreement constitutes a perfected security interest under applicable state law -- an issuing institution must structure its repurchase agreement program as a secured lending transaction. Repurchase agreement programs structured as a sale by the institution of undivided fractional interests in a government security or a pool of government securities, subject to the institution's obligation to repurchase those interests, do not satisfy the requirements of § 563.84(b)(3).

Short Funding. Some thrifts fund the purchase of mortgage-backed securities (MBSs) by entering reverse repos. If there is a significant difference between short- and long-term interest rates (yield curve is positively sloped), sizable spreads can be achieved. However, these spreads can be achieved only by assuming a significant amount of interest-rate risk. If the dollar amount invested in this strategy comprises a significant percentage of assets or exceeds explicit exposure limits required by the board of directors in accordance with TB 13, Responsibilities of the Board of Directors and Management with Regard to Interest Rate Risk, the strategy may be considered unsafe and unsound.

Collateralized Mortgage Obligation (CMO)

Thrifts issuing CMOs use MBSs or mortgage loans to collateralize the CMO security. A CMO is structured so that the cash flows from the underlying collateral, given conservative prepayment and interest rate level assumptions, are sufficient to repay, with stated interest, the obligation arising from the issuance of the CMO. A high investment rating, resulting from conservative prepayment assumptions, coupled with the CMO's various maturity structures and interest rates provides appeal to a broad range of investors.

The issuer of a CMO agrees to pay monthly, semi-annually or quarterly coupons on the outstanding bond value and to retire the bond principal according to prescribed structure. For instance, a CMO structure is characterized by classes, or "tranches." Typically, the tranches may consist of: (1) a short-term, fast-pay tranche, (2) a short-intermediate tranche, (3) a long-intermediate tranche, and (4) a slow-pay, zero-coupon ("Z" or "accretion") tranche. In a CMO, some tranches receive a coupon, while other tranches receive principal payments from the collateral as well. When the first tranche is retired (paid-off), the second tranche receives principal, and so on. Normally, the class with the shortest maturity receives all of the principal prepayments until it is retired. In the interim, the zero-coupon tranche accrues interest, which is added to its principal balance, resulting in negative amortization. Once faster paying tranches are retired, the zero-coupon tranche begins to receive payments on the then-higher principal.

In recent years, CMOs have been structured ranging from a single class to dozens of classes. Some CMOs contain floating-rate tranches in which the bond coupon is periodically readjusted based on an index, typically the London Interbank Offering Rate (LIBOR). A "straight" floating-rate tranche moves in the same direction as changes in the index; an "inverse" floating-rate tranche moves inversely to changes in the index. Many CMOs contain a planned amortization class (PAC) or targeted amortization class (TAC) tranche designed to provide investors increased protection against prepayment risk. PAC and TAC tranches transfer risk to the non-PAC and non-TAC tranches. Tranches that are specifically designed to absorb prepayment risk from PAC and TAC tranches are referred to as "support classes."

The effective interest rate (effective cost to the issuing thrift) and the term of the borrowing arising from the CMO will depend upon the prepayments of the collateral underlying the CMO.

Also considered in the interest rate on the borrowing are the costs of issuing the CMO (legal, accounting, and other costs). These costs will be amortized over the expected life of the CMO. Therefore, faster prepayments of the underlying collateral will require a faster write-off of the expenses increasing the effective cost. It is very important to determine where the proceeds from the CMO are invested. Since the term and effective interest rate of the CMO will vary based upon prepayments of underlying collateral, it is important to determine the expected return from the assets in which the proceeds from the CMO are reinvested. The expected term of these assets should be determined.

Residual cash flows arise due to the conservative assumptions required by rating agencies to be used in structuring the CMO and assessing the characteristics of the underlying collateral to ensure that the CMO is self-supporting. To the extent that actual cash flow exceeds these conservative assumptions, "excess" or residual cash flows are created. The residual interest represents the present value of all amounts expected to revert to the issuer or its affiliates (including reinvestment earnings).

The shorter CMO tranches will generally bear a lower interest rate than the underlying mortgages that are collateral for the issuance. This means that during the early life of the CMO, the issuer will receive income in excess of the interest expense it pays, while during the later years, the income will be less than the interest expense it pays to the CMO holders. The excess of income over the interest expense during the early life of the CMO is known as phantom income. Since it will be offset in later years, it is not income in the real economic sense. This phantom income is accrued to the issuer as the holder of the residual interest and will be transferred to buyers of the residual interest.

Frequently, thrifts have established a finance subsidiary to issue a CMO. In the past, one benefit of issuing a CMO through a finance subsidiary had been the exclusion of the CMO security from the thrift's minimum capital requirement calculation. However, under the present capital regulations, this exclusion is eliminated. Effective January 1, 1997, specific authority for finance subsidiaries contained in former 12 CFR § 545.82 was removed and all existing finance subsidiaries are deemed operating subsidiaries under 12 CFR § 559.11. All the functions of a finance subsidiary may be done with fewer restrictions by an operating subsidiary.

Effective January 1, 1987, REMIC legislation permitted various security structures such as CMOs, senior subordinated interests, and regular pass-through securities to be issued under the REMIC tax authority. The REMIC legislation provided flexibility in structuring multiclass mortgage securities as asset sales or financings subject to GAAP accounting standards. For example, a thrift using MBSs with unrealized losses as underlying collateral will likely choose to classify its CMO issuance as a financing, rather than a sale, for financial reporting to avoid recording the loss. However, for tax purposes, under REMIC treatment, the transaction can be structured as a sale to record the losses and thus reduce the tax liability. Prior to the REMIC legislation, if sale treatment was desired, CMO transactions needed to pass very stringent tests. Although the transaction could theoretically pass the tests for accounting purposes, the result was almost inevitably unacceptable from a tax viewpoint.

The underlying collateral of CMOs structured to meet the GAAP standards for a sale of assets are treated as if sold, and the liability associated with the issue does not appear on the issuer's financial statements. If the transaction is treated as a financing, the MBSs or mortgages stay on the issuer's books and the balance sheet is simply grossed up to reflect the cash received from the offering and the related liability under the bonds. (Any costs incurred are deferred and amortized over the life of the liability.)

Other Sources of Borrowed Funds

Common sources of thrift borrowed funds include the following:

- Federal funds purchased (commercial bank loans).
- Issuance of various other debt securities.

- Retail reverse repurchase agreements.
- Loans from a parent or affiliate.
- Loans secured by the thrift's office building.
- Underlying mortgage in a wrap-around loan unless the holder of the underlying mortgage has accepted a subordinate position.
- Liabilities for capital leases related to the institution's offices or premises and equipment.
- Redeemable preferred stock issued by consolidated subsidiaries to third parties.
- Commercial paper issued.
- Eurodollars issued.
- Liability from "sale" of loans with recourse accounted for as a financing.

Also considered a source of borrowed funds are overdrafts in the institution's transaction accounts in other depository institutions, where there is no right of offset against other accounts in the same financial institution, unless the overdraft is in a zero-balance account or an account that is not routinely maintained with sufficient balances to cover checks drawn in the normal course of business.

Deposits/Borrowed Funds Analysis

Cost and Risk Analysis

Management should analyze and monitor the deposit and borrowing composition to determine the effect of the financial costs on the net interest margin and profitability, and to assess the risks associated with these liabilities. The analysis should assist management in determining an acceptable liability mix. The regulator should evaluate the adequacy of management's analysis and its monitoring systems. Cost and risk analysis should include:

- The identification of the overall rate/volume/ mix of deposits and of borrowings and the periodic evaluation of changes (variance) in interest expense due to changes in rate/ volume/mix.
- An evaluation of the risk/benefit trade-offs of the various sources of funds. (See discussion of risk/benefit trade-offs below.)
- A procedure to estimate the effect of an instantaneous and sustained shift in interest rates of $\pm$ 100, $\pm$ 200, $\pm$ 300, $\pm$ 400 basis points on the net portfolio value of deposits and borrowings. (Refer to Thrift Activities Handbook Section 650, Interest Rate Risk Management, for detailed discussion.)
- An analysis of the marginal cost to generate additional funds.
- An analysis of the potential effects on profitability of paying below-market rates on deposits.

Risk/Benefit Trade-Offs

Management should not attempt to increase net interest income by merely increasing the level of risk in the liability structure without adequately analyzing and evaluating the risk/benefit trade-offs. Examples of risk/benefit trade-offs include:

Retail versus brokered (including money desk) deposits: Retail deposits generally are more stable and less interest costly than brokered deposits, but usually carry higher operating costs and are limited in total volume by the size of the local market area and the competition within the local market area. Brokered deposits, although usually higher risk in terms of volatility and interest costs, nevertheless, may be appropriate for some thrifts, provided that they are well-capitalized, or have a waiver from the FDIC permitting them to offer brokered deposits if they are adequately capitalized.

Borrowings versus deposits: Borrowings can provide a large volume of funds quickly, while retaining current deposit pricing strategies. The cost of certain large-volume borrowings (e.g., certain issuance costs, effective reverse repo rates) may benefit from economies of scale. However, borrowings introduce collateral risk. Depending upon their maturity and payment characteristics, an increase in either borrowings or deposits may aggravate interest rate risk.

Thrifts generating large volumes of volatile short-term deposits or accessing large volumes of short-term borrowings should evaluate the feasibility of hedging to alleviate their interest rate risk. (Refer to Thrift Activities Handbook Section 660, Hedging.)

Marginal Cost Analysis

When interest rates are changing, average cost and marginal cost of deposits will differ. Consideration of marginal cost is especially appropriate for monitoring and evaluating the cost of new deposits. When rates are rising, the true cost of acquiring new deposits (marginal cost) will be greater than the simple average of the incremental cost of a higher rate paid on new deposits and an unchanged cost on existing deposits. The higher rate must be paid not only to the new depositors, but also to the existing depositors who would have been willing to hold deposits at the lower rate. The larger the volume of existing accounts, the higher the marginal cost. In addition, the cost of servicing accounts will rise as deposits increase. Moreover, an increase in the rate at one maturity level might necessitate a change in rate at other maturity levels. The reaction of competing thrifts should also be considered in setting interest rates on deposits.

Analysis of the true cost of additional deposits places management in a better position to control these costs. Some thrifts have paid high rates to attract new deposits, resulting in a marginal cost that exceeds the return on the loans and investments funded by those deposits. Such conditions encourage decisions to relax loan and investment credit underwriting standards.

Marginal cost analysis may not be as appropriate for monitoring and evaluating the cost of additional borrowings because the rate paid on new borrowings is limited to the incremental funds raised, not total funds. However, a comparative analysis of the marginal cost of new deposits to the incremental cost of new borrowings should be done. (See Thrift Activities Handbook Section 530, Cash Flow and Liquidity Management.)

Below-Market Rates

Thrifts considering a strategy to shrink the balance sheet by paying below-market rates on deposits must research their market. A primary risk of the strategy is underestimating the expected deposit outflow. The rate sensitivity of deposits differs from product to product, among different locations, and among different customer groups.

The effect of a below-market rate strategy on profitability may be approximated by comparing estimated cost savings (represented by the expected volume of deposit outflow times the rate that had been paid on these deposits; plus the cost savings represented by the spread between the market rate and the below-market rate paid on the remaining deposits); with the estimated cost (represented by the yield given up on interest-earning assets expected to be sold times the volume expected to be sold, and/or the cost of any anticipated new borrowings needed to replace the deposit outflow as a continuing funding source).

REFERENCES

United States Code (12 USC)

Chapter 16: Federal Deposit Insurance Corporation

§ 1831f	Brokered Deposits

Code of Federal Regulations (12 CFR)

Federal Deposit Insurance Corporation
Subchapter B: Regulations and Statements of General Policy

§ 337.6	Brokered Deposits

Office of Thrift Supervision

§ 545.16	Public Deposits, Depositories, and Fiscal Agents
Part 557	Deposits
§ 561.16	Demand Accounts
§ 561.28	Money Market Deposit Accounts
§ 561.29	Negotiable Order of Withdrawal Accounts
§ 563.80	Borrowing Limitations

§ 563.81	Issuance of Subordinated Debt Securities and Mandatorily Redeemable Preferred Stock
§ 563.84	Transfer and Repurchase of Government Securities
§ 563.174	Futures Transactions
§ 563.175	Financial Options Transactions
Part 563g	Securities Offerings

Office of Thrift Supervision Bulletins

RB 3b	Policy Statement on Growth for Savings Associations
TB 13	Responsibilities of the Board of Directors and Management with Regard to Interest Rate Risk

Deposits/Borrowed Funds Program

Examination Objectives

To determine if the established strategic plans, policies, procedures, and practices related to deposit solicitation/retention and borrowed funds adequately addresses safety and soundness, near- and longer-term profitability, and compliance with laws and regulations.

To determine whether the thrift's officers and employees are operating in conformance with the established plans, policies, procedures, laws, and regulations.

To determine the thrift's ability to generate market rate deposits, and its ability to access borrowed funds.

To determine the adequacy of management's monitoring of deposits/borrowed funds.

Examination Procedures

Level I

Wkp. Ref.

1. Coordinate responsibilities and communicate findings with the examiner(s) assigned to the review of cash flow/liquidity management and funds management.

2. Review the previous report of examination and all deposits and borrowed funds-related exceptions noted and determine if management has taken appropriate corrective action.

3. Obtain and review strategic plans, marketing plans, policies, and procedures related to deposits and borrowed funds. Determine whether these plans and policies are integrated in the goals and objectives of the business plan. Planning and policy guidelines should address safety and soundness issues, near-term and longer-term profitability, and compliance with laws and regulations.

4. Determine that written plans, policies, and procedures are reviewed and updated as necessary and that policy changes are communicated to appropriate personnel.

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5. Analyze the present sources, volumes, and trends of deposits and other borrowed money (e.g., core deposits, volatile deposits, short- or longer-term borrowings).

6. Assess the adequacy of management's evaluation of the thrift's near-term and longer-term funding needs, and of the advantages/disadvantages of alternative funding sources as well as the thrift's access to those sources.

7. Evaluate the present deposit and other borrowing structure in terms of:

   - Deposit pricing (e.g., at, above, or below-market competition);
   - Cost of the various major types of deposits and borrowings in relation to the thrift's overall cost of funds and the spreads between these sources of funds and the earnings of the assets funded;
   - Availability of assets to collateralize borrowings;
   - Major mismatching of short-term sources of funds financing long-term assets;
   - Liquidity;
   - Level of capital; and
   - Ability to extend or repay maturing borrowings.

8. Evaluate whether planned growth is achievable, cost/beneficial, and supported by adequate capital. Refer to the supervisory guidelines contained in Regulatory Bulletin 3b, Policy Statement on Growth for Savings Associations.

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9. Review the adequacy of management reports and the information systems to provide management and the directors with information that is accurate, relevant, and useful for decision making and for monitoring compliance with on-going plans and policy guidelines.

10. Evaluate management's expertise to carry out its responsibilities to conduct deposit solicitation/retention and borrowing activities in a prudent, safe, and sound manner.

11. Analyze brokered deposits to determine the volume of uninsured deposits, concentrations of deposits from a particular broker or group of brokers, money desk activity, and adequacy and completeness of records.

12. Determine if more than two percent of the deposits are concentrated under the control of, or payable to, one entity.

13. If the thrift is not well capitalized, determine compliance with the restrictions or prohibition on brokered deposits.

14. Review reports of broker fees paid and subsidiary expense ledgers for any unusual brokered deposit activity. Confirm that a deposit broker is registered with the FDIC per § 337.6 if needed.

15. Review a sample of trade tickets and confirmations of financial market borrowing transactions such as reverse repurchase agreements. Test check that these transaction records correspond to the transaction logs, reports to management and the directors, and to the general and subsidiary ledgers.

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16. Evaluate the appropriateness of amounts of collateral for reverse repurchase agreements, and report any evidence of over-collateralization.

17. Review the reconciliation of suspense accounts.

18. Review the Level II procedures and perform those necessary to test, support, and present conclusions derived from the performance of Level I procedures.

Level II

19. Obtain a listing of deposit accounts of directors, officers, and other affiliated persons. Test check these accounts for preferential rates and appropriate board approval of overdrafts.

20. Reconcile borrowed funds balances to the general ledger.

21. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

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Deposits/Borrowed Funds Questionnaire

General Questionnaire	Yes	No
1. Has management developed a clearly defined retail deposit marketing strategy that identifies desired market share and assesses present and potential competition?		
2. Is the retail deposit marketing strategy integrated with the goals and objectives of the business plan?		
3. Does management analyze the deposit structure and identify core and volatile deposits?		
4. Have substantial amounts of funds been obtained through deposit brokers or money desk operations?		
• Is the board of directors aware of the high amount of brokered or money desk deposits?		
• Are more than two percent of the deposits concentrated under the control of, or payable to, one entity?		
5. If accepting "brokered deposits" (including brokered, money desk, and deposits paying a significantly higher rate of interest than the prevailing rate offered by other thrifts in the normal market area), is the thrift well-capitalized, or if adequately capitalized, does it have a waiver from the FDIC?		
6. Does management analyze its present and anticipated funding needs?		
7. Does management analyze the cost of deposits versus the cost of other borrowing alternatives?		
8. Does management analyze and monitor the availability of collateral for borrowings?		
9. Does management regularly monitor pricing, volume, sources, volatility, and trends of its deposits and borrowings in relation to the overall goals of interest rate risk management, liquidity management, funds management, and near- and longer-term profitability?		
10. If the association has stock market-indexed certificates of deposit, has it complied with the safety and soundness, legal, reporting, and records requirements for offering these instruments?		
11. Is the level of over-collateralization of reverse repurchase agreements acceptable?		
12. Are the savings and borrowings trial balances reconciled to the general ledger on at least a monthly basis?		
13. Are files of trade tickets and confirmations of borrowings from the financial markets maintained?		
14. Are the trade tickets and confirmations accurate?		
15. Are internal control procedures regarding deposits and borrowings adequate?		

Comments

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Introduction

Under the Depository Institutions Deregulation and Monetary Control Act of 1980, every depository institution that has transaction accounts or nonpersonal time deposits must maintain reserves on those deposits as prescribed by the Federal Reserve Board (FRB). The FRB's Regulation D, Reserve Requirements of Depository Institutions (12 CFR § 204), contains the rules related to reporting deposits and maintaining reserve balances. Depository institutions, whether members of the Federal Reserve System or not, are required to file a periodic report of deposits with the Federal Reserve Bank in the Federal Reserve District in which it is located.

The reports of deposits (i.e., FR 2900 for weekly reporters, FR 2910q for quarterly reporters, and FR 2910a for annual reporters) are used by the Federal Reserve to more precisely define the components of the money supply, set reserve requirements, and, in aggregate, help formulate monetary policy. Errors in reporting or in maintaining proper reserve balances may adversely affect the conduct of monetary policy by the Federal Reserve and result in: (1) higher reserve requirements and a reduction in potential earnings, (2) the assessment of reserve deficiency charges, and (3) a more frequent reporting requirement.

Regulation D is a highly complex regulation that requires careful study to master. It is suggested that the regulation itself be read by all regulators.

This Handbook Section only touches on the highlights of the regulation and focuses on those areas that are frequently misunderstood.

Transaction Accounts

Transaction accounts are defined with great specificity in 12 CFR § 204.2(e). Such accounts include:

- demand deposits,
- certain accounts on which the depository institution has reserved the right to require at least seven days written notice prior to withdrawal or transfer of any funds. These accounts include those subject to check, draft, or other similar item, those subject to automatic withdrawal, also those that permit a depositor to make more than six withdrawals per month or statement cycle,
- deposits or accounts maintained in connection with an agreement that permits the depositor to obtain credit directly or indirectly through the drawing of a negotiable or nonnegotiable check or similar device, and
- certain other accounts that the FRB has determined by rule or order, to be transaction accounts.

Savings deposits as defined in 12 CFR § 204.2(d) are not transaction accounts.

Nonpersonal time deposits are defined in 12 CFR § 204.2(f). Reserves are no longer required to be held against these deposits.

Eurocurrency liabilities are defined in 12 CFR § 204.2(h). Reserves are no longer required to be held against these liabilities.

Reserve Requirements

Regulation D (12 CFR § 204.9(a)(1)) specifies the reserve requirement ratios for all depository institutions as shown in Table 1.

There is a zero percent reserve requirement on the first $4.4 million of the institution's transaction accounts subject to the low reserve tranche ($49.3 million). A three percent reserve requirement is applied on the remainder of the low reserve tranche.

The FRB establishes before the beginning of each year the amount of transaction accounts subject to the three percent ratio requirement. This adjustment is known as the low reserve tranche adjustment. The FRB also establishes on an annual basis the amount of reservable liabilities of each depository institution that is subject to a reserve requirement of zero percent. This is known as the reservable liability exemption. Reservable liabilities include transaction accounts, nonpersonal time deposits, and Eurocurrency liabilities as defined in § 19(b)(5) of the Federal Reserve Act. The reserve ratio on nonpersonal time deposits and Eurocurrency liabilities is zero percent.

Deposit cutoff levels are used in conjunction with the reservable liability exemption to determine the frequency of deposit reporting. Nonexempt institutions are those with total reservable liabilities exceeding the amount exempted from reserve requirements while exempt institutions are those with total reservable liabilities not exceeding the amount exempted from reserve requirements.

Table 1

Category	*Reserve Requirement*
Net Transaction Accounts	
$0 - $4.4 M	*0% of amount**
$4.4 - $49.3 M	*3% of amount*
>$49.3 M	*$1,479,000 + 10% of amount > $49.3 M*
Nonpersonal Time Deposits	*0%*
Eurocurrency Liabilities	*0%*

** See 12 CFR 204.3(a)(3) for a technical explanation of the allocation of exemption from reserve requirements.*

Specific Rules for Certain Types of Savings Deposit Accounts

Preauthorized or automatic transfers for savings deposits such as passbook and statement savings accounts and money market deposit accounts (MMDAs) are limited to six transfers and withdrawals, or a combination of such, per calendar month or statement cycle of at least four weeks. Three of these transfers may be made by check, draft, or similar order drawn by the depositor to third parties. Telephone transfers to another account of the same depositor are also restricted to the six-transactions limitation.

MMDAs and other savings deposits should be reported separately where called for according to reporting instructions for the specific reports.

Institutions are required to implement procedures either to prevent transfers in excess of the limitations or to monitor accounts on a periodic basis and contact customers who exceed these limits. Further, proper disclosure to customers of these limitations may serve to ensure compliance.

If the account limitations are exceeded, the account will be either closed and the funds placed in another account that the depositor is eligible to maintain, or the transfer and draft capacities of the account will be taken away.

Frequency of Reporting

The frequency of filing the report of deposits with the Federal Reserve ranges from weekly to annually and is based on the level of total deposits and reservable liabilities. Institutions are screened during the second quarter of each year to determine reporting frequency beginning the following September.

Effective December 17, 1996, nonexempt institutions with total deposits of $59.3 million or more are required to report weekly while nonexempt institutions with total deposits less than $59.3 million may report quarterly, in both cases on FR 2900. Similarly, exempt institutions with total deposits of $48.2 million or more are required to report quarterly on form FR 2910q while exempt institutions with total deposits less than $48.2 million may report annually on form FR 2910a. Institutions with total deposits below $4.4 million are excused from reporting if their deposits can be estimated from other sources.

Where Reserve Balances are Maintained

Each depository institution can satisfy its reserve requirements with a combination of vault cash and balances held at a Federal Reserve Bank. Depository institutions may deposit their required reserve balances directly with a Federal Reserve Bank. Depository institutions that are not members of the Federal Reserve alternatively may elect to pass through their required reserve balances to the Federal Reserve through a correspondent -- which may be the District Federal Home Loan Bank. The correspondent will pass through this required reserve balance dollar for dollar to the Federal Reserve Bank in the Federal Reserve District in which the main office of the respondent institution is located. However, every depository institution that maintains transaction accounts or nonpersonal time deposits is required to file its report of deposits directly with the Federal Reserve Bank of its District, regardless of the manner in which it chooses to maintain required reserve balances.

The Federal Reserve Bank that receives the reports shall notify the reporting depository institution of its reserve requirements. If a pass-through arrangement exists, the Reserve Bank will also notify the correspondent that passes reserve balances through to the Federal Reserve of the depository institution's required reserve balance.

Reserve Deficiency Charges

Deficiencies in a depository institution's required reserve balance are subject to reserve deficiency charges. Federal Reserve Banks are authorized to assess charges for deficiencies in required reserves at a rate of two percent per year above the lowest rate in effect for borrowings from the Federal Reserve Bank on the first day of the calendar month in which the deficiencies occurred. Charges are assessed on the basis of daily average deficiencies during each maintenance period.

In satisfaction of a reserve deficiency and any charges accruing, a Federal Reserve Bank may, after consideration of the circumstances, permit a depository institution to eliminate deficiencies in its required reserve balance by maintaining additional reserves during subsequent reserve maintenance periods.

References

United States Code (12 USC)

Subchapter XIV - Bank Reserves

§ 461 (19(a) - (c)) Reserve Requirements

Code of Federal Regulations (12 CFR)

Federal Reserve System Rules and Regulations

Part § 204	Reserve Requirements of Depository Institutions

FRB Amendments/Interpretations of Regulation D

61 FR 60171, November 27, 1996 - Reserve Requirements of Depository Institutions

61 FR 69020, December 1, 1996 - Reserve Requirements of Depository Instiutions

62 FR 34613, June 27, 1997 - Reserve Requirements of Depository Institutions and Issue and Cancellation of Capital Stock of Federal Reserve Banks

Chapter V - Office of Thrift Supervision, Department of the Treasury

Part 557	Deposits
§561.9	Certificate Account
§561.16	Demand Account
§561.28	Money Market Deposit Accounts
§561.29	Negotiable Order of Withdrawl Accounts
§561.42	Savings Account

Reserve Requirements (Regulation D) Program

Examination Objectives

To determine that the institution has procedures in place to comply with Regulation D.

To determine that the institution is in compliance with the reporting and reserve balance requirements of the regulation.

Examination Procedures

Level I

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1. Identify whether the institution prepares a report of deposits and submits it to the Federal Reserve Bank in its district.

2. Determine whether the institution has implemented operating procedures and a system of internal controls to ensure compliance with the reporting requirements.

3. Obtain the institution's records detailing charges incurred or instances of returned forms, indicating inadequate compliance with Regulation D. Determine whether the institution has corrected any problem areas.

4. Determine whether the institution's internal audit program provides adequate coverage to assure that the reporting requirements are monitored on a regular basis. If the institution does not have an internal audit function, a program of management reviews or self audits should include the reporting requirements.

5. Identify whether the institution has procedures in place to identify and monitor the monthly transaction limitations on regular passbook accounts and money market accounts to ensure that they do not exceed regulatory limits.

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6. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

7. Review the two most recent reports of deposits to determine whether the items listed are accurate and properly classified.

8. Perform a limited review of all line items on the report of deposits.

9. Perform a review and evaluation of the institution's system of internal controls for Regulation D reporting compliance. Typical internal controls include independent review and verification of forms for accuracy prior to submission and the maintenance of proper supporting documentation.

10. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Level III

11. If substantive exceptions are noted in examination procedures 1-5, perform a detailed review of all line items on the report of deposits and reconcile the form line items with the general ledger accounts for the specific time period under review.

Examiner's Summary, Recommendations, and Comments

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Introduction

A succession of highly publicized failures of government securities broker/dealers occurred from the mid-1970s to the mid-1980s (e.g., Drysdale, Lombard-Wall, E.S.M.) causing large losses to investors. Four practices were common to the failed government securities broker/dealers:

- Selling multiple interests in the same securities under several repurchase agreements while maintaining custody of the securities and the pledging of customer securities without transferring title or possession;
- Inadequate collateral given to customers when the broker/dealer engaged in repurchase transactions with customers or excessive collateral demanded when reversing securities from customers;
- Poor recordkeeping; and
- Inadequate capital.

As a result of these failures and improper practices, Congress was impelled to exercise its authority over the largely unregulated government securities market through passage of the Government Securities Act of 1986 (GSA). The stated purpose of the GSA and its implementing regulations is to enhance the protection of investors in government securities by establishing and enforcing appropriate financial responsibility and custodial standards.

The GSA applies to all financial institutions that engage in government securities activities. For the purposes of the GSA, government securities include:

- U.S. Treasury bills, bonds, and notes;
- Discount notes, bonds, certain collateralized mortgage obligations, pass-throughs, master notes, and other obligations of the Government National Mortgage Association (GNMA), the Federal National Mortgage Association (FNMA), the Federal Home Loan Mortgage Corporation (FHLMC), the Student Loan Marketing Association (SLMA), the Farm Credit System (FCS), and the Financing Corporation; and
- FNMA or FHLMC stock.

"Off-exchange" puts, calls, straddles, and "similar privileges" on government securities are considered to be government securities except for the rules addressing custodial holding of securities.

Custodial Holding Requirements

All thrift institutions that hold government securities as fiduciary, custodian, or otherwise for the account of a customer (including a counterparty to a hold-in-custody repurchase agreement) must comply with the requirements relating to the safeguarding and custody of those securities. All government securities held for customers, including those subject to repurchase agreements with customers, must be segregated from the thrift's own assets and kept free from lien of any third party or the thrift. A thrift that holds securities held for a customer through another institution, a custodian institution, must notify that custodian institution that such securities are customer securities. The custodian institution must maintain the customer securities in an account that is designated for customers of the thrift. The thrift must notify the custodian institution that these securities are to remain free of any lien, charge, or claim. In turn, the custodian institution, upon the instruction of the thrift, is required to treat the securities as customer securities and maintain those securities in accordance with 17 CFR § 450. The custodian institution does not have to keep records that identify individual customers of the thrift.

When a thrift maintains customer securities in an account at a Federal Reserve Bank, it is considered to be in compliance with the requirements to hold customer securities free of lien if any lien of the Federal Reserve Bank or other party claiming through it expressly excludes customer securities.

The thrift is not required to maintain customer securities in a separate custody account at the Federal Reserve Bank, although segregation is encouraged. The thrift must segregate the customers' securities on its own records.

A thrift may lend customer securities held in safekeeping to third parties and remain in compliance with the GSA as long as any securities loans are made under a written agreement with the customer and in compliance with OTS and FFIEC guidelines for securities lending.

An institution engaged in safekeeping U.S. Government securities for customers is required to issue to the customer a confirmation or safekeeping receipt for each government security held that identifies the issuer, maturity date, par amount, and coupon rate of the security being confirmed.

Recordkeeping Requirements

The institution must also maintain a recordkeeping system of government securities held for customers that is separate and distinct from other records of the institution. These records must: (1) identify each customer and each government security held for a customer; (2) describe the customer's interest in the security (e.g., pledged to secure a public deposit), and (3) indicate all receipts and deliveries of securities and cash in connection with the securities. A copy of the safekeeping receipt or confirmation given to customers must be maintained. The institution is required to conduct a count at least annually--and document it within seven days--of physical securities and securities held in book-entry form.

An annual reconcilement with customer account records must also be performed. In order to count securities held outside the thrift, such as book entry securities held at a Federal Reserve Bank, the thrift must reconcile its records to those of the outside custodian. Any securities in transfer, in transit, pledged, loaned, borrowed, deposited, failed to receive or deliver, or subject to a repurchase or reverse repurchase agreement must be verified when they have been out of the thrift's possession for longer than 30 days. All custodial holding requirement records must be maintained in an easily accessible place for at least two years and not disposed of for at least six years. This system of records must provide an adequate basis for an audit. Additional information on custodial and fiduciary holdings, including examination procedures and an examination checklist, can be found in Trust Activities Handbook Section 300, Operations and Internal Controls.

Hold-In-Custody Repurchase Agreements

All thrift institutions that engage in repurchase transactions and/or forward repurchase transactions ("forward repos") with customers while retaining custody or control of government securities ("hold-in-custody" repurchase transactions) must comply with the GSA requirements relating to written agreements, confirmations, and disclosures. Forward repos are repurchase and reverse repurchase transactions that settle in a next-day or longer timeframe**.** Repurchase transactions for the purposes of the GSA may be characterized and accounted for by the parties as either a sale and repurchase of a security or as a secured loan. Securities are considered to be retained in custody even when the securities are maintained through an account at another institution and the securities continue to be under the control of the thrift. All hold-in-custody repurchase transactions are required to be conducted pursuant to a specific written repurchase agreement. If the customer agrees to allow substitution of securities in a hold-in-custody repurchase transaction, then authority for the financial institution to substitute securities must be contained in the written repurchase agreement. In all hold-in-custody repurchase agreements where the financial institution reserves the right to substitute securities, the following disclosure statement must be prominently displayed in the written repurchase agreement immediately preceding the provision allowing the right to substitution:

> REQUIRED DISCLOSURE
>
> The (seller) is not permitted to substitute other securities for those subject to this agreement and, therefore, must keep the (buyer's) securities segregated at all times, unless in this agreement the (buyer) grants the (seller) the right to substitute other securities. If the (buyer) grants the right to substitute, this means that the (buyer's) securities will likely be commingled with the (seller's) own securities during the trading day. The (buyer) is

> advised that, during any trading day that the (buyer's) securities are commingled with the (seller's) securities, they may be subject to liens granted by the (seller) to third parties and may be used by the (seller) for deliveries on other securities transactions. Whenever the securities are commingled, the (seller's) ability to resegregate substitute securities for the (buyer) will be subject to the (seller's) ability to satisfy any lien or to obtain substitute securities.

No editing or paraphrasing of the above language of the required disclosure statement is permitted under the regulation, except for inserting the appropriate names for the buyer and seller. Any thrift issuing a hold-in-custody repurchase agreement must disclose to the customer in writing that the funds held pursuant to the repurchase agreement are not a deposit and are not federally insured.

Written confirmations describing the specific securities subject to the transaction must be sent to the customer by close of business on the day on which the trade takes place, as well as on any day on which substitution of securities occurs. Issuance of confirmations on the trade date for forward repo transactions in government securities is especially important since these transactions usually settle in a longer timeframe than normal settlement. Confirmations must identify the specific securities by issuer, maturity, coupon, the money or the par amount, market value, CUSIP or mortgage pool number of the underlying securities**,** and whether there are any rights of substitutions. Market value is defined as the most recently available bid price for the security, plus accrued interest.

Pooling of securities as collateral for repurchase agreements is no longer permitted. "Blind pooled" hold-in-custody repurchase transactions occur when a seller does not deliver securities and does not identify specific securities as belonging to specific customers. Instead, the financial institution sets aside, or otherwise designates, a pool of securities to collateralize its outstanding repurchase obligations. The regulations require that the written confirmation sent to a customer must identify the specific securities that are the subject of the hold-in-custody repurchase transaction. A specific security identified to a customer must be in an authorized denomination, that is, in a deliverable par amount.

Broker/Dealer Notification Requirements

A much more limited number of thrift institutions are subject to the broker/dealer notification requirements set forth in the GSA. Thrift institutions that are government securities brokers or dealers are required to notify OTS of their status upon becoming a government securities broker or dealer and to comply with applicable requirements relating to those activities.

A thrift institution will generally be considered a government securities broker if it engages in the following government securities activities:

- Representing itself as a government securities broker or inter-dealer broker, or
- Actively soliciting purchases or sales of government securities on an agency basis.

A thrift institution will generally be considered a government securities dealer if it engages in the following government securities activities:

- Underwriting or participating in a selling group for the sale of government securities;
- Advertising or otherwise representing itself to other dealers or investors as a dealer in government securities; or
- Quoting a market for government securities, and in connection with such quotations, standing ready to purchase or sell government securities.

A thrift institution that buys or sells government securities solely for investment for its own account or accounts for which it acts as fiduciary will not generally be considered as a broker or dealer and subject to notification requirements, even if such purchases and sales are made with some frequency. Although still subject to custodial holding (except for savings bond transactions) and hold-in-custody repurchase agreement requirements, a thrift may engage solely in the following government securities activities without filing a written notice or associated requirements:

- Issuing or handling savings bond transactions (exemption from custodial holding requirements permitted);
- Submitting tenders for the account of customers for purchase on original issues of U.S. Treasury securities;
- Engaging in limited government securities dealer activities, such as entering into repurchase or reverse repurchase agreements, or sales or purchases in a fiduciary capacity; or
- Engaging in limited brokerage activities: either effecting fewer than 500 government securities brokerage transactions per year, or effecting brokerage transactions only through another government securities broker or dealer on a fully disclosed basis where its employees perform only clerical, ministerial, or order-taking functions.

Notice by thrift institutions of their government securities broker or dealer activities is to be filed with OTS on Forms G-FIN and G-FIN-4. Once an institution has filed notice of its status as a government securities broker or dealer, any changes to the status of its filing must be reported within 30 days. If a thrift institution ceases its government securities activities, it must file a notice of termination using Form G-FINW. See Appendix A for exhibits of the current G-FIN and G-FINW forms.

References

Code of Federal Regulations (17 CFR)

Chapter IV: Department of the Treasury

Subchapter A: Regulations under Section 15c of the Securities and Exchange Act of 1934

Subchapter B: Regulations under Title II of the Government Securities Act of 1986

Part 450--Custodial Holdings of Governmental Securities by Depository Institutions

PL 99-571 The Government Securities Act of 1986

Form G-FIN (Department of Treasury) - Notice by Financial Institutions of Government Securities Broker or Government Securities Dealer Activities

Form G-FINW (Department of Treasury) - Notice by Financial Institutions of Termination of Activities as a Government Securities Broker or Government Securities Dealer

Department of Treasury Staff Interpretation of Regulations Implementing the Government Securities Act of 1986 - Letter from Bureau of Public Debt dated April 19, 1996, clarifying GSA record-keeping requirements regarding forward repurchase agreement transactions

OTS Trust Activities Handbook Section 300

Government Securities Act
Program

Examination Objectives

To determine that the thrift institution has procedures in place to comply with the GSA.

To determine that the thrift institution is in compliance with the custodial holding requirements, hold-in-custody repurchase agreement requirements, and reporting requirements of the regulation.

Examination Procedures

Level I

Wkp. Ref.

1. Ascertain whether the thrift holds government securities as a fiduciary, custodian, or otherwise for the account of a customer. If so, ascertain whether the institution has procedures in place to maintain segregated assets and records and to conduct an annual count of securities.

2. Review the previous report of examination and all GSA-related exceptions noted and determine if management has taken appropriate corrective action.

3. Ascertain whether the thrift engages in repurchase transactions with customers while retaining custody or control of the government securities. If so, ascertain whether the institution has procedures in place for transaction confirmations.

4. Ascertain whether the thrift is currently or has been a government securities broker or dealer. If so, ascertain whether associated GSA reporting requirements have been met.

5. Review and ascertain whether the institution's internal audit program provides adequate coverage to monitor the extent of applicability of the GSA.

6. Review Level II procedures and perform those necessary to test, support, and present

Exam Date: _____
Prepared By: _____
Reviewed By: _____
Docket #: _____

Wkp. Ref.

conclusions derived from performance of Level I procedures.

Level II

7. Review a sample of customer confirmations.

8. Verify that customer securities are, in fact, segregated from those of the thrift.

9. Verify that the recordkeeping system contains sufficient information.

10. Review the annual count of securities.

11. If a custodian institution is used, review a sample of transactions to determine whether the custodian has received appropriate notification.

12. Review a sample of repurchase transactions with customers to validate disclosures and confirmations.

13. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

Exam Date: _____
Prepared By: _____
Reviewed By: _____
Docket #: _____

Form G-FIN

Notice By Financial Institutions of Government Securities Broker or Government Securities Dealer Activities

(This booklet includes instructions and blank forms)

Board of Governors of the Federal Reserve System

Federal Deposit Insurance Corporation

Office of the Comptroller of the Currency

Office of Thrift Supervision

Securities and Exchange Commission

NOTICE REQUIREMENTS

This notice must be filed by all financial institutions that are government securities brokers or government securities dealers that are not exempt from the notice requirement under regulations of the Department of Treasury. Generally, a financial institution will not be required to file as a government securities broker or dealer if its only government securities activities are to: (1) Buy or sell government securities solely for investment for its own account; (2) Buy or sell government securities for fiduciary accounts; (3) Handle savings bond transactions; (4) Submit tenders for the account of customers for purchase on original issue of U.S. Treasury securities; (5) Enter into repurchase or reverse repurchase agreements; (6) Effect fewer than 500 government securities brokerage transactions per year; (7) Effect brokerage transactions only through another government securities broker or dealer on a fully disclosed basis; or (8) Effect brokerage transactions that do not involve active solicitations.

For further information on the requirements to file this notice, please refer to the instructions.

Form G-FIN

FR G-FIN
OMB No. 7100-0224
Approval expires February 28, 1998

OFFICIAL USE

Notice of Government Securities Broker or Government Securities Dealer Activities To Be Filed by a Financial Institution Under Section 15C(a)(1)(B) of the Securities Exchange Act of 1934

1. Appropriate regulatory agency (check one):

   A. ☐ Comptroller of the Currency
   B. ☐ Board of Governors of the Federal Reserve System
   C. ☐ Federal Deposit Insurance Corporation
   D. ☐ Office of Thrift Supervision
   E. ☐ Securities and Exchange Commission

2. Conducts business as:

   A. ☐ Government Securities Broker
   B. ☐ Government Securities Dealer
   C. ☐ Government Securities Broker and Dealer

3. Filing status of notice:

   A. ☐ Notice
   B. ☐ Amendment

4. A. Full name of the Financial Institution:

   _____

   B. Address of principal office of Financial Institution:

   _____

   C. Address of principal office where government securities broker or government securities dealer activities will be conducted (if different than item (B)):

   _____

   D. Mailing address if different from (B) or (C):

   _____

   E. Name, title and telephone number of contact person with respect to this notice:

   _____
   Name Title Telephone

5. Does Financial Institution conduct, or will it conduct, government securities broker or government securities dealer activities at any location other than given in Question 4 above? A. ☐ Yes B. ☐ No

   (If yes, provide addresses and describe activities.)

   _____

   _____

   _____

   _____

   _____

FR G-FIN
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Approval expires February 28, 1998

6. Furnish the name and title of each person who is directly engaged in the management, direction or supervision of any of the financial institution's government securities broker or government securities dealer activities:

Full Name

Last	First	Middle	Title
Last	First	Middle	Title
Last	First	Middle	Title
Last	First	Middle	Title
Last	First	Middle	Title

Note: Attach a separate Form G-FIN-4 (or, if previously filed, a copy of Form MSD-4 or Form U-4) for each person named in response to this item 6.

7. Has any "associated person" (see definition in paragraph A.7. of the instructions) responded "yes" to any question in Item 17 of Form G-FIN-4, or "yes" to one or more questions in Items 23 through 26 of Form MSD-4 or Item 22 on Form U-4?

A. ☐ Yes B. ☐ No

(If yes, attach a copy of Form G-FIN-4, Form MSD-4, or Form U-4 for all such persons with this Notice.)
Note: The financial institution and the person executing this form are responsible for making an inquiry of all other employers of any associated person during the immediately preceding three years for the purpose of verifying the accuracy of the information furnished on Form G-FIN-4. (See 17 C.F.R. 400.4(c)). Similar requirements are applicable to Form MSD-4 and Form U-4.

8. **The financial institution submitting this notice and the person executing it represent that all of the information contained herein is true, current and complete.**

Please print name and title of person executing this notice:

First	Middle	Last	Title

Manual Signature Date

Form G-FIN

Instructions for Completing Notice of Government Securities Broker or Government Securities Dealer Activities by Financial Institutions

GENERAL INFORMATION AND INSTRUCTIONS

A. Terms and Abbreviations

1. "Act" refers to the Securities Exchange Act of 1934, as amended by the Government Securities Act of 1986.

2. "ARA" refers to the financial Institution's appropriate regulatory agency, as defined in section 3(a)(34)(G) of the Act. See general instruction (E) below for a listing of appropriate regulatory agencies.

3. "Government securities" are defined in section 3(a)(42) of the Act. In general, this term refers to direct obligations of or obligations guaranteed as to principal or interest by the United States; securities issued or guaranteed as to principal or interest by corporations designated by statute or by the Secretary of the Treasury to constitute exempt securities; and puts, calls, straddles or options on such securities. Although not all inclusive, the following are the more common types of government securities covered by the term: U.S. Treasury bills, bonds, notes; discount notes, bonds, certain collateralized mortgage obligations, pass throughs, master notes, and other obligations of the Government National Mortgage Association (GNMA), Federal National Mortgage Association (FNMA), Federal Home Loan Mortgage Corporation (FHLMC), Student Loan Marketing Association (SLMA), Federal Home Loan Banks and Farm Credit Banks; securitized Small Business Association (SBA) loans; and FNMA stock.

4. "Government securities broker" is defined in section 3(a)(43) of the Act. In general, this term refers to a financial institution that is regularly engaged in the business of effecting trans-actions in government securities for the account of others.

5. "Government securities dealer" is defined in section 3(a)(44) of the Act. In general, this term refers to a financial institution engaged in the business of buying and selling government securities for its own account but does not include a financial institution insofar as it buys or sells securities for its own account but not as a part of its regular business or in a fiduciary capacity.

6. "Financial institution" is defined in Section 3(a)(46) of the Act. In general, the term refers to any national or State chartered bank or trust company which is supervised and examined by a State or Federal bank supervisory agency, a foreign bank, and any other institution whose deposits were formerly insured by the Federal Savings and Loan Insurance Corporation.

7. "Associated person" is defined by Treasury regulation (17 C.F.R. 400.3(c)) to mean a person directly engaged in any of the following activities in either a supervisory or nonsupervisory capacity: underwriting, trading or sales of government securities; financial advisory or consultant services for issuers in connection with the issuance of government securities; other communications with public investors, or research or investment advice other than general economic information or advice, with respect to government securities in connection with the activities described above. The term is further defined in Section 400.3(c) to cover persons engaged in the following activities in a supervisory capacity: processing and clearance activities with respect to government securities and maintenance of records involving any of the activities described in this paragraph.

   This definition does not include directors and senior officers of the financial institution who may from time to time set broad policy guidelines affecting the financial institution as a whole, but are not directly involved in the conduct of the financial institution's government securities business on a day-to-day basis. It also does not cover persons whose functions are solely clerical or ministerial, persons who are acting in a fiduciary capacity, or persons who act solely as order takers without giving investment advice or receiving transaction-based compensation.

B. Who Must File?

Under Section 15C(a)(1)(B) of the Act, any financial institution that is a government securities broker or government securities dealer within the foregoing definitions must file with its ARA a written notice, on the form prescribed herein, except as described below.

A financial institution that buys and sells securities solely for investment for its own account or for accounts for which it acts as a fiduciary will not generally be classified as a dealer, even though such purchases and sales are made with some frequency. Virtually every financial institution purchases government securities for investment; and purchases and sales may occur to accommodate changes in the financial institution's financial position or to reflect investment decisions. The legislative history of the Act indicates that Congress did not intend to require financial institutions engaged in such investment-type activity to register as dealers.

The Department of the Treasury has exempted financial institutions that engage solely in the following activities:

(1) Acting as issuing agent, payment agent or forwarding agent for U.S. Savings Bonds (17 C.F.R. 401.1);
(2) submission of tenders for the account of customers for purchase on original issue of U.S. Treasury securities (17 C.F.R. 401.2);
(3) the sale and subsequent repurchase and the purchase and subsequent resale of government securities pursuant to a repurchase or reverse repurchase agreement (17 C.F.R. 401.4); or
(4) sales or purchases in a fiduciary capacity (17 C.F.R. 401.4).

In general, government securities activities that may bring a financial institution within the definition of government securities dealer include the following: (1) underwriting or participating in a

selling group for the sale of government securities; (2) advertising or otherwise holding itself out to other dealers or investors as a dealer in government securities; or (3) quoting a market for government securities, and in connection with such quotations, standing ready to purchase or sell government securities.

The Department of the Treasury also has exempted (17 C.F.R. 401.3) any financial institution from the definition of government securities broker unless it (1) holds itself out as a government securities broker or interdealer broker; or (2) actively solicits individual purchases or sales of government securities on an agency basis. In addition, a financial Institution will be exempt if it (a) effects less than 500 brokerage transactions per year or (b) except for U.S. Savings Bonds and submissions of tenders for U.S. Treasury securities (as described above), effects all brokerage transactions through a government securities broker or dealer who is clearly identified as the entity providing the brokerage services, and who meets the other conditions of the exemption.

A branch or agency of a foreign bank that engages in government securities transactions solely with non-U.S. citizens that are resident outside the United States is also exempt (17 C.F.R. 401.6).

C. When to file

A financial institution that was acting as a government securities broker or government securities dealer on July 25, 1987, was required to file a notice with its ARA on or before that date. Any financial institution that proposes to act as a government securities broker or government securities dealer after that date shall file the notice before It commences operations.

D. Amendments

In the event any of the information previously submitted on this notice becomes incomplete, inaccurate or no longer applicable, the notice must be amended. This amendment must be filed within 30 calendar days of the notice becoming inaccurate (17 C.F.R. 400.5(b)).

Items 1, 2, 3, 4, and 8 of the notice shall be completed for each amendment. Otherwise, only those items which are being amended need to be completed.

E. How and where to file: Number of copies

Each financial institution must file two copies of the notice and each amendment with its ARA, one of which will be sent by the ARA to the SEC. Retain one exact copy for your records. A financial institution may determine the name and address of its ARA from the following:

1. A national bank, a bank operating in the District of Columbia that is examined by the Comptroller of the Currency, or a Federal branch or Federal agency of a foreign bank, files with the:

   Office of the Comptroller of the Currency
   Administrator of National Banks
   Compliance Programs
   Washington, D.C. 20219

2. A State member bank of the Federal Reserve System, a foreign bank, an uninsured State branch or a State agency of a foreign bank, a commercial lending company owned or controlled by a foreign bank, or an Edge corporation files with the:

   Board of Governors of the
   Federal Reserve System
   Division of Banking Supervision & Regulation
   Securities Regulation Section
   Washington, D.C. 20551

3. A bank insured by the Federal Deposit Insurance Corporation (other than a bank which is a member of the Federal Reserve System or a Federal savings bank) or an insured branch of a foreign bank files with the:

   Federal Deposit Insurance Corporation
   Division of Bank Supervision
   Securities Analysis Unit
   Washington, D.C. 20429

4. A Federal savings and loan association, Federal savings bank, or an institution formerly insured by the Federal Savings and Loan Insurance Corporation, files with the:

   Office of Thrift Supervision
   Office of the General Counsel
   Corporate and Securities Division
   1700 G Street, N.W.
   Washington, D.C. 20552

5. A State chartered bank or a State chartered trust company that is not a member of the Federal Reserve System and whose deposits are not insured by the Federal Deposit Insurance Corporation, or any other financial institution not described in the preceding paragraphs, files with the:

   Securities and Exchange Commission
   450 Fifth Street, N.W.
   Washington, D.C. 20549

F. Privacy Act Notice

Collection of the information to be supplied on this form is authorized by section 15C(a)(1)(B) of the Securities Exchange Act of 1934, 15 U.S.C. 78o-5(a)(1)(B). Disclosure is mandatory for all financial institutions that act as government securities brokers or government securities dealers that are not exempted from filing under Treasury Department regulations (see 17 C.F.R. Part 401). The principal purpose of this notice is to identify to the appropriate regulatory agencies those financial institutions that act as government securities brokers or government securities dealers and are subject to regulation under the Act. Information supplied on this form will be included routinely in the public files of the appropriate regulatory agencies and will be available for inspection by any interested person. In addition, the Securities and Exchange Commission will maintain copies of all G-FIN notices in the public files, and will make them available for public inspection by any interested person. Financial institutions that do not provide the information solicited on this form may not lawfully act as government securities brokers or government securities dealers unless exempt from the notice requirement by Treasury Department regulation (17 C.F.R. Part 401).

Form G-FINW

Reporting Burden—Public reporting burden for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of the collection of information, including suggestions for reducing this burden, to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503, and to one of the following: Secretary, Board of Governors of the Federal Reserve System, 20th and C Streets, NW, Washington, D.C. 20551; Assistant Executive Secretary (Administration), Room F-400, Federal Deposit Insurance Corporation, Washington, D.C. 20429; Legislative and Regulatory Analysis Division, Office of the Comptroller of the Currency, Washington, D.C. 20219; Chief Counsel's Office, Office of Thrift Supervision, 1700 G Street, NW, Washington, D.C. 20552; or to Securities and Exchange Commission, 450 Fifth Street, NW, Washington, D.C. 20549.

Notice By Financial Institutions of Termination of Activities as a Government Securities Broker or Government Securities Dealer

(This booklet includes instructions and blank forms)

Board of Governors of the Federal Reserve System

Federal Deposit Insurance Corporation

Office of the Comptroller of the Currency

Office of Thrift Supervision

Securities and Exchange Commission

Form G-FINW

FR G-FINW
OMB No. 7100–0224
Approval expires February 28, 1998

OFFICIAL USE

Notice by Financial Institutions of Termination of Activities as a Government Securities Broker or Government Securities Dealer

1. Appropriate regulatory agency (check one):

A. ☐ Comptroller of the Currency
B. ☐ Board of Governors of the Federal Reserve System
C. ☐ Federal Deposit Insurance Corporation
D. ☐ Office of Thrift Supervision
E. ☐ Securities and Exchange Commission

2. (a) Full name of the Financial Institution:

_____

(b) Address of principal office of Financial Institution:

_____

(c) Mailing address if different from (b):

_____

3. Furnish the name and address of the person who has or will have custody or possession of the financial institution's books and records with respect to the financial institution's activities as a government securities broker or government securities dealer:

Full Name

_____ _____
Last First Middle

_____ _____
Address

4. Furnish the address of the place where such books and records will be located:

_____ _____

_____ _____

5. **The financial institution submitting this notice of termination of activities and the person executing it represent that all of the information contained herein is true, current and complete.**

Please print name and title of person executing this notice:

_____ _____ _____
First Middle Last Title

_____ _____
Manual Signature Date

Form G-FINW

General Instructions for Form G-FINW
Termination of Activities as a Government Securities Broker or Government Securities Dealer

1. When to file

A financial institution that has filed a Notice of Government Securities Broker or Government Securities Dealer Activities pursuant to section 15C(a)(1)(B) of the Securities Exchange Act of 1934 must file this notice with its appropriate regulatory agency (ARA) when the financial institution ceases to act as a government securities broker or government securities dealer.

A notice of termination activities as a Government Securities Broker or Government Securities Dealer shall become effective for all matters on the 60th day after filing this notice unless the financial institution is otherwise notified by its ARA.

2. How and where to file: Number of copies

Each financial institution must file two copies of the notice with its ARA, one of which will be sent by the ARA to the SEC. Both copies of this Notice filed with the ARA shall be executed with a manual signature in item 5. The Notice shall be signed in the name of the financial institution by a principal officer who was directly engaged in the management, direction, or supervision of the financial institution's government securities broker or dealer activities.

INTRODUCTION

The Mortgage Banking Chapter consists of this Overview Section and sections on profitability, accounting, production, secondary marketing, and servicing. These sections are designed to be used together for a comprehensive review of all mortgage banking operations or on a stand alone basis to examine individual areas. Commercial mortgage banking is not discussed because it is a specialized high-risk activity that is generally limited to a relatively few mortgage banking firms. Multifamily lending, however, is generally considered residential and almost all of the material in this Chapter is applicable.

Each section of the Mortgage Banking Chapter is accompanied by its own set of examination procedures that embody the risk-focused examination approach. Consistent with this approach, the procedures have been tiered into two levels. The level of procedures performed during an examination will depend on the types of mortgage banking activities conducted by the thrift, its subsidiaries, and, in some cases, its affiliates. Because of the rapidly changing mortgage banking industry, no set of procedures can cover all of the risks involved for thrifts. Therefore, regulators are urged to look closely at new mortgage banking activities and practices that may pose direct or hidden risks and tailor the examination to those activities that may present material risk to the thrift.

This Overview Section describes the basics of mortgage banking, its terminology, the major areas of risk, common errors made by thrifts, the most common regulatory problems, and characteristics of successful and unsuccessful mortgage banking operations. General management issues are also discussed.

Mortgage Banking Basics

Mortgage banking is the origination, sale, and servicing of mortgage loans (mortgages) secured by either residential or commercial real estate. Mortgage bankers are best described as being financial intermediaries, which bring a variety of mortgage services to consumers that are funded by investors. They efficiently move capital from surplus areas to their customers by means of pooling similar mortgages for sale in a mortgage-backed security (MBS). (See Section 542, Mortgage-Backed Securities.) During the period between locking in an interest rate to a borrower and selling the closed mortgage in the secondary market the mortgage banker is subject to an enormous amount of interest-rate risk (IRR). This IRR is the primary risk of mortgage banking, but by no means the only risk.

The mortgage banking process begins with the mortgage banker borrowing short-term funds to make long-term residential mortgages to home buyers and existing homeowners. The mortgage banker then groups mortgages together (usually into pools) for sale to outside investors. The proceeds of the sale repay the short-term loan and starts the cycle all over again. Most mortgage bankers continue to service the mortgage even after the mortgage is sold. Servicing or loan administration consists of collecting the monthly payments, forwarding the proceeds to the investors who have purchased the mortgages, maintaining escrow accounts for payment of taxes and insurance, and acting as the investor's representative for other issues and problems.

Mortgage banking is much more complicated than the picture just described. A mortgage banking company is made up of several departments. Each department has its own set of investor rules, laws, and regulations it must follow. From origination to payoff, the mortgage banker must diligently maintain files for each mortgage. Each stage is carefully documented to:

- Obtain the information necessary to process the mortgage (application);
- Determine the risk of the applicant and market value of the property (processing, appraisal, and underwriting);

- Obtain the money and close the mortgage (closing and warehousing);
- Package and sell the mortgage to an investor (secondary marketing and shipping);
- Collect, record, and remit monthly mortgage payments to the investor (servicing or loan administration); and
- Foreclose and dispose of the property to pay-off the mortgage (foreclosure and property disposition).

Generally, thrifts not only originate and service mortgages for their own portfolios, but they also buy, sell, and service other mortgages for profit in any combination and volume, just as mortgage bankers do. Their origination programs often complement existing mortgage originations for their own portfolio. This makes the servicing operation more efficient due to the economies of scale that result from adding servicing from mortgage banking to portfolio servicing.

Mortgage bankers have become increasingly specialized in recent years. Due to the cyclical nature of mortgage finance, some real estate lending firms have changed the way in which they originate mortgages. Some have moved away from the full service aspect of the industry and have become experts at their specialty. These specialists generally operate in either origination or servicing.

Mortgage bankers that only originate mortgages are usually called correspondents or brokers. They concentrate on finding home buyers in need of financing, processing the application and other paperwork, sometimes funding the closing, and then selling the closed mortgage and servicing rights to an investor or servicing mortgage banker. In some cases, brokers perform only a sales function by bringing together borrowers and mortgage lenders. The low capital requirements necessary to enter and maintain one or a small number of branches, the accounting advantages for servicers to purchase mortgage servicing rights rather than originate them, and the personal independence from the large servicing organizations are the main reasons the broker and correspondent have emerged.

Servicing mortgage bankers, sometimes called wholesalers, concentrate on purchasing mortgages from brokers and other mortgage bankers, but they may also originate mortgages as do most thrifts. Wholesalers generally pool mortgages into MBSs guaranteed by FNMA, FHLMC, and GNMA and sell the resulting securities to private investors but retain the servicing rights. The fees from large volumes of servicing are their primary source of income for wholesalers. Servicing can be done on a recourse basis where the servicer retains the risk of mortgage default or a non-recourse basis which is much more common. (The capital requirements for recourse servicing make it undesirable for most thrifts.)

Full-service mortgage bankers not only originate and service their own mortgages, but they may also purchase mortgages from brokers or sell a portion of their originations or servicing. The various types of mortgage bankers are not always distinguishable, especially since most thrifts both originate and service their own mortgages. The important issues for examiners are: (1) how the strategy and operations of the mortgage banking entity match or conflict with the thrift's own strategy and operations for portfolio mortgages; and (2) what risks the thrift is taking compared to the net additional income from the mortgage banking activities.

Mortgage Banking Names

Types of Mortgages. There are three basic types of mortgages: FHA, VA, and conventional. FHA mortgages meet the requirements and are insured by the Federal Housing Administration (FHA), a part of the U.S. Department of Housing and Urban Development (HUD). VA mortgages meet the requirements of and are guaranteed up to a pre-set limit by the U.S. Department of Veterans Affairs, but only for veterans. The VA charges an origination fee, but no annual fee for mortgages up to 100% of the purchase price. The FHA charges an origination fee and a monthly fee known as monthly mortgage insurance premium (MMI or MIP). Conventional mortgages are usually uninsured, but may have private mortgage insurance (PMI) for the portion of the mortgage that exceeds some percentage loan to value (LTV) ratio, usually 80% LTV. Properties securing FHA or

VA mortgages must meet the rigid standards set by those agencies.

Federal National Mortgage Association (FNMA or Fannie Mae). FNMA was established in 1938 as a wholly owned government corporation for the purpose of buying FHA and VA mortgages. In 1968, Congress divided the agency into two entities. The Government National Mortgage Association (GNMA) remained as the wholly owned government corporation and FNMA emerged as a private profit making corporation with the public goal of promoting affordable housing by increasing the availability of FHA and VA mortgages. In 1970, Congress expanded FNMA's purchasing authorization to include conventional mortgages. In 1981, FNMA expanded into the guaranteed MBS market by securitizing conventional mortgages and in 1984 it launched its conventional multifamily program. It now buys conventional mortgages of all types under a variety of set and negotiated servicing requirements that include recourse and non-recourse servicing.

Although FNMA is a privately managed, shareholder-owned corporation, it continues to operate under a federal charter serving a public purpose. The contradictory roles of maximizing profits for investors while promoting affordable housing for the public are the source of many problems for both FNMA and its twin - FHLMC. This situation is aggravated by the fact that the U.S. Treasury Department has the authority to purchase up to $2.25 billion of FNMA's debt, which is the basis for the implied guarantee of the U.S. Government for FNMA. This implied guarantee results in a AAA credit rating thus increasing the value of FNMA MBSs and lowering its costs of borrowing. This and the economies of scale from its huge size virtually prohibit equal competition from private conduits, but the implied guarantee has never been tested or used. FNMA is called a government sponsored enterprise (GSE) and is supervised by the Office of Federal Housing Enterprise Oversight (OFHEO), a part of HUD. It is headquartered in Washington, D.C., and has regional offices in Philadelphia, Atlanta, Chicago, Dallas, and Los Angeles.

Government National Mortgage Association (GNMA or Ginnie Mae). GNMA was formed in 1968 when FNMA was split into two distinct entities. It was established as a corporation wholly owned by the U.S. Government within the Department of Housing and Urban Development (HUD) and remains so today. It was GNMA that first pooled FHA, Farmers Home Administration (FmHA), and VA mortgages and issued guaranteed MBSs backed by those pools. The reasoning was that since the federal government had already underwritten and guaranteed FHA, FmHA, and VA mortgages, GNMA could issue U. S. government-guaranteed MBSs backed by those mortgages at virtually no additional risk or cost to the government. The timely payment of principal and interest on a GNMA MBS is guaranteed by GNMA, but GNMA requires the servicer to advance their own funds to pay investors on time for all delinquencies. *Also, GNMA requires the servicer to pay all losses on FHA, FmHA, and VA foreclosures in its pools that are not paid by those agencies. These losses can be significant.*

The GNMA program has been copied in various ways, with great success by FNMA and FHLMC, as well as private conduits. GNMA operates under the general policy direction of the Secretary of HUD in Washington and its president is appointed by the U.S. President. All other positions are nonpolitical. GNMA has no branch offices and contracts out a lot of its work because it has very few employees.

Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac). FHLMC was established in 1970 by the Emergency Home Finance Act. It helped boost the liquidity of thrifts by adopting GNMA's MBS program to the conventional mortgage market. In 1978, FHLMC's authority was extended to allow it to swap mortgages not only from thrifts but also from commercial banks and HUD approved mortgagees (mortgage companies). FHLMC's MBS is called a participation certificate (PC) to highlight a slight legal difference in how their securities are structured compared to GNMA's MBSs. For practical purposes, however, FHLMC's PC is created and its securities sold in basically the same way as GNMA's and FNMA's MBSs. The recent adoption by FHLMC's Gold PC of many of the

payment provisions of FNMA's MBS makes the two mortgage securities very similar.

FHLMC, like FNMA, is a privately owned and managed corporation chartered by the U.S. Government for the public purpose of promoting affordable housing through greater mortgage availability. It is also called a GSE and is supervised by OFHEO. It is head-quartered in Washington, D.C. with branch offices in Atlanta, Chicago, Dallas, Washington, D.C., and Los Angeles.

Private Conduits. As FNMA, GNMA, and FHLMC achieved dominant positions in the conforming mortgage market, private conduits arose to exploit profitable opportunities in areas where the agencies were not operating, be it by choice or preclusion by law. The single largest category of residential mortgages that FNMA, FHLMC, and GNMA can not purchase are those with unpaid principal balances exceeding their statutory limits as revised periodically by HUD. In 1972, when FNMA first purchased conventional mortgages, the limit was $55,000; however, HUD has now raised that limit to $203,150 for single-family loans.

Mortgages that exceed the statutory limits are referred to as jumbo mortgages, or more often, simply as jumbos. In many areas jumbos account for the majority of new originations, so they are a vital part of the mortgage marketplace. Until private conduits were established, thrifts relied on private investors to purchase jumbos directly. Such sales, however, were inefficient in providing the consistent underwriting and the large sales volumes needed. Today, private conduits provide consistent underwriting, purchasing, and funding for jumbo and other types of nonconforming mortgages. There are even efforts underway to establish uniform documentation for all nonconforming mortgages.

Sale and Servicing Agreements. These are contracts that are normally negotiated and signed by the buyer and seller to govern the terms of the mortgage sale and later the servicing. This contract also sets the servicing fees and any special conditions and warranties. Sale and servicing agreements are usually very long and complex because of the difficulty of providing for all types of future servicing problems. The lack of such an agreement for any servicing package should be considered by examiners as a significant problem except for FNMA, GNMA, and FHLMC which are governed by their respective Guides.

Types of Servicing Rights. Servicing rights are divided into four categories for accounting purposes: (1) purchased mortgage servicing rights (PMSR), (2) excess servicing fee receivables (ESFR), (3) originated mortgage servicing rights (OMSR), also called retained or off-balance sheet servicing rights, and (4) subservicing for another owner of the servicing rights. The four types of servicing rights are more thoroughly discussed in Sections 573 and 576, Accounting and Servicing.

Other Definitions. Other important mortgage banking terms, functions, and areas are discussed in the appropriate mortgage banking sections that follow this Overview Section. Definitions of all mortgage banking terminology, agencies, and related items is also included in the Glossary at the end of this Handbook.

Mortgage Banking For Thrifts

Many thrifts have adopted mortgage banking activities as a profitable addition to portfolio mortgage lending. Already over two thirds of the thrifts in the country service some mortgages for other owners. By originating all or some of their mortgages for sale in the secondary market, thrifts can increase mortgage originations and servicing without increasing their IRR from long-term mortgages. While this increases operating expenses, it also generates fee income which can increase profits and reduce reliance on portfolio spreads for earnings.

The move into mortgage banking may present many difficulties for thrifts. While portfolio lending and mortgage banking have much in common, they are very different business disciplines and must be managed in very different ways. Management must understand the differences and manage the change carefully. Financial strategies and risk management policies must be designed for each specific type of lending operation in order to be effective.

Differences Between Thrifts and Mortgage Bankers

Thrifts often originate mortgages as investments for their own portfolios. Mortgage bankers, on the other hand, originate mortgages for sale to investors who normally pay the mortgage banker a fee to service the mortgage on the investor's behalf. The ultimate objective for most mortgage bankers is to build servicing income by acquiring a large and profitable servicing portfolio.

The types of mortgages offered by a thrift often are based on its investment needs and legal or regulatory requirements. If other mortgage types are offered to accommodate customers, the less desirable mortgages may be priced above market rates. Mortgage bankers, however, originate mortgages based on market demands and opportunities. The products offered by the mortgage banker must be competitive and attractive to the customer and the investors to whom the mortgages ultimately will be sold.

Secondary Marketing. Thrifts often sell mortgages that they do not want as investments, that exceed their investment needs, or to generate short-term profits. They also buy mortgages in the secondary market as investments when they cannot originate them. Thrifts are traditionally reluctant to pay standby commitment or hedging fees to investors because they reduce the profit on the sale of the mortgage or may even produce a loss.

The mortgage banker uses the secondary market continually to dispose of all mortgages originated. Continuous sales to investors, as well as forward commitments, are used by the mortgage banker to reduce the IRR of holding mortgages. They carefully manage their forward coverage (forward commitments from a mortgage buyer), pipeline (the mortgages in process), and warehouse (mortgages closed and awaiting sale) so that the mortgages can be sold on a break even or better basis. Most mortgage bankers, however, realize that breaking even will not be possible in every transaction, because interest rates are volatile and gains achieved under favorable conditions are usually offset by losses under poor conditions. Although some sales produce losses, they are often necessary both to reduce the risk of holding the mortgages even longer, or to clear out the warehouse and make room for more profitable mortgages. Mortgage bankers try to break even on secondary marketing over time. They are not reluctant to pay commitment fees to lock in investor money to cover the mortgages in their pipeline.

The thrift and the mortgage banker are both subject to IRR, but the nature of those risks is somewhat different. The thrift suffers the IRR of any mismatch of assets and liabilities. The mortgage banker is subject to interest-rate movements that erode prices while the mortgages are in the pipeline or warehouse. A thrift that is originating mortgages both for portfolio and for sale is subject to both kinds of IRR.

Prepayment Risks. Prepayment risks are a form of IRR often linked to drops in interest rates. Thrifts usually are only concerned with the prepayment risk that their high interest-rate mortgages will payoff as interest rates drop. They generally are not concerned over any loss of servicing value since most thrifts do not view their portfolio servicing as a separate asset, and they have very little ESFR or PMSR assets that must be written down for unexpected prepayments. For mortgage bankers, on the other hand, all servicing is a valuable asset, even if it is off-balance sheet retained servicing, and usually represents their profit on the origination and sale of mortgages. Writing off those servicing assets for early prepayment or quarterly performing impairment tests and marking down both ESFR and PMSR to reflect unexpected prepayments can produce large losses.

In the origination area, mortgage bankers incur one other cost that is significantly different from a thrift's costs. Originators for mortgage banking companies typically are paid a commission out of the mortgage origination fee of each mortgage that they produce, but little or nothing if they do not produce. If a salary is paid at all by a mortgage banker, it is very low in comparison to the expected commission. Conversely, thrifts usually pay a straight salary to originators that is much less than the commissions paid by mortgage bankers. Unless thrifts match the compensation of mortgage bankers, they usually will not attract the best and most productive originators.

Mortgage Servicing. For most thrifts, mortgage servicing is viewed as an expense that reduces the total return on the portfolio. For a mortgage banker, however, servicing is an asset that is the single most important component of profitability and must be actively managed to be profitable and to retain its value. Servicing provides relatively stable earnings and servicing rights may be sold at a profit. To achieve long-term servicing profitability, however, the servicer must achieve the economies of scale that reduce costs and must maintain that scale by replenishing the portfolio with new servicing rights as the older ones pay off.

Except for recourse servicing, mortgage bankers usually do not suffer the loss of principal or interest when a mortgage defaults, but they may incur expenses to foreclose on and dispose of the property. They may also be liable to the investor for losses if the mortgage has not been properly underwritten or serviced. Sale and servicing agreements between thrifts often contain unusual conditions that mortgage bankers do not normally make such as guaranteeing a yield to the buyer. These agreements are usually in writing but can be verbal. Such agreements do not really transfer the risks and rewards of ownership and defeat many of the objectives of mortgage banking. Because such agreements retain all or part of the risks of loss, OTS considers them to be full or partial recourse servicing. (See Section 575, Secondary Marketing.)

Accounting Requirements. The accounting requirements to mark the mortgage warehouse to the lower of cost or market (LOCOM), to amortize purchased servicing costs and origination costs, and other requirements are often viewed by some thrift managers as undesirable consequences of mortgage banking operations. Most mortgage bankers, however, have come to view these accounting requirements as a critical discipline in the successful management of mortgage banking operations since they allow the accurate measurement of financial performance. (See Section 573, Accounting.)

Management and Supervision

Mortgage banking is comprised of several separate and interdependent activities. The efficiency and profitability of the entire mortgage banking operation hinge on how well these activities are managed on an institution-wide and departmental basis. Senior management must define and communicate strategy, permissible activities, operational responsibilities, and acceptable risk for mortgage banking operations. Mortgage banking management should use this guidance from senior management to help develop written policies and procedures for each mortgage banking department.

Specific management tools should include a risk management program that is well defined and communicated to operating personnel. There should be a business plan that clearly states the specific objectives for the mortgage banking operation. The plan should be consistent with the thrift's business plan, as well as asset and liability management objectives. In addition, the plan should clearly state management's acquisition and sales strategies for mortgage origination and servicing. The lines of authority and assigned responsibilities should also be clearly described and there should be provisions for adequate financial, human, technological, and physical resources.

Because the disciplines and goals of mortgage banking operations differ from portfolio lending, thrifts should normally conduct mortgage banking in a separate department, division, or subsidiary. If the mortgage banking activities are done within the thrift, the cost accounting, management, employees, and other operations should be separate. Transfers of mortgages to the thrift's portfolio should be pre-planned investments that are carefully documented and the mortgage banking operation should be charged market rates for borrowings, office space, and management provided by the thrift.

To provide total separation and to shield the thrift from the risks of the mortgage banking operations, many thrifts segregate their mortgage banking operations by putting them into subsidiary corporations either as traditional service corporations or as operating subsidiaries. Each of these types of subsidiaries have various advantages. The primary difference between them is that an operating subsidiary is not subject to the same aggregate investment limitations as a service

corporation, but its operations are subject to the same rules and regulations as the parent thrift.

Whether in the thrift or a subsidiary, comprehensive information management systems are essential to a successful mortgage banking operation. These systems should provide accurate, up-to-date information on all functional areas. The reports produced should enable management to identify and evaluate operating results along with primary sources of risk, and prepare accurate financial statements. In addition, management should have procedures in place for monitoring compliance with regulatory and investor requirements.

If mortgage banking operations are in service corporations, operating subsidiaries, or affiliates within a holding company structure, it is essential that management set up and maintain separate corporate identities that can withstand a challenge in court. This requires separate officers, employees, offices, names, and appearance. Without such separation the protection that the thrift has from the risks of the subsidiary is effectively negated. Affiliates must also comply with transaction with affiliate regulations. All transactions between the thrift and its affiliates must be at arm's length, at market supported rates and terms, within quantitative limits, and clearly documented.

Common Problem Areas

Risks That Have Caused Thrift Failures

Each of the following general risk categories have been largely responsible for the failure of thrifts heavily involved in mortgage banking operations:

Pipeline Risk. The IRR from the time of locking in the interest rates on the mortgages in the pipeline until those mortgages are sold in the secondary market.

Prepayment Risk. The danger that servicing will pay off before estimated, leaving unamortized PMSR servicing release fee premiums or ESFR assets that must be partially or fully charged off. Rapid prepayments also reduce the amount of servicing fee income and the market value of OMSR or retained servicing.

Operational Cost Risk. The risk that servicing expenses will increase faster than anticipated and overwhelm fixed servicing income and create long-term losses.

Operational Flexibility Risks. (A) The risk of devoting a large percentage of resources to mortgage origination or servicing that cannot be shifted to other areas during cyclical downturns in those operations. (B) The risk of structuring operating costs with long-term fixed-rate cost commitments in facilities and personnel that cannot be reduced in periods of lower production volume in the same manner that variable cost structures can be reduced.

Liquidity Risk. The risk that an investor will pull servicing escrow and P&I custodial accounts from the thrift. This can cause a fatal liquidity crisis if those accounts are a large percentage of total deposits.

Common Mistakes of Thrifts in Mortgage Banking

Thrifts that shift to mortgage banking or add mortgage banking to their lending activities without recognizing the differences, often find increased rather than reduced risk, uneven performance, and an inability to measure profitability. The most typical mistakes are:

- Moving mortgages into the thrift's portfolio at par rather than selling them in the secondary market at a loss, or not marking mortgages held for sale down to the lower of cost or market;
- Holding mortgages intended for sale indefinitely because interest rates are low and the warehouse spread is large;
- Not having reporting systems that allow management to react quickly to the volatile changes in the secondary market;
- Using too little forward coverage to adequately protect against movements in interest rates;
- Failing to adequately separate portfolio lending and mortgage banking so the performance

of the two functions can be measured independently;

- Operating mortgage banking departments or subsidiaries at a profit margin insufficient to justify the increased risk of their operations;
- Servicing a small number of different types of mortgages for many investors without advance planning or efficient systems in place; and
- Failure by the board of directors to enforce clear policies that define the strategy and goals of the thrift and the mortgage banking operation and that limit IRR.

Regulatory Problems

In addition to the common mistakes made by thrifts in mortgage banking, the following are regulatory problems that OTS examiners have encountered most often in mortgage banking operations:

- Excessive amounts or overvalued ESFR or PMSR servicing assets;
- Not lowering the value of ESFR and PMSR on the balance sheet on a quarterly basis to reflect increases in prepayment speeds or not recording an accurate 10% reduction in value for regulatory capital purposes;
- Excessive unhedged and uncovered IRR in the pipeline or warehouse;
- Failure to balance or hedge large servicing portfolios with other investments; and
- Excessive reliance on mortgage banking originations as the primary source of income or excessive fixed investments in buildings, equipment, or personnel to adjust to cyclical downturns.

Important Areas in Examination Reports

The following are the areas of mortgage banking that examiners should be careful to address adequately in examination reports to allow supervisory personnel to understand the full scope and the potential impact of mortgage banking operations:

- The earnings and market value of OMSR or off-balance sheet retained servicing;
- The mortgage banking activities of service corporations, operating subsidiaries, and affiliates to reveal the effect and threat of those operations to the thrift; and
- The overall effect of mortgage banking operations on the thrift, both good and bad.

Characteristics of Thrifts That Have Failed From Mortgage Banking

- Highly leveraged operations where the origination and servicing operations were disproportionally large compared to a relatively small thrift.
- Large amounts of very aggressively calculated ESFR.
- Thrift investment portfolios that have sold most or all high interest-rate and ARM mortgages while retaining a large amount of below-market fixed-rate mortgages.
- Purchasing most servicing while selling retained or off-balance sheet servicing.
- Very aggressive accounting policies that tend to dictate mortgage operations.
- Lack of written and enforced policies governing mortgage banking operations.
- Little, if any, internal controls.
- No separation between the thrift's portfolio and mortgage banking activities.

Characteristics of Good Mortgage Banking Operations

- A good fit with the parent thrift in terms of both size and overall operations and strategies.
- Conservatively calculated and relatively small amounts of ESFR.
- Careful monitoring of the separate operations, costs, and risks of the thrift and the mortgage banking operation.

- Large percentage of the servicing portfolio consisting of OMSR or off-balance sheet retained servicing.
- Well thought out and enforced mortgage banking policies and internal controls that contain adequate safeguards.

Conclusion

Mortgage banking is the wave of the future for many risk averse thrifts seeking to add a fee generating business that is compatible with traditional thrift operations. This is in contrast to the speculative approach adopted by many thrifts that have failed due to overly aggressive and imprudent mortgage banking strategies. Our job as regulators is to encourage the good aspects of mortgage banking while ensuring that those operations are carried out without exposing the thrift to the pipeline IRR, prepayment, operational cost, operational flexibility, and liquidity risks that we have seen in previous thrift failures. Thrifts that do not control these risks, especially IRR, are not likely to be successful mortgage bankers in the long haul. A mortgage banking operation should not gamble. Instead, it is a business whose risks must be managed and controlled to produce consistent long-term profits without endangering the thrift.

Mortgage Banking – Overview
Program

Examination Objectives

To review the general management of the thrift's mortgage banking operation to determine if it is operating in a safe and sound manner.

To determine if the thrift is making any of the common mistakes or is operating in any of the common problem areas highlighted in this Section.

Examination Procedures

Perform the following examination steps to ensure that the mortgage banking activities do not pose concerns that historically have indicated trouble. Those steps that do not apply may be omitted; however, a notation should be made as to why they do not apply.

Level I

Wkp. Ref.

1. Have the thrift complete the Mortgage Banking Questionnaire.

2. Review the organizational chart for mortgage banking activities. Determine whether decision making is centralized or delegated, and to what extent. Determine who is responsible for major decisions and where final authorities rest. Obtain and review the board of directors and committee minutes for significant information.

3. Determine whether the board of directors and senior management have written policies and procedures defining permissible activities, individual responsibilities, and risk limits. Determine the policy making process and to what degree policies are followed. Determine if these policies and procedures ensure compliance with generally accepted business standards, laws, and regulations.

4. Review the strategic plans for both the thrift and for the mortgage banking activities to determine if they are compatible, reasonable, and achievable.

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5. Assess management quality and depth, and review succession plans and their practicability.

6. Review the mortgage banking unit's financial performance. Determine whether there is a separate profitability analysis for the mortgage banking operation or whether it is commingled with the thrift's performance.

7. Review lists of common errors, risks, problems, and characteristics from this Section to determine if any apply.

8. Determine if there is a comprehensive risk management system in place. Determine to what extent simulation modeling is employed.

9. Obtain a copy of the latest external audit, the latest internal audit reports, and the written internal auditing procedures to determine whether:

   - Internal auditors are sufficiently independent and knowledgeable to render objective opinions;
   - The scope and frequency of internal and external audits is adequate;
   - To what extent external auditors rely on the internal auditors' work and if that level of reliance is justified;
   - The controls related to mortgage banking operations are rated "effective" or better;
   - Management has addressed in a timely manner the weaknesses noted in internal and external audit reports; and

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- These audit reports disclose any significant risks that require immediate enforcement action.

10. Locate investor sales and servicing manuals. Determine if those manuals are up to date, if they are easily accessible to the origination and servicing staffs, and if they are, in fact, being used.

11. Assess current business volume in relation to personnel, physical facilities, and management information system (MIS) equipment and software. Determine the adequacy and feasibility of these areas in conjunction with future plans.

12. Determine if mortgage banking is integrated into the thrift's overall asset/liability management activities.

13. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level 1 procedures.

Level II

14. Review management's process for planning new products. Determine to what degree customer needs and wants are considered, if financial projections and risk analyses are made, and if legal opinions are obtained.

15. Review MIS to determine their usefulness in evaluating and monitoring mortgage banking activities:

- Determine the adequacy of MIS and operating systems to supervise current operations;

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- Evaluate MIS reports for sufficient detail, accuracy, and timeliness;
- Evaluate management's and the board's knowledge and understanding of the systems; and
- Determine the use of the MIS data in the decision making process.

16. Ascertain whether the thrift has recently been put on probation, suspended, or approval revoked as a seller or servicer for FHA, VA, FNMA, FHLMC, GNMA, private investors, or any PMI companies. Determine if they have since been reinstated.

17. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

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Reviewed By: _____
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MORTGAGE BANKING QUESTIONNAIRE
Preliminary Examination Response Kit
Office of Thrift Supervision

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Institution Name

This questionnaire is to be completed for the thrift and for all subsidiaries engaged in mortgage banking during the examination period. Supporting schedules should be typed and attached. If a request is not applicable for a particular item, respond with "Not applicable." If no mortgage banking activities, including small sales or servicing for others, have occurred during the review period, so indicate.

General

1. Provide an organization chart of the mortgage banking operations including management, loan production offices, subsidiaries, servicing, and computer support. Provide a brief explanation of the thrift's and each subsidiary's mortgage banking objectives compared to their actual operations and how the combined mortgage banking operations affected the thrift. Attach copies of the budgets and any strategic plans for the mortgage banking operations.

2. How are the income and expenses of the mortgage banking operation tracked separately from the thrift's portfolio lending and servicing programs? How are management and other general and administrative (G&A) expenses allocated and reported? Who is responsible for these records?

3. Provide the amount and number of originations for each mortgage banking operation during the examination period broken down by mortgage type (FHA, VA, conventional 30 year, ARM, etc.).

4. What software systems are used to track the production pipeline, monitor the warehouse inventory, and handle servicing operations? Are these systems operated in house or in a service bureau? Is a switch in software being considered or has one recently been completed?

Mortgage Originations

5. Were FNMA, FHLMC, and GNMA underwriting and documentation requirements followed for all mortgages originated, purchased, sold, or exchanged and, if not, why? Did all mortgages intended for the thrift's portfolio meet those criteria except for dollar limits? If not, provide a summary list of mortgages that did not meet those criteria and why.

MORTGAGE BANKING QUESTIONNAIRE
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6. Describe the quality control procedures and criteria for originated, purchased, and table-funded mortgages. Who is responsible for these records?

7. What is the compensation or commission structure on originated mortgages for the mortgage banking operation? How does it differ with the thrift's compensation program for portfolio mortgages? What internal controls exist to ensure appropriate amounts are paid?

8. Have records been kept for monitoring the cumulative amount of mortgages purchased or table funded by source and the related default rates and losses? If so, who is responsible for these records?

9. Have records been kept to identify mortgages originated or purchased for re-sale to separate them from mortgages intended for the portfolio? If so, who is responsible for these records?

10. What is the percentage of originated mortgages that were placed into portfolio versus those sold or held for sale by product type (FHA, VA, conventional 30 year, ARM, etc.)? How do these ratios compare to the prior examination period?

Interest-Rate Risk

11. What type of records have been kept for monitoring pipeline and warehouse interest-rate risk? Who is responsible for these records and who is on the distribution list to see them?

12. Have rate locks been provided to prospective borrowers? If so, what was the duration and how was the interest-rate risk hedged?

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13. Has the board of directors adopted a limit on unhedged interest-rate-risk exposure in the pipeline and warehouse and if so, what are those limits? Are those limits strictly enforced? Provide a copy of the latest management and board reports showing pipeline and warehouse exposure.

Mortgage Sales and Purchases

14. Provide a summary list by correspondent of mortgage sales, purchases, and exchanges including table-funded mortgages. The list should show the dollar amounts bought, sold, or exchanged by mortgage type (FHA, VA, conventional 30 year, ARM, etc.).

15. Which sale, purchase, or exchange transactions including table funding were between the thrift and its subsidiaries or affiliates? Which of these sales were with servicing rights released? Were these transactions at documented market prices and terms, and if so, who has these records?

16. Summarize the representations and warranties that were provided to mortgage purchasers during the period (such as meeting certain underwriting standards, etc.) except for FNMA, FHLMC, and GNMA sales and swaps.

17. Have any mortgage sales been made with full or partial recourse (either written or verbal) other than for delinquency during the first 90 days after sale or for standard representations and warranties? If so, provide a list of the buyers, dates, amounts, mortgage types, and recourse type (include yield agreements, swap or repurchase agreements, FNMA/FHLMC recourse servicing, and any vague or unstated recourse requirements or periods). Exclude GNMA servicing.

18. Have any sold mortgages been repurchased or swapped for other mortgages or have any losses or settlements on sold mortgages been paid during the examination period except for servicing and foreclosure costs? If so, list the amount of each repurchase, swap, or loss paid and the reason.

MORTGAGE BANKING QUESTIONNAIRE
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19. Were custodians, escrow agents, or other intermediaries used for the transfer of all mortgages purchased or sold? If not, what was done to control the risks?

Mortgage Servicing Assets

20. Provide a summary list of all sales and purchases of mortgage servicing assets by correspondent showing the total amount of servicing bought and sold by type (FHA, VA, conventional 30 year, ARM, etc.), any recourse or reserve provisions, wholesale or flow servicing percentages, and average price. Describe how the servicing was evaluated prior to sale or purchase and who is responsible for this record and continuing valuations.

21. For all mortgage servicing assets and certain non-security financial instruments (including interest-only strips), provide a list by group of the original amount of the asset booked and when current market value, current book value, and the last date those values were determined. Also, have available the related information for the underlying mortgages including types, balances, interest rates, original discount rates, and maturities.

22. Does the total amount currently capitalized for capitalized servicing assets exceed 1.5 (150 bp) of the underlying mortgages? If so, list the groups of mortgages in excess of 1.5% and the percentages currently capitalized. Provide a list of all servicing asset valuation adjustments as well as adjustments to amortization during the examination period.

23. Has a cost/benefit analysis been performed since servicing purchases were made and if so who is responsible for it? Were any of the purchases of mortgage servicing assets hedged against prepayment risk and if so how?

Audit and Other

24. Is there an independent internal auditor responsible for reviewing the mortgage banking operations? If so, who is it? Provide a copy of the last audit report. If not, what procedures exist to ensure sound internal control of the mortgage banking function?

MORTGAGE BANKING QUESTIONNAIRE
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Office of Thrift Supervision

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25. Has the thrift or any of its mortgage banking subsidiaries been suspended or had corrective action of any type taken against it by FNMA, FHLMC, GNMA, FHA/HUD, VA, any state governmental body or agency, any private mortgage insurance company, or any investor? If so, explain the circumstances and current status. Provide a copy of the latest FNMA, FHLMC, GNMA, and investor audits.

26. List the dollar amount by servicer of mortgages that are owned by the thrift or its subsidiary but are serviced by another servicer? What does the thrift do to monitor that servicing and those servicers and who is responsible for those records?

27. Has the thrift signed a cross-default or guarantee agreement covering a mortgage banking subsidiary or an affiliate under the thrift's holding company on behalf of Ginnie Mae or any other investor? If so, attach a copy of that agreement.

28. Who is responsible for the accounting records of the thrift's and any subsidiary's mortgage banking operations?

INTRODUCTION

Profitability is the ability of the mortgage banking operation of a thrift to generate stable and consistent earnings in excess of all costs. It is the key to managing and regulating the mortgage banking business because without a high yield or profit on the funds invested in mortgage banking, the associated interest-rate risks (IRR) are not justified. This is because the IRR of the mortgage pipeline and the servicing operations are very high relative to other thrift investments.

This Profitability Section discusses the ways in which the OTS looks at the profitability of mortgage banking operations and compares that profitability to other thrifts and mortgage bankers with similar operations. Although each thrift may have a different cost accounting system, management should be able to provide explanations to examiners for costs that exceed the industry averages as shown in the annual cost studies of the Mortgage Bankers Association (MBA).

The MBA Cost Study provides average income and costs associated with mortgage origination and servicing functions. As such, the MBA Cost Study, which is completed about eighteen months after the year ends, is a good tool to use to compare the relative efficiency of an association's mortgage banking operation. Such use must be tempered with the understanding that it is directly comparable only to mortgage banking firms. OTS internal reports comparing the mortgage banking operations of thrifts are another good source of data for examiners; however, these reports should be used with caution since they are based on Thrift Financial Report (TFR) data that does not usually include the mortgage banking activities of subsidiaries. Also, if the thrift has no subsidiaries these reports may not show any loans serviced for others because this data was not reported on the TFR.

Production Overview

Production refers to the process of obtaining mortgages, on a wholesale or retail basis, for sale in the secondary mortgage market. A wholesale or correspondent production operation purchases mortgages from other originators, or utilizes mortgage brokers who originate mortgages for the thrift in exchange for the origination and servicing release fees. In contrast, retail origination operations generally originate all of their mortgages internally.

In addition, thrifts can act as correspondents where it underwrites mortgages to the specifications of another financial institution, and funds these mortgages for later sale to the correspondent, typically a mortgage banker. Revenue is realized by the association from receiving a higher price for the mortgages than the related costs of originating and funding those mortgages. During this period the thrift is exposed to losses from IRR unless the buyer of the mortgages has specifically agreed to absorb that risk in the form of purchase price guarantees.

In some areas of the country it is customary for the seller to provide the original mortgage documents (note and mortgage or deed of trust) to the buyer prior to receiving payment. This exposes the association to losses from nonpayment or partial payment from the buyer. It can be avoided through the use of escrow agents, closing attorneys, or brokers, whenever practical, especially when the buyer is unknown or has limited resources.

The final type of mortgage production is called table funding and relies on independent subcontractors to originate mortgages and close them in their own name. The thrift funds the closing, takes possession of the mortgage and an assignment, and pays the originator a servicing release fee for the servicing. The mortgage is then sold in the secondary mortgage market paying off the association and leaving it with the servicing rights. Under GAAP this process qualifies the servicing as purchased mortgage servicing rights (PMSR). (See Section 573, Accounting.)

Normally the cost of originations from retail operations exceeds the cost of wholesale operations due to the burden of additional employees and greater overhead costs. However, the revenue per mortgage for retail originations is generally higher since a portion of the origination fee does not have to be given up to the broker. This offsets the greater origination costs, thus making wholesale and retail originations similar in costs.

Another cost factor is the volume of mortgages originated. Clearly the fewer the mortgages originated for sale, the higher the costs per mortgage. Conversely, high volume origination operations can achieve great economies of scale. One of the major mortgage banking firms with over $10 billion in annual internal mortgage originations, reduced origination costs to 155 basis points (bp) per mortgage in 1991 compared with an average of 216bp for all types of mortgage lenders.

Some thrifts have hybrid mortgage banking operations that combine both internal and wholesale operations, while others specialize in only one type, or act only as correspondents. When evaluating these mortgage banking operations, examiners should first separate the revenue and expense amounts of each operation for both origination and servicing. This separation is necessary to compare the income and expense elements of the various types of mortgage banking operations with similar operations and to calculate net profitability to the thrift. Several sources of income are discussed below.

Income from Production. Mortgage production income consists primarily of origination and application fees. Retail origination fees are generally much higher than wholesale fees, but so are costs.

Income from Sales of Mortgages or Servicing. A second source of income is from the sale of the mortgages. This income can either be in the form of cash from an outright sale of the mortgage and its servicing rights, called a servicing released sale, or from the combination of selling the mortgage and capitalizing the present value of the excess servicing rights retained called excess servicing fee receivable (ESFR).

ESFR is calculated by deducting the generally accepted accounting principles (GAAP) normal servicing fee from the total servicing fee and then calculating the present value of the remaining servicing fee at an appropriate discount rate. Under GAAP, and for safety and soundness considerations, the combination of the sales price of the mortgage and the ESFR must not exceed what the association could have realized if it had sold the mortgage for cash without retaining the servicing. (See Section 573, Accounting.)

The normal portion of the servicing fee is called retained servicing or originated mortgage servicing rights (OMSR). It can never be capitalized by the thrift and it cannot be fully recognized as income until the entire mortgage servicing rights are sold or the underlying mortgages pay off. Also, thrifts can rarely sell the excess portion separately from the normal servicing fee since FNMA, FHLMC, and many private investor contracts prohibit splitting the ownership of servicing on their mortgages.

The mortgage servicing asset is usually the means by which mortgage banking operations generate a profit. The book value of ESFR, recording servicing income when received, realizing gains on servicing released, or selling off-balance sheet servicing rights all refer to the value of the mortgage servicing asset that is created in the origination process. Only the timing of receipt and tax considerations give advantages to one method over another.

Warehousing Income and Losses. Warehousing income is the third form of origination income and it refers to the profits on the difference between an association's cost of funds and the interest from the mortgages, less hedging costs. This income should be viewed as an unimportant by-product of the secondary marketing process, because the main objective is to sell the mortgages at the highest possible price while holding them for the shortest time. Warehousing income is usually insignificant compared to the risks of losses on sale. In fact, mortgages and mortgage-backed securities (MBS) in the warehouse are subject to losses even before they are sold. That is because GAAP requires that mortgages held for resale must be carried at the lower of cost or mar-

ket (LOCOM) adjusted on a regular basis. (See Section 573, Accounting.)

Revenue and Cost Elements of Servicing

Mortgage servicing entails the collection, record-keeping, and remittance of monthly payments of principal and interest (P&I) and payoffs to the owner of the mortgages (investor) in accordance with the servicing agreement with that investor. It also usually involves the payment of property taxes and insurance premiums on the mortgaged property from an impound or escrow account as well as foreclosure and any other needed services during the life of the mortgages. For performing these services, the servicer usually retains a fee from the monthly remittances which is a fixed percentage of the mortgage amount set by the servicing contract. In addition, the servicer usually receives float or interest income from the use of the escrow and P&I accounts as well as ancillary or miscellaneous income.

Elements of Servicing Income

Servicing Fees. Servicers retain fees to service mortgages for investors that typically range from 25bp and up. Usually servicing fees are at least as high as the minimum that FNMA, FHLMC, and GNMA require. These are the same as the GAAP normal servicing fees discussed earlier because GAAP relies on these organizations to determine the minimum acceptable fees.

Float Earnings. Mortgagors are usually required to maintain escrow or impound accounts for the payment of taxes and insurance on the mortgaged property. The servicer normally retains most, if not all, of the interest earned on these funds because only fourteen states currently require servicers to pay interest on escrow accounts. Also, the servicer usually retains all of the float income from the relatively short periods P&I payments and payoffs are held prior to remittance to the investor.

Ancillary Income. Ancillary income is the miscellaneous income a servicer receives from such things as late charges, insurance commissions, and mortgage assumption fees. The MBA Cost Study for 1991 shows the average of these fees for mortgage bankers as $33 per mortgage per year.

Elements of Servicing Costs

Personnel. Personnel costs are the expenses for employees, fringe benefits, training, and other employee expenses.

Occupancy. Occupancy expenses are the costs of occupying the building and any related costs.

Systems Costs. Systems costs are the servicing expenses for data processing.

Other Direct Costs. Other direct costs of servicing cover all expenses not directly associated with another cost category. They cover such items as the cost of funds advanced on delinquent mortgages and the maintenance and sales expenses of REO.

Provision for Loan Losses. Loan losses are the average allowance for losses on the foreclosure and sale of the property to satisfy a mortgage in default. Although the investor usually bears this risk, there are many types of servicing that require the servicer to absorb all or part of these losses. This is called recourse or partial recourse servicing.

Amortization of Purchased Servicing. This is the annual cost to amortize the debt related to the purchase of the PMSR. (See Section 573, Accounting.)

Marginal Servicing Costs. In addition to the total direct servicing costs, thrifts should calculate the marginal cost of servicing one additional mortgage. This cost should exclude all fixed costs, management, and overhead. Marginal costs are an additional consideration to gauge the profitability of prospective PMSR purchases, but should be used with great caution.

Value of the Servicing Asset

The value of the servicing asset is the present value of the profit from the expected cash flows less the direct costs of the servicing. Larger mortgages are more profitable since they provide larger dollars of servicing fees and float while the

cost of servicing is usually a fixed amount per mortgage regardless of size.

Many factors influence the valuation and market price of mortgage servicing: the type of mortgage, average size, age, geographic location, investor, market conditions, government regulations, loan to value ratio (LTV) and many other smaller factors. The largest single factor affecting servicing market values is the anticipated prepayment speed and that is usually dependent on interest rates. As rates fall, mortgages, with their related servicing, prepay faster because borrowers want to refinance at a lower interest rate. (See Section 576, Servicing.)

As servicing on individual mortgages is paid off, the servicing fees from pools of mortgages decrease, thus decreasing servicing values. Alternatively, if rates rise the prepayments decline because people tend to retain mortgages with below-market interest rates. However, losses in servicing values from decreases in interest rates are far greater than increases in value for an equal amount of interest rate increase.

The creation of the servicing asset and its value have a counter cyclical nature. That is to say, when rates decline and rapid prepayments result, a typical mortgage banking operation will take part in the wave of refinances. This replaces the servicing paying off with new servicing rights created from new originations. Conversely, if rates rise, the volume of origination activity falls, but the servicing portfolio also prepays at a slower rate.

Underwriting and Servicing Risks

The amount of default and servicing risk that is retained by the servicer after the securitization and sale of an MBS is very important. Almost all mortgage securities require the seller/servicer to make extensive representations and warranties to the issuer and investors covering the origination, sale, and servicing of the individual mortgages. These warranties usually include a guarantee from the seller/servicer that the individual mortgages were underwritten and will be serviced in accordance with the issuers published requirements as is the case with FNMA and FHLMC. Subsequent servicers of these mortgages are usually required to assume not only the servicing warranties but also the origination warranties.

A breach of either the origination or servicing warranties usually requires the current servicer to repurchase the mortgage from the MBS. Since these repurchases usually involve mortgages that have gone into default, the servicer is being forced to repurchase a mortgage that almost certainly will cause a loss. Additional penalties for warranty violations can include fines, suspensions as approved seller/servicers, and, in some cases, the loss of the entire servicing portfolio for that issuer, with and sometimes without compensation.

Many mortgages that were swapped with FNMA for mortgage securities require the seller/servicer to retain the risk of default. For example, under the FNMA MBS program the regular servicing option requires that the servicer advance interest during the delinquency and repurchase the mortgage in the event of default. This default risk is significant and can be very expensive for the servicer. The OTS defines this as recourse servicing for capital purposes. Only under FNMA's special servicing option does the servicer transfer the default risk.

Servicers should carefully evaluate and estimate the costs of all warranties and default risks before they decide to originate or service mortgages, especially mortgage securities, since they generally have more extensive requirements. These costs should be added to the other expenses of origination and sales in evaluating overall profitability.

Mortgage Banking Strategies

The following strategies are the predominant methods used by thrifts to create mortgage servicing assets. The risks associated with each strategy normally increase as the percentage of the servicing asset carried on the balance sheet increases and as the ratio of those booked servicing assets to capital increases. Generally, no more than 150bp of total loans serviced for others should be carried on the balance sheet and over 200bp clearly indicates excessive risk.

Creating an Off-Balance Sheet Servicing Portfolio (OMSR) and Recording Servicing Fees and Income as Received

This is the most conservative type of mortgage banking operation. The creation of a servicing portfolio provides the thrift with the right to future income, similar to receiving interest on whole loans held in the portfolio, for up to the thirty-year life of mortgages. (Although most mortgages have a stated maturity of thirty years, their actual life is usually only about seven years). In this strategy the right to future income is not clouded by the need to amortize the servicing assets (ESFR or PMSR). In addition, this strategy lessens the thrift's dependence on origination volume because the servicing portfolio is counter cyclical. That is, if interest rates increase and originations slow, the servicing portfolio will increase in value because prepayments decline. On the other hand, if rates fall, the servicing portfolio will drop in value as prepayments increase. This can be partially offset by increased originations.

The disadvantage of this strategy is that unless the servicing asset is sold or somehow capitalized as either ESFR or PMSR, most mortgage banking operations will not make a profit from originations. The income from originations usually is barely enough to cover the cost of originating and selling mortgages in the secondary market. In fact, losses often occur in the origination process. Therefore, to retain off-balance sheet servicing (OMSR), thrifts must be able to afford the short-term sacrifice of not making money on their mortgage banking originations. This disadvantage gradually decreases as the servicing operations generate more and more income. This strategy has the least amount of risk for thrifts since it avoids the risks of overcapitalizing ESFR or relying upon PMSR.

Creating an Off-Balance Sheet Servicing Portfolio and Capitalizing the ESFR

This strategy is similar to the first one except for how the servicing asset and incomes are recorded. Rather than carry the servicing asset off the balance sheet, this strategy capitalizes the present value of the ESFR portion of the servicing fee. A portion of the servicing fees received each month is then used to amortize that ESFR. The risk is that the assumptions of projected cash flows used to estimate the present value of the ESFR may be inaccurate. If prepayments occur more rapidly than the original assumptions, thrifts are required under GAAP to evaluate the prepayment speeds and make downward adjustments to their ESFR assets quarterly. A failure to make these quarterly adjustments can lead to large adjustments that can rapidly impair capital.

This strategy is used by most thrifts for mortgage banking operations since it usually creates enough additional income from originations to provide a small profit, yet it is still conservative. Part of the servicing asset (OMSR) is still carried as an off-balance sheet asset, thereby creating long-term servicing income to be recognized as received. As long as the initial ESFR asset is conservatively calculated and adjustments to the asset are made quarterly for increases in the prepayment speed, then this strategy is a good compromise between the first and third strategies.

The danger of this strategy is that thrifts will use accounting techniques to overstate ESFR, which artificially inflates current profits at the expense of long-term profitability. This strategy is even more risky if thrifts pool mortgages into unnecessarily low coupon MBS (i.e., 9.0% mortgages into 8.0% MBS instead of 8.5%) to increase the amount of ESFR and then use accounting techniques to greatly inflate the already overstated ESFR. This process often creates huge amounts of ESFR that cannot be amortized by the actual servicing income; and thus becomes a drain on the thrift. In virtually every occurrence where we have found a thrift consistently pooling mortgages into unnecessarily low coupon MBSs, we have also found greatly overstated ESFR. Many thrifts have failed because of overstating ESFR and, therefore, these tactics are of major concern to OTS.

Selling Mortgages With Servicing Released

Under this strategy thrifts sell the servicing rights at the same time that the mortgage is sold, therefore, no servicing assets of any type are retained. Immediate income is maximized at the expense of long-term income. Profits from mortgage banking operations will rise and fall with the rate of origi-

nations. To the extent that the thrift is dependent on mortgage banking origination income for its own profits, then a change in origination volume will increase or reduce profits. If originations decline to the point where the thrift is unable to earn sufficient income to cover fixed expenses, then the risk is significant. With this type of strategy, the expenses of origination should go down proportionately for drops in origination volume; the lack of this cost variability is of concern. Finally, thrifts that engage in this strategy should have other major sources of core revenue to ensure long-term viability.

Despite its shortcomings, this strategy may be appropriate for some thrifts. Thrifts that have minimal capital levels, that do not have any experience servicing mortgages for investors, that have small servicing portfolios, or that have high servicing costs will all benefit from this strategy, but for different and obvious reasons.

Buying or Using Table Funding to Obtain Servicing

Under this strategy the association purchases or uses table funding to acquire virtually all of its servicing. This results in the entire value of the servicing asset being carried on the books at its amortized purchase price or full value. Since PMSR must be adjusted downward each quarter, if necessary, to reflect unexpected increases in the prepayment speed, this strategy can result in major losses to the association, especially in times of decreasing interest rates.

Of all the strategies, this strategy poses the most risk to the thrift when investments in PMSR exceed safe amounts. Generally, no more than the amount whose losses could be safely absorbed by the association's capital should be purchased. In addition, there is a 50% of core capital regulatory limitation on PMSR contained in the Regulatory Capital: Intangible Assets regulation.

Combination of Strategies

Most mortgage banking operations utilize more than one of these strategies, and some use all of them. The important point from the regulatory perspective is that the thrift carefully monitor and minimize the risks associated with each strategy.

Compensation

The area of compensation for mortgage banking personnel working for a thrift or a thrift subsidiary is difficult for thrift management and regulators. In order to attract and hold qualified mortgage bankers, thrifts must offer compensation that is equal to that offered in the mortgage banking industry. The problem is that mortgage banking compensation is usually significantly higher than that paid to comparable personnel within the thrift.

The equalizing factor between mortgage banking compensation and lower thrift compensation for similar jobs is that mortgage banking compensation and even employment is tied to the profitability of the mortgage banking operation. When times get hard mortgage bankers are laid off, whereas thrift personnel are traditionally retained.

There are four broad categories of mortgage banking personnel for compensation purposes: originators, clerical processors/servicers, secondary marketers/managers, and executive management. The compensation for each category are quite different and should be tied to different performance factors.

Originators. Originators' compensation should primarily be tied to the volume of mortgage originations, and second, to quality, as most mortgage bankers do. In good times this commission income can be very large and may appear way out of line compared to comparable thrift employees. In some cases it even exceeds the compensation of senior thrift management. In bad times, however, mortgage banking originators traditionally have little, if any, compensation. The limiting factor should be that originator compensation should not exceed that for similar positions in the mortgage banking industry.

Clerical Processors/Servicers. Clerical mortgage banking personnel include mortgage processors and servicers of all types. Although clerical in nature, the sophistication, training, and communication skills required to perform these

functions is greater than the typical clerical job and, therefore, the compensation must also be higher. In addition, the tight quality control needed to meet the requirements of today's secondary mortgage market and the skill needed to service all of the types of mortgages that back mortgage securities require a higher level of skill than that needed for similar personnel processing and servicing mortgages for the thrift's portfolio. The higher compensation of mortgage banking processors and servicers should not be totally fixed; at least part of the total compensation should be tied directly to strict levels of quality control and to volume.

Secondary Marketers/Managers. For the secondary marketing manager in charge of pipeline and warehouse IRR, the difficulties of minimizing this enormous risk and avoiding recourse sales demand exceptional skill and dependability. Other managers in the mortgage banking operation must only concern themselves with volume and minimizing the risks of having to repurchase mortgages because of origination or servicing errors. Also, thrifts traditionally are not as concerned with mortgage sales because of the investment needs of the thrift's own portfolio. These considerations justify higher compensation compared to that of thrift employees and other mortgage banking managers, but compensation should be partially tied to how successfully these managers perform their jobs of limiting risk and maximizing quality control.

Executive Management. Executive management of a thrift's mortgage banking operation are often paid what appear to be exorbitant salaries compared to thrift management. This primarily results from the competitiveness in the mortgage banking industry. These high salaries, however, should be tied to overall profitability in the same way as that of mortgage bankers and should decrease dramatically during slow cycles. Executive management should also be judged on the minimization of excessive IRR, quality control risks, recourse sales, and overall risk to the parent thrift.

Bonuses. Often a significant part of executive compensation, and the compensation of other mortgage banking employees to a lesser degree, is made up of annual bonuses. Such bonuses should be no larger than those offered in nonaffiliated mortgage banking firms and this limit should be enforced by the thrift or an outside compensation committee. The practice of basing bonuses on short-term production profits without regard to quality control, IRR, future recourse losses, or servicing retained should be avoided. The worst of both worlds is to have higher salaries for mortgage banking personnel, but with less profits, risk and quality control, accountability, or servicing production than their thrift counterparts.

In evaluating mortgage banking management compensation, examiners and thrift management should never lose sight of the fact that almost all thrift mortgage banking operations were added primarily to increase overall, long-term profitability without jeopardizing the thrift. The executive management of thrift mortgage banking operations that succeed in these goals should be rewarded according to mortgage banking industry standards, however, management that falls short of these goals should not receive such high levels of compensation. Mortgage banking operations that produce losses or marginal profits, that pay high salaries, and that pose large risks to the thrift are defeating their whole purpose.

Subsidiaries and Affiliates

A vital part of the profitability of mortgage banking operations in subsidiaries or affiliates is determined by its overall affect on the parent association. No matter how much origination or servicing is generated or how many savings customers are served, a mortgage banking operation that is a drain on the thrift, or a threat to it, is in conflict with basic safety and soundness considerations.

To measure the overall profitability of a mortgage banking subsidiary or affiliate to a thrift, the profit or loss calculations of the basic operations of origination and servicing are only the starting point. After carefully checking to see that these basic costs and incomes are accurately calculated, the costs to the thrift for the funds advanced, office space provided, equipment, supplies, data processing, mortgage servicing, legal support, general and administrative (G&A) expenses allocated, and the costs of any nonconforming or below-market mortgages purchased should be determined. Calculations of both the cost to the

thrift and market costs can be made, however, the only realistic profitability calculations are based on market prices. In fact, market prices are required for transactions with affiliates under a holding company structure by §§ 23A and 23B of the Federal Reserve Act. A comparison of calculated market costs to those actually paid, by the mortgage banking operation to the thrift, normally results in significant additional charges against the profitability of most mortgage banking subsidiaries and affiliates.

The profits and other benefits provided to the thrift should be compared to the amount the thrift has paid the subsidiary or affiliate. Thrifts and examiners often overlook the value of off-balance sheet servicing that has been contributed to the thrift. This servicing produces an annual net income that gives it a determinable market value, and the additional servicing helps the thrift to achieve the economies of scale that volume normally brings. The value of this servicing and the contribution to efficiency should be calculated and added to income from the subsidiary or affiliate. Also, the costs charged for origination or servicing provided to the thrift should be compared to market rates and resulting adjustments made to profitability.

The borrowings from the thrift by subsidiaries and affiliates should be carefully reviewed and separated into secured lines of credit for the warehouse and servicing purchases, and into unsecured lines of credit for working capital and other uses. (Affiliates cannot obtain unsecured advances from thrifts.) Market costs for each of these items should be compared to actual charges paid by the subsidiary or affiliate and the needed adjustments calculated.

The relationship of the subsidiary or affiliate to the thrift should also be examined. Any guarantees, recourse agreements, cross-collateral agreements, and other forms of credit support provided by the thrift is of particular concern. The permissibility of that support under OTS and §§ 23A and 23B of the Federal Reserve Act should be determined, its threat to the thrift should be assessed, and a market cost for that support should be estimated.

After all adjustments to the income and expenses of the mortgage banking operation are made, the net profit or loss to the thrift should be calculated. This net income should then be compared to the investment and the return on equity calculated. If the mortgage banking operation in the subsidiary is not producing a superior yield on the association's investment than other less risky alternative investments, then that investment should be questioned in the final examination report. Likewise, if the relationship with an affiliate produces more risks than rewards for the thrift, then that relationship should also be questioned.

Conclusion

In summary, the mortgage banking operation should be viewed as a financial factory originating or buying servicing rights. Originated servicing rights are assets that can be sold at the time of the mortgage sale (servicing released) or retained as an off-balance sheet asset (OMSR) and an on-balance sheet asset (ESFR).

The ability to create servicing rights at a profit without exposing the thrift to excessive IRR or other undue risks from error, fraud, credit, and recourse is the goal of most mortgage banking operations. These operations may be commingled between the thrift and its subsidiaries and affiliates, however, it is vital that the thrift maintain sufficient records of individual income and expense categories to separate the activities of each. Without these records it is not possible for the thrift to manage or monitor its mortgage banking operations nor can examiners do their job to ensure safety and soundness.

REFERENCES

Mortgage Bankers Association of America, *The Cost Study*

Mortgage Banking – Profitability Program

Examination Objectives

To measure the profitability of the thrift's mortgage banking operations in order to determine if they are sufficient to justify the relatively high risks of the operation.

To determine if the salaries paid to the mortgage banking personnel are excessive or inadequate.

To determine the effect of the subsidiary and affiliate mortgage operations on the profitability and safety of the parent thrift.

Examination Procedures

Perform the following examination steps to ensure that the mortgage banking activities are profitable and not a drain on the thrift. Those steps that do not apply may be omitted; however, a notation should be made as to why they do not apply.

Level I

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1.	Determine what type of mortgage banking operation the thrift is operating: (1) creating an off-balance sheet servicing portfolio (OMSR) and recording servicing fees as received; (2) creating an off-balance sheet servicing portfolio and capitalizing ESFR; (3) selling mortgages with servicing released; (4) buying or using table funding to create servicing (PMSR); or (5) a combination of these strategies.	
2.	Review the previous report of examination and all mortgage banking operation-related exceptions noted and determine if management has taken appropriate corrective action.	
3.	Gather all profitability tracking reports prepared by the thrift that distinguish mortgage banking revenues and expenses. Compare these specific revenues and expenses to the latest MBA Cost Study (available for internal use from OTS Regional Offices).	

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4. Separate origination costs into fixed and variable in order to determine the ability of the thrift to reduce overhead expenses (salary and premises) if originations decline sharply.

5. Review the salaries and other compensation of the mortgage banking personnel to the average costs shown in the MBA Cost Study and other surveys. Then determine whether:

   - The mortgage banking personnel have greater compensation than others in the mortgage banking industry;
   - The compensation of mortgage banking personnel is tied to performance, avoidance of risk, and long-term profitability as well as volume;
   - The number and cost of mortgage banking personnel can be varied according to cyclical needs;
   - Annual bonuses and total compensation of executive management are tied to long-term profitability; and
   - Total mortgage banking compensation is reviewed by the thrift or an outside group to make sure that it is comparable to the mortgage banking industry.

6. Determine the relationships of the mortgage banking subsidiaries or affiliates with the parent thrift. Assess whether those operations are permitted under OTS regulations and § 23A and 23B of the Federal Reserve Act. Assess whether:

   - Their operations are practically and visibly separate as well as legally separate;
   - All transactions are covered by written agreements and are at market comparable prices and terms;
   - The thrift is not providing any guarantees or other forms of credit support; and

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- The mortgage banking operation is not dumping mortgages into the thrift's portfolio that it cannot sell into the secondary market without losses.

7. Calculate the overall benefit/expense of the subsidiary to the thrift using market prices:

   - Determine the yield for the funds invested; and
   - Determine if that yield is adequate for the risks taken by the thrift both from its initial investment and from continuing operations.

8. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

9. Measure the reports from the mortgage banking operation of the thrift against the appropriate OTS mortgage banking reports with particular attention to the expense coverage ratio (mortgage banking income to G&A) and the off-balance sheet value of servicing report. Then determine:

   - The rough percentage of the thrift's operations that are related to mortgage banking;
   - The percentage of the mortgage banking operation to the thrift's overall profitability/losses;
   - The other core income of the thrift;
   - The yield on mortgage banking activity for the funds invested;
   - If mortgages are originated for sale to correspondents, the profitability and dangers to the thrift;
   - The other significant risks of the thrift's mortgage banking operation; and

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- Whether the total profits versus total risks are appropriate for the core earnings and capital level of the thrift.

10. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

Exam Date: _____
Prepared By: _____
Reviewed By: _____
Docket #: _____

INTRODUCTION

The primary source of accounting guidance related to mortgage banking is Financial Accounting Standards Board (FASB) Statement of Financial Accounting Standards (SFAS) No. 65, Accounting for Certain Mortgage Banking Activities. The Statement was issued in 1982 and, although the FASB is currently considering a project to amend it, SFAS No. 65 remains the most comprehensive accounting document pertaining to mortgage banking. SFAS No. 65 applies to all entities that engage in mortgage banking activities. Also, there are additional sources of guidance that are referenced throughout this discussion.

Why Accounting Impacts Mortgage Banking Strategies

As discussed in Section 572, Profitability, mortgage servicing is typically the most important source of long-term profits for mortgage banking entities. The rights to service mortgages are generally acquired in four ways: (1) the origination of mortgages by the thrift that are kept in the portfolio which is called portfolio servicing; (2) the origination of mortgages that are sold with servicing retained which is called retained servicing or originated mortgage servicing rights (OMSR); (3) the purchase of servicing rights from third parties called purchased mortgage servicing rights (PMSR); or (4) as a by-product in a purchase of mortgages and their servicing (servicing released purchase) where a definitive plan for the sale of the mortgages with the servicing rights retained exists at the time the mortgages are acquired, also called PMSR. Under current generally accepted accounting principles (GAAP), the accounting for mortgage servicing rights, at acquisition and thereafter, varies depending on the manner of acquisition.

Differences in the manner of accounting for servicing rights are primarily evident in three areas: (1) asset recognition criteria; (2) classification as tangible or intangible assets; and (3) potentially different methods of amortizing and measuring impairment of the assets. In addition, the treatment of servicing rights for regulatory capital purposes depends on their manner of acquisition. Appendix A summarizes the distinctions discussed in the following paragraphs.

Asset Recognition. Currently OMSR are not recognized on the balance sheet as an asset distinct from the mortgage. SFAS No. 65 also prohibits the recognition of a mortgage servicing asset representing the normal servicing fee when a thrift originates a mortgage loan and then sells it to a third party with the servicing rights retained by the seller; only the excess servicing fee, if any, may be recorded as an asset. However, SFAS No. 65 provides for the full capitalization of PMSR. SFAS No. 65 also requires thrifts to separately capitalize (and classify as PMSR) the portion of the purchase price representing the cost of acquiring the right to service mortgages when the thrift purchases mortgage loans with a definitive plan for the sale of the mortgages with servicing rights retained at the initiation of the transaction. Finally, it is possible for thrifts to record split servicing in connection with a purchase of servicing rights. Split servicing refers to: (1) recording the present value of the normal servicing fee acquired in a purchase as PMSR; and (2) recording the present value of the servicing fee in excess of the normal servicing fee.

Classification. Current GAAP applies differing classifications to servicing rights: (1) the normal servicing fee on mortgages originated and sold with servicing retained is not recognized on the balance sheet (OMSR); (2) ESFR are recorded on the balance sheet and classified as tangible assets; and (3) PMSR are given balance sheet recognition but are categorized as intangible assets.

Amortization/Impairment. ESFR are amortized using the level-yield method, but SFAS No. 65 specifies that PMSR should be amortized in proportion to, and over the period of, estimated net servicing income. In practice, the level-yield method is typically used and has been accepted as appropriate for PMSR amortization (discussed be-

low). FASB Emerging Issues Task Force (EITF) Issue No. 86-38, Implications of Mortgage Prepayments on Amortization of Servicing Rights, requires that the impairment test for ESFR be performed on a discounted basis, whereas it allows for impairment of PMSR to be measured on either a discounted or undiscounted basis. However, both the OTS Regulatory Capital: Intangible Assets Regulation, and the FDIC's Capital Maintenance Rule, state that the book value of PMSR must be evaluated for impairment using a discounted cash flow approach if the asset is to be included in regulatory capital. Since the undiscounted approach is acceptable under GAAP, this would be an acceptable GAAP/RAP difference for financial statement purposes (with the appropriate adjustment reflected in the regulatory capital calculation).

Regulatory Capital Treatment. Because it is not recognized on the balance sheet, the normal servicing fee portion of OMSR is unaffected by regulatory capital guidelines. However, because the OTS Net Portfolio Value (NPV) model assigns a value to originated servicing rights, they are incorporated as part of the interest-rate-risk component of regulatory capital. ESFR are considered tangible assets under GAAP and are simply risk-weighted in the 100% category. However, due to their classification as intangible assets, PMSR are subject to special regulatory capital rules.

The OTS defines PMSR as qualifying intangible assets that are includable in regulatory capital, subject to certain limitations. Due to their complexity, these limitations are not discussed fully in this Section and the reader is advised to consult Section 576, Servicing, for a detailed review. The FDIC's Final Rule on Capital Maintenance and the OTS' Intangible Assets regulation require the book value of PMSR to be measured on a discounted cash flow basis. The discount rate used in the calculation should be no less than the original discount rate inherent in the asset at the time it was acquired, based upon the estimated net cash flow and price paid at the time of purchase.

The differences in book value recognition and regulatory capital values for servicing rights may result in transactions intended to obtain balance sheet recognition of OMSR. Current accounting practice encourages mortgage bankers to sell their off-balance sheet OMSR in order to recognize income immediately rather than on a cash basis over the life of the serviced mortgage. Mortgage bankers then can replace these rights through purchases of servicing originated by third parties that can be recorded on the balance sheet as purchased servicing assets. However, limitations such as the 10% regulatory capital haircut on PMSR tends to mitigate the impact of these transactions for thrifts.

Mortgage Loans Held for Investment or for Sale

Mortgages Held for Investment. These mortgages are carried at amortized cost, provided the thrift has the intent and ability to hold them for long-term investment purposes. The thrift's management should document its intent to originate the mortgages for a long-term investment. It is, however, the substance of a thrift's activities that determines whether mortgages reported as held for investment are, in reality, held for sale or trading. Thrift Bulletin No. 52, Supervisory Statement of Policy on Securities Activities, sets forth some of the factors to be considered in evaluating whether the classification of mortgages is consistent with management's intent. Mortgages that are moved from the held-for-investment to the held-for-sale category are transferred at amortized cost, but the lower of cost or market (LOCOM) method should be applied immediately with an allowance for loss established, if necessary.

Mortgages Held For Sale. Typically, mortgage banking entities originate or purchase mortgages for resale. SFAS No. 65 mandates that mortgages held for sale be reported at LOCOM. When the market value of mortgages held for sale is less than their amortized cost, the thrift records a charge to income and a valuation allowance that is shown on the balance sheet as a contra asset. If the market value of the mortgages subsequently improves, the valuation allowance is adjusted. However, the mortgages may never be shown on the balance sheet above the amortized cost, regardless of market value.

For example, assume that on July 1, 1993, Home Mortgage Inc. originated $2,000,000 in mortgages at par, intending to sell them in the secondary

market at a later date. At July 30, 1993, the market value of the mortgages was 97% of par. At August 31, 1993, the market value had improved to 99% of par. At September 30, 1993, the market value was 104% of par. (For simplicity, this example does not consider paydowns or deferred fees/costs.)

The entry to record the funding of the mortgages should be:

7/1/93	Dr.	Loans Held For Sale	$2,000,000	
	Cr.	Cash		$2,000,000

The month-end entries to adjust the carrying amount of the mortgages should be:

7/30/93	Dr.	Unrealized Loss on Loan Held For Sale	$60,000	
	Cr.	Allowance For Loss Loans Held For Sale		$60,000
8/31/93	Dr.	Allowance For Loss Loans Held For Sale	$40,000	
		Unrealized Gain on		$40,000
	Cr.	Loans Held For Sale		
9/30/93	Dr.	Allowance For Loss Loans Held For Sale	$20,000	
	Cr.	Unrealized Gain on Loans Held For Sale		$20,000

Note that the entry as of September 30, 1993 only increased the carrying value of the mortgages up to their amortized cost despite market value exceeding that cost.

In determining the market value of mortgages held for sale, the thrift should first segregate the mortgages by type (i.e., conventional [conforming and non-conforming to FNMA and FHLMC requirements], FHA, VA, FmHA, SBA, etc.). Next, they should be separated by property types (i.e., commercial, single-family, or multifamily); and then they should be separated by repayment types (i.e., ARMs, 30- and 15-year fixed-rates, and balloon mortgages). Once the mortgages have been separated, the LOCOM computation may be performed on either an individual mortgage basis or in the aggregate for the type of loan being valued. The adjustment to the valuation allowance is made for each type of mortgage identified. *While gains may be netted against losses within a particular type of mortgage, a net gain on one type of mortgage may not be used to offset a net loss on another type*. Unsalable, rejected, and repurchased mortgages should be valued separately and the loss should not be included as part of the overall LOCOM adjustment, depending on whether their impairment is permanent.

If a thrift has commitments in place to sell mortgages, the market value of those mortgages should be based on the commitment prices. If those commitments are representative of the market, they may also be used to estimate the market value of uncommitted mortgages. If not, the thrift should look to quoted market prices to determine market value.

Mortgages that are moved from the held-for-sale to the held-for-investment category are recorded at LOCOM as of the date of transfer. If market value is less than amortized cost, the market value becomes the new cost basis. The difference between the new cost basis and the contractual face amount of the mortgages is recorded as a contra asset on the balance sheet and, in accordance with SFAS No. 65 as amended by SFAS No. 91, amortized to income as a yield adjustment using the interest method over the remaining contractual life of the mortgages.

New FASB Pronouncement. The FASB has issued a new Statement, SFAS No. 115, Accounting for Certain Investments in Debt and Equity Securities, that will affect mortgage banking entities. While the Statement does not specifically include loans within its scope, it does specify that mortgage-backed securities that are held for sale in conjunction with mortgage banking activities, as described in SFAS No. 65, shall be classified as trading securities. As trading securities, they are directly carried at market value without the cost basis ceiling inherent in LOCOM valuations, no balance sheet valuation allowance is employed, and unrealized holding gains and losses are included in earnings. The new Statement is effective for fiscal years beginning after December 15, 1993. However, it contains certain early adoption provisions. Readers should contact their regional accountants with any questions.

Transfers Among Affiliates

Mortgage banking entities often transfer mortgages to affiliates. For accounting purposes, the mortgages transferred must be adjusted to LOCOM as of the date management makes the decision to transfer them. However, if the mortgage banking entity is acting as an agent for an affiliate, the LOCOM adjustment is not necessary and the mortgages should be transferred at the originator's cost. As defined in SFAS No. 65, an agency relationship exists where the two entities agree that all mortgages of a particular type originated by the seller will be transferred to the buyer. A right of first refusal or other arrangement whereby the seller retains the risks associated with ownership of the mortgages does not qualify as an agency relationship and thus the mortgages must be carried at LOCOM on the originator's books. (See the Holding Company Handbook for additional limitations on transactions with affiliates.)

Table Funding Arrangements

Table funding refers to transactions in which a thrift provides the original funding for a mortgage loan at the table when a mortgage broker or correspondent and the borrower close the mortgage, despite the fact that the thrift had no direct part, besides funding, in the processing or closing of the mortgage. Immediately after the closing, the thrift pays a servicing release premium and acquires the mortgage and its related servicing rights from the originating correspondent. The arrangement raises the issue of whether the acquiring thrift should account for the table funding as a purchase or as an origination.

The issue is important because if the mortgage is deemed to have been purchased and a definitive plan for its sale with servicing retained exists at acquisition, then the cost of acquiring the servicing rights must be allocated and capitalized as a separate asset apart from the cost basis of the mortgage. This accounting treatment results in a lower cost basis being assigned to the mortgage and thus a reduction of any loss recognized upon its subsequent sale with the servicing rights retained. Conversely, if the arrangement is considered an origination, all direct origination costs must be capitalized as part of the cost basis of the mortgage (including costs that could theoretically be assigned to the servicing rights), resulting in a higher basis for the mortgage. Mortgage bankers often view the difference between purchased and originated servicing more simply. They view the difference as being whether the servicing asset is on or off the balance sheet.

For example, assume the correspondent originates a $100,000, 8% fixed-rate mortgage. The loan agreement calls for the borrower to pay a 1% origination fee plus 1 point at closing. Assume First Thrift (FT) will fund the mortgage at closing and pay the correspondent a 125bp servicing release premium ($100,000 x .0125 = $1,250). The correspondent will retain both the 1% origination fee ($1,000) and the loan fee of 1 point ($1,000) paid by the borrower at closing. Therefore, at closing FT will disburse $101,250 ($100,000 principal and $1,250 servicing release premium) and the correspondent will receive $3,250 ($2,000 in fees from the borrower and $1,250 from FSA).

If Arrangement is Considered a Loan Origination. FT would record its investment in the mortgage at $101,250, representing $100,000 in principal and $1,250 in deferred loan origination costs in accordance with SFAS No. 91. No servicing rights would be recorded. If the mortgage is intended for sale, the origination costs would be deferred but not amortized. Rather, they would be an adjustment to the gain or loss on the subsequent sale of the mortgage. If the mortgage were sold at par, FT would record a $1,250 loss equal to the excess of its net investment in the loan ($101,250) over the sales proceeds of $100,000.

If Arrangement is Considered a Loan Purchase. FT would record its investment as $100,000 in the mortgage and $1,250 in PMSR. If the mortgage were then sold at par, no gain or loss would be recognized and the servicing asset would remain on the balance sheet to be amortized in accordance with SFAS No. 65 over the estimated life of the mortgage.

Table Funding Criteria. EITF No. 92-10, Loan Acquisitions Involving Table Funding Arrangements, specifies that table funding arrangements should be accounted for as loan purchases if the mortgage is legally structured as an origination by the correspondent and if the correspondent is in-

dependent of the acquiring thrift. In making this determination, all of the following criteria must be satisfied:

- The correspondent is registered and licensed to originate and sell mortgages under the laws of the jurisdictions in which it does business;
- The correspondent originated, processed, and closed the mortgage in its own name and is the first titled owner of the mortgage with the thrift becoming a holder in due course;
- The correspondent is an independent third party and not an affiliate of the thrift, as defined in SFAS No. 65. The correspondent must bear all the costs of its place of business;
- The correspondent must sell mortgages to more than one thrift or mortgage banker and not have an exclusive relationship with the purchaser; and
- The correspondent may not be directly or indirectly indemnified by the purchaser for market or credit risk on mortgages originated by the correspondent. However, a purchase commitment is not considered an indemnification for purposes of this requirement.

If any of the above requirements are not met, the mortgage should be accounted for as an originated mortgage by the acquiring thrift.

Mortgage Sales

The primary focus in accounting for mortgage sales is to recognize the economic gain or loss at the time of the transaction and to avoid current recognition of income and expense attributable to future periods. In a simple mortgage sale, where the seller retains no recourse obligation or servicing rights, the gain or loss is generally based on the difference between the actual or stated yield of the mortgages and the yield to the investor. Complications arise in recording sales where the seller has not transferred all of the risks and rewards of ownership to the purchaser; this occurs when the seller retains recourse risk on the servicing rights.

Mortgages Sold With Recourse. Thrifts may sell mortgages to a government sponsored agency or private investor with terms that, under certain conditions, provide for recourse against the thrift. For example, the thrift may be required to advance its own funds to the investor to cover shortfalls if a borrower fails to make payments when due. In a transaction where the seller retains the risk of recourse or borrower default, a determination must be made as to whether it should be recorded as a sale or a financing.

SFAS No. 77, Reporting by Transferors for Transfers of Receivables with Recourse, specifies that a transfer of mortgages with recourse may qualify as a sale only if all the following criteria are satisfied:

- The transferor surrenders control of the future economic benefits embodied in the mortgages;
- The transferor's obligation under the recourse provisions can be reasonably estimated; and
- The transferee cannot require the transferor to repurchase the mortgages except pursuant to the recourse provisions.

The first condition generally means the seller cannot hold an option to repurchase (call) the mortgages. Conversely, the third criteria means that the buyer may not hold an option to put the mortgages back to the seller. The second requirement refers to measuring the extent of recourse. If the seller retains recourse, a liability must be recorded at the time of sale. The liability is recorded on the balance sheet and has the effect of reducing the gain or increasing the loss recognized on the sale. If the seller is unable to reasonably estimate the amount of recourse liability, the transaction does not qualify as a sale and the cash received from the transferee should be recorded as a secured financing.

EITF No. 92-2, Measuring Loss Accruals by Transferors for Transfers of Receivables with Recourse, specifies that the liability recorded at the sale date pertaining to the recourse provisions of the transfer must include all probable credit losses over the life of the transferred receivables and not only those measured and recorded in accordance with SFAS No. 5, Accounting for Contingencies.

The recourse obligation may be recognized on a present value basis if the timing of the estimated cash flow can be reasonably estimated. However, the Securities and Exchange Commission (SEC) has stated its position that the discount factor may be no less than the rate on monetary assets that are essentially risk free and that have maturities comparable to those of the recourse obligation. Moreover, the recourse obligation must be measured and reported separately as a liability and may not be netted against assets unless a legal right of offset exists between the seller and the purchaser. However, the recourse liability is not considered a general valuation allowance (GVA) and would not be included as such for capital purposes.

Mortgages Sold With Servicing Rights Retained. Thrifts that originate or purchase mortgages for subsequent sale in the secondary market often retain the rights and obligations of servicing the mortgages for the purchaser in exchange for a fee and related income. Typically, the servicing fee is stated as a percentage of the outstanding mortgage balance and is deducted by the servicer from the borrower's monthly mortgage payments before those payments are passed on to the owner of the mortgages.

When mortgages are sold with the servicing rights retained by the thrift, an ESFR asset may be recorded if the interest rate on the mortgages sold, minus the normal servicing fee rate and guarantee fees, if any, exceeds the rate passed through to the purchaser of the mortgages or mortgage-backed securities. Recording the present value of this future excess servicing fee results in an increase in the gain or reduction in the loss on the sale of the underlying mortgages. However, the amount of the adjustment is limited to the difference between the actual sales price of the mortgages and the estimated sales price that would have been obtained if only a normal servicing fee had been specified.

For example, assume a package of fixed-rate mortgages with a weighted average coupon rate of 9% is sold to an investor at par with a pass-through rate of 8% with the seller retaining the servicing rights. Assuming the normal servicing fee is 25bp and the guarantee fee is 18bp, this means the excess servicing fee is 57bp (9.00% - 8.00% - .25% - .18% = .57%). In determining the book value of the excess servicing fee receivable, the seller/servicer estimates the amount and timing of the cash flows and discounts them to arrive at the present value.

Excess Servicing Fee Receivable (ESFR)

SFAS No. 65 provides guidance on the appropriate methodology to be used in initially recording and amortizing ESFRs. The initial book value of the ESFR is primarily dependent on three factors: (1) the net interest spread between the mortgage coupon rate, minus the sum of the normal servicing fee rate and any guarantee fees, and the pass-through rate to investors; (2) the estimated prepayment rate on the underlying mortgages; and (3) the discount rate employed to compute the present value of the excess servicing fee. Generally, an estimate of prepayment speeds that is too slow or a discount rate that is too low will result in overstating the ESFR asset. The following guidelines should be used in recording ESFR.

Prepayment Speed. The prepayment speed estimate used in calculating the ESFR should be based on the same guidelines set forth in Section 576, Servicing, for the valuation of PMSR.

Discount Rate. On June 29, 1989, the EITF reached a consensus on Issue No. 88-11, Allocation of Recorded Investment When a Loan or Part of a Loan is Sold, that ESFR should be calculated using prepayment, default and interest-rate assumptions that market participants would use for similar financial instruments and should be discounted using an interest rate that a purchaser unrelated to the seller of such a financial instrument would demand. However, since the ESFR cannot be split off and sold separately from the normal servicing fee under FNMA or FHLMC regulations and since GNMAs usually have no ESFR, there is no significant market in ESFR, per se, upon which to establish a benchmark. With the absence of a true, market-derived ESFR discount rate, servicers must look to comparable financial instruments as a basis for deriving an appropriate ESFR discount rate.

Most apparently comparable financial instruments do not work well in establishing market discount rates for ESFR because each instrument has significant distinguishing features. For example,

while cash flows associated with IO strips and ESFRs are both based on declining balance mortgages and both assets experience negative duration, ESFRs retain various distinct operational costs and risks. Similarly, an ESFR discount rate based on Treasury yields is inadequate because yields on mortgage servicing rights do not always track the U.S. Treasury securities yield curve.

Since the cash flow and operational risks associated with both ESFR and PMSR are identical and since there is a liquid market in PMSR, we believe that the best surrogate financial instrument in establishing ESFR market discount rates is PMSR. Typically, however, mortgage bankers and accountants have used discount rates for ESFR that are lower than for comparable PMSR. This is because of the cushioning or protective effects of the normal servicing fee, which is specifically deducted from the mortgage cash flow before computing ESFR. Conversely, when valuing PMSR, there is no stated normal servicing fee and all servicing costs and revenues are considered individually. *Because of these considerations, generally an ESFR discount rate of 100 basis points below the rate for comparable PMSR is reasonable.*

Comparable PMSR is generally meant to refer to the differences in the discount rates or yields demanded by investors for PMSR with perceived additional risks. High delinquency, nonagency, commercial, and recourse servicing are examples of servicing that traditionally have required significantly higher yields to attract buyers than single-family, agency servicing. Also, the terms, interest rates, and geographical locations of mortgages may be factors requiring higher yields to attract buyers.

In accordance with EITF No. 88-11, a discount rate equivalent to the pass-through rate to investors is not appropriate for ESFR recorded after June 29, 1989. Moreover, discount rates below the pass-through rate will generally not be accepted even if the ESFR was recorded prior to July, 1989. Such rates do not adequately reflect the true risks and rewards of the ESFR asset.

The OTS recognizes the difficulty in establishing reasonable and appropriate discount rates for ESFR. Each pool of ESFR should be evaluated based on its individual risks and a conservative, well-supported discount rate should be employed. Thrifts should remember that conservatively valued ESFR will not alter the actual underlying cash flows. If subsequent actual cash flows exceed those estimated in valuing the ESFR asset, the thrift will benefit from an asset providing a higher than anticipated yield. Conversely, the use of an aggressive or excessively low discount rate in valuing ESFR exposes the thrift's capital to significant risk.

Normal Servicing Fee. The minimum servicing fees established by FNMA, FHLMC, and GNMA are intended to cover the cost of servicing plus an unspecified profit component to protect the market and encourage servicers to fulfill their servicing responsibilities. FASB Technical Bulletin No. 87-3, Accounting for Mortgage Servicing Fees and Rights (FTB No. 87-3), makes it clear that thrifts may not derive an individualized normal servicing fee rate based on their particular cost to service. FTB No. 87-3 states that the normal servicing fee must be no less than the minimum servicing fees specified by FNMA, FHLMC, and GNMA. Generally, these are 25bp for securitized fixed-rate mortgages, 37.5bp for ARMs and unsecuritized mortgages, and 44bp for FHA/VA mortgages in GNMA MBS pools. FNMA typically requires a minimum servicing fee of 50bp on servicing for second mortgages.

Recourse servicing generally should reflect significantly higher normal servicing fees than similar nonrecourse servicing in order to recognize the additional servicing costs from higher credit losses. Also, the normal servicing fee for Small Business Administration (SBA) loans must be a minimum of 100bp. For transactions requiring a minimum retained spread (such as ARM sales to FNMA, FHLMC and many private investors) the normal servicing fee must not be lower than the minimum retained spread.

For sales directly to private sector investors with servicing retained, FTB No. 87-3 requires the thrift to use the minimum servicing fee required by the federally sponsored organization whose

servicing terms are most comparable to those being valued. If the thrift can show that FNMA, FHLMC, and GNMA do not purchase substantially similar mortgages, the thrift should use a normal servicing fee reflecting the predominant fee that is found in the private sector market for similar mortgages.

The normal servicing fees for second and wrap-around mortgages are more difficult to determine than for first mortgages. If prevailing market rates cannot be determined, the normal servicing fee should be calculated by considering the fully documented costs of servicing, a reasonable and adequate profit factor, and the costs related to protecting the second mortgages from foreclosure actions by the first mortgagee. The normal servicing fee for wrap-around mortgages should be a minimum of 100bp to adequately cover the large costs of servicing these mortgages.

Reasonableness Tests. As an overall reasonableness test, compare the prices paid by the FHLMC for mortgages with servicing released versus the price paid for mortgages with servicing retained. Also, the amount of ESFR recorded should not exceed the current servicing released premiums being paid for similar mortgages less the equivalent of a normal servicing fee.

Amortization and Impairment Analysis. ESFR should be amortized over its expected life so that net servicing income (servicing income less amortization) approximates the normal servicing fee plus interest earned on the ESFR asset. Therefore, if unanticipated mortgage prepayments occur, both the current book value of the ESFR and the rate of future amortization must be adjusted. Management must review its ESFR asset at least quarterly to determine if an adjustment is needed.

EITF No. 86-38 specifies that the ESFR asset must be written down to the present value of the currently estimated remaining cash flows applying the same discount factor used to initially record the asset. A cumulative adjustment should be made to the book value to reflect any decline in the present value. However, the book value of ESFR may not be increased as a result of slower than anticipated prepayments but, rather, the rate of amortization would be adjusted prospectively.

Preferably, the impairment analysis should be performed for each group or pool of serviced mortgages, but that is not always practical for very large ESFR assets. The OTS generally does not object to grouping similar types of mortgages, with very comparable interest rates and terms, into larger groups for purposes of measuring impairment. In these cases, a weighted average of the original discount rates should be used. For purposes of recording impairment these groups may then be aggregated. The OTS reserves the right to require less aggregation if the aggregation process appears to distort results.

Multifamily ESFR. Multifamily mortgages are secured by residential dwellings with five or more units. Unlike other types of commercial or income property mortgages, multifamily mortgages qualify for purchase by FNMA, FHLMC, and GNMA. Each of these organizations, however, has very different and complex programs. The minimum servicing fees and other requirements for these mortgages are defined by their purchase contracts and their respective sale and servicing guides. Minimum servicing fees are often as low as 12.5bp and even less for some multifamily mortgages over $10,000,000.

If ESFR is recorded, the normal servicing fee for multifamily mortgages should not be lower than 12.5bp (25bp if the mortgage is less than one million dollars) unless a lower rate is specified in the sale/servicing contract. The discount rate for multifamily ESFR should generally be at least 500bp over single-family ESFR rates. Prepayment estimates for multifamily servicing should generally be based on a Constant Prepayment Rate (CPR) speed that is closely analogous to fixed-rate single-family mortgages with similar interest rates and terms, adjusted for any required balloon payments.

Documentation and Recordkeeping. Thrifts should retain adequate records to support both the initial value of the ESFRs and the value as of the last four quarters. At a minimum, the following information should be maintained for each group or pool of mortgages with ESFR: (1) original and current principal balances; (2) original and current book values of related ESFRs; (3) original and current prepayment speed estimates, with documentation; (4) normal servicing fee rates, if

obtained from other than a GSE then with supporting documentation; and (5) the original discount rate, with basis for its support. Thrifts should also maintain historical information regarding the actual prepayment experience for each pool. Records should substantiate the basis for and amounts of write-downs and other losses.

Purchased Mortgage Servicing Rights (PMSR)

Acquisition. PMSR may be acquired in two ways for accounting purposes: (1) through the purchase of the rights alone, where the seller retains the mortgages; and (2) by purchasing whole mortgages and allocating a portion of the acquisition costs to PMSR, as long as the purchaser has a definitive plan for the sale of the mortgages with servicing retained when they are acquired. SFAS No. 65 defines a definitive plan as follows: (1) the acquiror has obtained, before the purchase date, commitments from permanent investors to purchase the mortgages, or makes a commitment within a reasonable time (generally, within 30 days of the acquisition date) to sell the mortgages to permanent investors; and (2) the plan includes estimates of the purchase price and selling price.

In addition to the net interest spread between the mortgage coupon and the pass-through rate, the mortgage servicer usually obtains certain other unstated rights which have significant economic value. These rights include the opportunity to earn income by investing the float from collection of borrower payments (principal, interest, and escrows) before passing them through to the appropriate parties (investors who own the mortgage, taxing authorities, insurance companies, etc.). The servicer also receives ancillary income items such as late payment fees charged to borrowers and credit life insurance commissions. (Note that these rights may not be included in the determination of the book value of ESFR because ESFR is created via a credit to income rather than from an up-front payment to acquire the rights from an independent party, as is the case with PMSR. Income from these unstated rights is recognized on a cash basis as earned.)

When servicing rights are purchased, their cost is capitalized and classified as an intangible asset called PMSR. The purchase price represents the buyer's estimate of the present value of the future servicing fees net of servicing costs. The estimate encompasses such items as anticipated prepayment speeds, servicing costs, delinquency ratios, foreclosure costs, the cost of advances, escrow balances and the earnings thereon, ancillary income, and so on. The valuation of PMSR is thus far more complex and dependent on more assumptions than ESFR. Its recoverability should be closely monitored.

Amortization. SFAS No. 65 specifies that PMSR must be amortized in proportion to, and over the period of, estimated net servicing income (servicing revenue in excess of servicing costs). This proportional amortization requirement has generally been interpreted as allowing the use of either the level-yield (interest) method or the proportional cash flow approach. The proportional cash flow approach results in a slightly more rapid amortization.

When using the proportional cash flow approach, an amortization factor is computed each period by dividing the current period's net servicing income before amortization by the initial estimate of total net servicing income over the life of the asset. This ratio is then multiplied by the initial PMSR balance to arrive at the current period amortization expense.

In accordance with EITF No. 86-38A, the estimate of net servicing income must consider the effect of unanticipated prepayments. However, a write-down would not be required if estimated net servicing income exceeds the asset's carrying amount. The estimate of future net servicing income may be computed on a discounted or undiscounted basis. The effect of the unanticipated prepayments would result in an adjustment to the rate of amortization on a prospective basis consistent with the change in estimated future net servicing income. However, in order for PMSR to be included in regulatory capital, thrifts must measure impairment of PMSR using a discounted cash flow methodology for book value purposes, similar to that for ESFR.

Book Value. The FDIC's Final Rule on Capital Maintenance, and the OTS' Intangible Assets regulation, specify that a write-down of the book

value of PMSR must be made to the extent that the discounted value of future net cash flows is less than current book value. The discount rate used for this impairment analysis must be no less than the rate inherent in the asset at the time of acquisition, based on estimated net cash flow and the price paid on the purchase date. Thus, in order for a thrift's PMSR to be includable in regulatory capital, the book value must be tested for impairment on a discounted basis utilizing, at a minimum, the thrift's original internal rate of return implicit in the purchase price.

Sales. The contractual right to service mortgages represents a significant economic asset to thrifts. The servicing rights related to a thrift's originated mortgage portfolio are not recognized on the balance sheet, nor is the normal servicing fee portion when mortgages are sold with the servicing retained (OMSR), however, PMSR are recognized for these same assets when these rights are, in effect, purchased from a third party. If a thrift sells the rights to service its mortgages but retains the underlying mortgages, immediate income recognition of the sales price is not appropriate.

There may be cases where a thrift has purchased mortgages with a definitive plan for their subsequent sale with the servicing rights retained, so that a portion of the purchase price is allocated as PMSR. EITF No. 86-39, Gains from the Sale of Mortgage Loans with Servicing Rights Retained, specifies that if the mortgages are then sold at a gain, the gain must be offset against the previously recorded PMSR before any income statement gain can be recognized.

Origination and Commitment Fees

SFAS No. 91, Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases, provides the guidance in this area. The Statement has been in effect for fiscal years beginning after December of 1987 and, due to its significant impact on the thrift industry, this discussion assumes the reader has a basic understanding of SFAS No. 91 and only focuses on those aspects applicable to mortgage banking.

On mortgages held for sale, origination fees and direct origination costs should be deferred until the related mortgage is sold. Commitment fees received should generally be deferred and amortized into income as a yield adjustment unless the commitment expires unused, at which time the remaining unamortized fee is taken into income. However, if the probability of a mortgage commitment being exercised is remote, the fees may be taken into income on a straight-line basis over the commitment period. If this approach is utilized but the commitment is then exercised, the remaining unamortized fees are recognized over the life of the mortgage (until it is sold) as an adjustment to the yield. For commitment fees paid to investors to ensure the sale of the mortgages, SFAS No. 91 requires the fees to be expensed when the mortgages are sold or it becomes evident the commitment will expire unused.

Conclusion

Accounting for mortgage banking activities is a complex and evolving area. The accounting principles involved are technical, detailed, and the theory discussed is often difficult to apply in practice. Aggressive valuation assumptions and accounting practices will result in placing a thrift's capital at risk. While applying conservative valuation and accounting principles will not eliminate the market risks associated with mortgage banking, such practices will mitigate the adverse impact of market fluctuations on a thrift's capital.

REFERENCES

Statements of Financial Accounting Standards Board (FASB)

Statements of Financial Accounting Standards

No. 65	Accounting for Certain Mortgage Banking Activities
No. 77	Reporting by Transferors for Transfers of Receivables with Recourse
No. 91	Accounting for Non-refundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Cost of Leases

No. 115	Accounting for Certain Investments in Debt and Equity Securities

Emerging Issues Task Force (EITF) Consensuses

No. 84-21	Sale of Servicing, Loans Retained
No. 86-38	Implications of Mortgage Prepayments on Servicing Rights
No. 86-39	Gains from the Sale of Mortgage Loans With Servicing Rights Retained
No. 87-34	Subservicing Agreements
No. 88-11	Allocation of Recorded Investment When a Loan or Part of a Loan is Sold
No. 89-2	Maximum Maturity Guarantees on Transfers of Receivables with Recourse
No. 89-5	Sale of Mortgage Loan Servicing Rights
No. 92-2	Measuring Loss Accruals by Transferors for Transfers of Receivables with Recourse
No. 92-10	Loan Acquisitions Involving Table Funding Arrangements

Technical Bulletins

No. 87-3	Accounting for Mortgage Servicing Fees and Rights

American Institute of Certified Public Accountants (AICPA) Statement of Position

No. 90-3	Definition of the Term Substantially the Same for Holders of Debt
No. 90-3	Instruments, as Used in Certain Audit Guides and a Statement of Position

Office of Thrift Supervision Bulletins

TB 52	Supervisory Statement of Policy on Securities Activities

Mortgage Banking — Accounting Program

Examination Objectives

To determine if the thrift is in compliance with GAAP and OTS accounting requirements.

To determine if the thrift's accounting practices are safe and sound.

To determine if corrective action is needed to correct deficiencies.

Examination Procedures

Perform the following examination steps to ensure that the accounting related to mortgage banking activities complies with GAAP and regulatory requirements. Those steps that do not apply may be omitted; however, a notation should be made as to why they do not apply.

Level I

Wkp. Ref.

1. Review the thrift's mortgage portfolio to determine if mortgages are properly classified in accordance with management's stated intent:

   - Review OTS TB 52 for factors to be considered when evaluating whether the classification of mortgages is consistent with management's intent; and

   - For mortgages transferred in from the held-for-sale portfolio, determine that the mortgages were recorded at LOCOM as of the date of transfer to establish their new cost basis. Recompute accretion to date of the difference between the new cost basis and the mortgages' face amount as of the date of transfer.

2. Review the previous report of examination and all mortgage banking accounting-related exceptions noted and determine if management has taken appropriate corrective action.

3. Review the thrift's held-for-sale portfolio to:

   - Determine that the held-for-sale portfolio is reasonably segregated by type of mortgage;

   - Determine that the portfolio is properly carried at LOCOM. Verify that net

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unrealized gains in one type of mortgage are not used to offset unrealized losses on other types of mortgages; and

- If commitments for sale are in place, verify sales prices against transaction documents.

4. Review a representative sample of mortgage sales to:

   - Determine that the transactions qualify as sales rather than financings in accordance with SFAS No. 77;
   - Ascertain the existence and extent of potential recourse against the thrift. (Mortgage sale and servicing agreements generally address these recourse provisions);
   - Evaluate the adequacy of the liability due to recourse provisions in accordance with EITF No. 92-2; and
   - If the mortgages were previously purchased by the thrift and PMSR was recorded at the time, ensure that any gain on the sale is offset against PMSR before any gain is recognized.

5. For mortgage sales on which servicing rights have been retained and ESFRs recorded, review the thrift's method of calculating ESFR:

   - Determine if the normal servicing fee rates comply with GAAP and if they agree with the minimums established by the government-sponsored enterprises;
   - Verify that the thrift deducts the normal servicing fee and any guarantee fee in computing the ESFR;
   - Verify that no estimated float earnings or any ancillary income items are included in the computation of the ESFR;
   - Determine the method for establishing prepayment speed estimates and confirm that those estimates are reasonable and conform to Section 576, Servicing; and

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- Review the assumptions employed to derive the discount rate and ascertain if they were realistic and conformed to GAAP and industry practice at the time the mortgages were sold by the thrift and ESFR was recorded:

  — Is the discount rate less than the pass-through rate on the security before the June 1989 issue of EITF 88-11?

  — Is the discount rate below market rates after June 1989?

  — Are PMSR and ESFR recorded on the same mortgages? Does the accounting for this conform to GAAP? Is this practice unsafe and unsound in this situation?

6. Review the thrift's method of amortizing ESFR to verify that amortization is recorded using the level-yield (interest) method. (Use of a straight-line or balloon method is generally not appropriate.)

7. Determine whether the thrift reviews the ESFR book value at least quarterly in accordance with EITF No. 86-38 to test for impairment:

   - Verify that the same discount rate used to initially value the ESFR is utilized in discounting the estimated remaining cash flow;

   - Determine if actual prepayment speed experience on the underlying mortgages has exceeded the rate originally projected by the thrift when the ESFR asset was recorded. If so, verify that write-downs have been recorded and the rate of projected amortization has been accelerated;

   - Determine that prepayment speed projections have been adjusted to reflect current expectations. Ascertain that the speeds currently employed are reasonable in light of historical experience and current market projections; and

   - Verify that the book value of ESFR has not been written up in instances where actual prepayments have been slower than anticipated, but that the rate of amortization has been adjusted prospectively.

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8. Review the book value of PMSR to:

   - Verify that PMSR acquired via table funding arrangements meets the guidelines set forth in EITF No. 92-10;
   - Determine that amortization is recorded using one of the proportional methods as specified in SFAS No. 65. If the thrift uses another similar method, such as sum-of-the-years digits, verify that the result is not materially different;
   - Verify that amortization rates are adjusted prospectively to reflect differences between anticipated and actual prepayment speeds;
   - Verify that impairment tests are performed on at least a quarterly basis and that they utilize the original discount factors implicit in the price paid to acquire the rights;
   - Determine that the original discount factors implicit in the price paid to acquire the rights and prepayment speed projections are reasonable in light of historical experience and current market expectations; and
   - Ensure that charges against the book value of PMSR are recorded as the impairment tests dictate.

9. Review the fair market valuations performed on the thrift's PMSR portfolio:

   - Verify that the thrift is performing the requisite quarterly fair market valuation of its PMSR portfolio; and
   - If the book value of PMSR exceeds 25% of the thrift's core capital, verify that the required annual independent valuation has been obtained.

10. Review sales of servicing rights:

    - If the rights that were sold had previously been recorded on the balance sheet as ESFR or PMSR, ensure that the asset is written off before any gain or loss is recognized on the income statement; and

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- If the rights relate to mortgages that have been retained by the thrift, ensure that no immediate income statement recognition has taken place.

11. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

12. See Section 576, Servicing, for the checklist on the valuation of PMSR and limitations for its inclusion in regulatory capital.

13. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

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Accounting Matrix for Servicing Rights on Mortgage Loans

	Originated Mortgage Servicing Rights (OMSR)	**Purchased Mortgage Servicing Rights (PMSR)**	**Originated or Purchased [2] Excess Servicing Fee Receivable (ESFR)**
Asset Recognition Criteria	Prohibited [SFAS No. 65, ¶ 16]	Other Assets – PMSR [SFAS No. 65, ¶ 16-17]	Other Assets/Receivable - ESFR [SFAS No. 65, ¶ 11]
Asset Classification (i.e., tangible or intangible asset)	Intangible asset NOT reflected on balance sheet	Intangible asset reflected on balance sheet	Tangible Asset reflected on balance sheet
Asset Amortization Method	Not Applicable	Amortization "in proportion to, and over the period of estimated net servicing income (servicing revenue in excess of servicing costs)." [SFAS No. 65, ¶ 19. Also, see regulatory capital section below.]	Level-Yield Amortization method [Prevailing Practice]
Asset Impairment Test	Not Applicable	Impairment is determined by estimating the future net servicing income, on an undiscounted or discounted basis, depending on whether the entity uses discounting to evaluate other similar intangible assets. [EITF 86-38A]	Impairment is determined by discounting the estimated remaining future excess service fee revenue using the same discount factor used to calculate the original excess fee receivable. [EITF 86-38B]
Regulatory Capital Treatment	Not included in regulatory capital, Tangible Assets, Adjusted Tangible Assets or Risk-Weighted Assets' Off-Balance Sheet Conversion Items	Included in regulatory capital, Tangible Assets, Adjusted Tangible Assets, and Risk-Weighted Assets to lesser of: (1) 90% of fair value, (2) unamortized book value, or (3) 100 % of tangible capital (or 50% of core capital) before PMSR deduction.[1] Risk-weight in the 100 % category.	Included in regulatory capital, Tangible Assets, Adjusted Tangible Assets, and Risk-Weighted Assets without limit. Risk-weight in the 100% category

[1] Only PMSR subject to a 15-year maximum amortization period and evaluated on a discounted basis may be included in regulatory capital

[2] FASB staff have indicated that ESFR may be acquired through origination or as part of the allocation or purchased servicing rights into a normal servicing fee and an excess servicing fee portion.

INTRODUCTION AND OVERVIEW

The process of producing mortgages is usually referred to as production. It consists of two broad types, retail origination and wholesale or correspondent lending. Retail origination generally refers to retail lending directly to borrowers and consists of marketing to attract borrowers, taking the borrower's loan application, processing to obtain needed documentation, underwriting to ensure that the mortgage meets investor's standards, and finally closing where all documents are signed and the mortgage funds are disbursed. (Quality control is checked prior to closing for each mortgage and on a test sample basis after closing.)

During all of the origination stages, potential mortgages are referred to as being in the pipeline. Once mortgages leave the pipeline they either go directly to the thrift's investment portfolio or enter the warehouse where they are marketed in the secondary-mortgage market and shipped to the buyer. Successful mortgage originators must be efficient in their operations because the origination process itself has little significant profit. Most mortgage bankers profit either from the sale of the servicing or by building up a large servicing portfolio. (See Section 572, Profitability.)

Wholesale or correspondent production usually refers to the process of buying mortgages and their servicing from other originators and has two broad categories. The first is to buy closed mortgages, individually as they are closed or in bulk, and the second is called table funding mortgages. For purchases and table funding the buyer normally pays for both the individual mortgage and a servicing release or purchase fee for the servicing rights.

Table funding is the process of buying the originations of independent mortgage brokers by funding their mortgages at the closing and paying them a servicing release fee. (See Section 573, Accounting, for other table funding requirements.) The payment of a servicing release fee results in a significantly higher sales price for the originator/seller than the sale of the mortgage alone. The buyer, on the other hand, pays more for the mortgage and its servicing than for a retail origination, but does not have any origination costs.

Wholesale or correspondent production has a major accounting advantage over retail originations. Under generally accepted accounting principles (GAAP), mortgage originators can book only the excess portion of the value of servicing rights for mortgages originated directly with the borrowers. (The "normal servicing fee" portion is an off-balance sheet asset.) If the servicing rights are purchased, however, the entire purchase price or value of the servicing can be booked as an asset. (See Section 573, Accounting.)

For mortgage brokers the extra income from selling the servicing with the mortgages allows them to concentrate on originations. Most mortgage brokerage firms, but not all, specialize in mortgage originations while leaving the more clerical function of servicing to the larger servicing organizations. Mortgage brokers were not common until the late 1980s, but today they originate a large percentage of all new originations.

Retail Origination

The retail origination process should be viewed as a factory producing good quality mortgages that ideally have the highest possible resale value in the secondary mortgage market. Using standard FNMA/FHLMC approved forms and underwriting according to those organization's standards adds value to conventional mortgages because FNMA/FHLMC eligible mortgages are much more marketable. In fact, many thrifts go through the additional process of pooling and swapping their conventional mortgages for FNMA MBSs or FHLMC PCs and swapping their FHA/VA mortgages for GNMA MBSs to add value and marketability, even if the mortgages are intended for the thrift's investment portfolio. Should the investment needs of the thrift change FNMA

MBSs, FHLMC PCs, and GNMA MBSs are much more salable and will bring higher prices than private placements. (See Section 542, Mortgage-Backed Securities.)

Primary Marketing. Competition in the primary or retail mortgage production business is fierce and it forces most firms to offer very competitive interest rates and fees. Often the difference between success and failure is decided by customer service and quality control. Good customer service brings more business even if rates are the same and good quality control means more buyers who are willing to pay higher prices.

Application. Once a customer has responded to advertisements or marketing efforts through real estate brokers and makes an appointment to apply for a mortgage, the lender begins the application process. The application step involves filling in the mortgage application form giving all the information necessary to be able to properly evaluate the customer's and the property's qualifications for the mortgage sought. This includes type of mortgage and terms sought, property information, address and prior addresses, job information and salary history, other personal information, details of the proposed purchase, credit information, and a detailed financial statement showing all assets and liabilities. Standard application forms approved by FNMA/FHLMC are usually used for conventional mortgages and FHA or VA forms are used for those mortgages.

At the time of application, the applicant signs the completed application and authorizations for the originator to verify in writing his or her employment, salary, credit history, and deposits of money to be used in the proposed purchase, if applicable. Most lenders also collect an application fee to cover the cost of the appraisal and credit report. Also, at the time of application most lenders perform a very rough underwriting process to make sure that the borrower generally qualifies for the mortgage. Applicants that clearly do not qualify, for whatever reason, are usually discouraged from applying and paying the appraisal and credit report fees.

Processing. This includes sending out and following up for return of the written forms to verify employment, salary, and deposits. Also, a written credit report is obtained as well as any other documentation needed to support the application, such as copies of recent income tax returns. Another important step is requesting an appraisal, and a survey when appropriate, of the property to be purchased. A detailed system of procedures should be in place to facilitate the rapid processing of all mortgages using standard documentation approved by FNMA/FHLMC or the FHA/VA. Most processing delays occur as a result of the slow return of one or more of these documents.

Underwriting. The underwriting step includes evaluating all of the information gathered to decide if the requested mortgage qualifies according to the standards of the intended investor; usually FNMA/FHLMC for conventional conforming mortgages or FHA or VA for those mortgages. Generally, the proposed housing costs to income ratio should not be more than 28% and the proposed ratio of all debt payments to income should not be over 36%. If the mortgage amount is over 80% of the proposed purchase price or loan to value (LTV) ratio, private mortgage insurance (PMI) is usually required by FNMA/FHLMC and it must be approved in advance by one of the PMI companies. PMI premiums are charged to the borrower both at closing and on a monthly basis, and are usually added to the proposed mortgage payments in calculating ratios. Conventional mortgages up to 95% LTV are generally permitted by FNMA/FHLMC when the additional exposure to the lender is covered by higher amounts of PMI. However, FNMA and FHLMC both feel that high LTV ratios are the single largest contributor to mortgage defaults and thus they have stricter underwriting requirements for 95% LTV mortgages.

Proposed FHA/VA properties must be appraised and their mortgages must be underwritten and approved by those agencies prior to closing. Generally FHA will insure a higher LTV ratio than conventional mortgages, often as high as 97%, but it charges a fee at closing and usually a monthly mortgage insurance premium (MMI or MIP). VA guarantees mortgages up to 100% LTV and does not charge the veteran for this service.

Once an application has been approved by everyone required, it enters the closing phase. If, however, the application is denied, a formal disclosure and notification to the applicant must be made. Credit denial letters must state the reasons for denial and the source of the information that caused denial. (See RESPA in the Compliance Handbook.)

Closing. Once the applicant has been approved, the mortgage enters the closing process. First, a title search of the property to be purchased or refinanced and other needed legal assistance are arranged. Mortgage document preparation is then performed by or coordinated with the closing attorney who usually prepares the closing statement, when needed. A preclosing checklist should be utilized by the originator or attorney to catch missing or incorrect documents before any funds are disbursed.

On the closing date, all documents are executed including the purchase deed by the seller and the mortgage, note, closing statements, and all supporting documents by the buyer/borrower. The mortgage is then funded and funds are distributed to all appropriate parties including sending the deed and mortgage to the register's office for recording. Also, a computer servicing file is established if this has not already been done during the origination process. In addition, an escrow account for the payment of taxes and insurance meeting RESPA limits and state payment of interest requirements is established. Until the recorded mortgage is returned to the originator, the mortgage remains incomplete and the disbursed loan funds are referred to as loans in process.

Warehouse. Once the mortgage has returned from the register's office the mortgage servicing file, tax and insurance files, and microfilm records are all established. The mortgage file is not complete, however, until the final title insurance policy is received from the title insurance company insuring that the lender has a first (or second, when appropriate) mortgage. At this point the originator executes its strategy of either keeping the mortgage in its own portfolio, selling it into the secondary market but retaining the servicing, or selling both the mortgage and its servicing. (See Section 572, Profitability.) If the decision is to sell the mortgage, it leaves the mortgage originator's pipeline and enters the warehouse while it is marketed in the secondary mortgage market. (See Section 575, Secondary Marketing.)

Shipping. Once sale in the secondary mortgage market is finalized, the mortgage is shipped to the buyer or closing agent. After copies of all documents are made for its files, the originator packages all of the original mortgage documents with copies of other supporting documents and delivers these to the buyer or in some cases the new servicer.

Low-Doc or No-Doc Mortgages. Low-documentation mortgages are sometimes made available to borrowers with high down payments and correspondingly low LTV ratios. The processing for these mortgages omits many of the written verification and documentation procedures of normal mortgage processing. No-documentation mortgages omit virtually all of these documentation steps. Experience has shown that the increased down payment needed to qualify for these mortgages is not always adequate to ensure quality and, therefore, such mortgages generally have a reduced market value.

Multifamily and Commercial Mortgages. These mortgages are usually originated only for specific investor purchase commitments. This is because terms and conditions vary so widely within the industry and because the danger of being left with large unsalable mortgages presents enormous risk. Additionally, most of these large mortgages are closed simultaneously with the investor purchase and funding so that the originator takes no closing or warehouse risks.

Wholesale or Correspondent Production

The critical two issues for the wholesale mortgage buyer or wholesaler, whether the mortgages are purchased individually or in bulk, are to buy mortgages that meet their mortgage banking strategy and to ensure that those mortgages are of adequate quality to meet investors' requirements.

Approval of Outside Originators. Prior to purchasing mortgages from an originator that is new to the thrift, certain basic steps should be performed. The thrift should:

- Check with other purchasers as to the quality of their mortgages;
- Review their financial and operating statements;
- Check their good standing with FNMA, FHLMC, GNMA, and HUD (when applicable);
- Check their delinquency, default, and foreclosure rates and trends;
- Look for documentation, underwriting, or repurchase problems; and
- Check for any non-delivery histories or other problems.

In addition to these checks, formal purchase and sale agreements should be executed between the thrift and its prospective outside originators governing all aspects of the mortgages to be purchased, due diligence procedures, quality control, and the details of the proposed sales. These agreements should also provide the thrift with repurchase protection from the seller for mortgages with missing documentation, underwriting or servicing errors, and delinquency at the time of sale. A failure to follow these basic safeguards has resulted in large losses in the past for some thrifts.

Bulk Purchases. For bulk purchases of existing mortgage portfolios the buyer usually performs due diligence procedures on the mortgages being purchased. This generally occurs after the purchase is negotiated, but prior to its closing. Due diligence procedures vary widely, but the sample checked should use procedures that: (1) are similar to the post-closing quality control checks used in the origination process to check individual mortgages; (2) check historical delinquencies, foreclosures, and prepayment rates, as well as other general problems; and (3) check the quality of the servicer to spot areas of neglect and inadequate servicing.

Individual or Flow Purchases. Mortgages that are purchased individually or in small groups as they are produced are called flow purchases. The resulting servicing after the individual mortgages are sold is called flow servicing. Such mortgages should be reunderwritten at delivery and before funding by the thrift; or if that is not possible, they should be reunderwritten shortly after purchase and the seller held responsible for errors and defects.

Table Funded Purchases. These mortgages are new and they are purchased individually, therefore, the thrift should reunderwite them prior to funding or soon thereafter. Although table funded servicing is a common practice today, GAAP only recognized the practice of separately booking the servicing released fee as the servicing purchase price in the Fall of 1992. EITF No. 92-10 gives several important requirements that must be met for the servicing release fee to be treated as the servicing purchase price; the most important of these being originator independence and sales to other buyers. (See Section 573, Accounting.)

In general the quality of mortgages purchased from mortgage brokers and other sources has become an issue for mortgage bankers and for FNMA and FHLMC. Statistics have shown that mortgages originated by some, but not all, of these sources have not been of the same quality as those originated by in-house lenders. The risk of mortgage defects, underwriting errors, and poor quality mortgages increases for mortgages purchased to the extent that the wholesale purchaser relies on another company's employees to correctly process and underwrite mortgages. Wholesalers should be aware that FNMA and FHLMC look to the seller/servicer and not the originator if problems or errors in origination are discovered.

Quality Control

In order for the quality control function to be effective, standardized checklists, procedures, tests, and necessary corrective actions must receive management's full support and attention. A reputation as a lender producing incomplete or erroneous files, nonconforming mortgages, or high levels of delinquency and foreclosures will eventually lose the originator business, revenue, and possibly investor approval.

Prefunding. The originator should emphasize quality control throughout the mortgage origination process. The most important of these checks

should be the prefunding checklists that should be used regularly to check for missing documents and conformance with the major underwriting requirements. Different types of checklists should be used before the files go to the closing attorney and just prior to closing, when applicable. Special attention should be given to mortgages originated by personnel paid by commission since these tend to have higher rates of underwriting problems.

Post-Closing. Post-closing quality control is the final step to verify that the mortgage origination is routinely complying with all documentation, consumer protection, legal, and investor requirements in originating mortgages. In order to ensure adequate quality control checks that also meet investor's requirements, statistically random samples meeting FNMA/FHLMC standards should be developed on each month's production and those samples reviewed to determine quality and conformance with investor requirements. FNMA/FHLMC generally require a 10% post-closing sample of production, but this is the minimum acceptable. Other quality control requirements and those of other investors should also be taken into consideration.

Purchases and Table Funded Mortgages. Bulk purchases without thorough preclosing due diligence checks should be subjected to more intensive sampling and fraud checks than mortgages originated in house because of the additional risks imposed by unknown origination employees. Table funded mortgages should also be subject to extra quality control measures on individual purchases such as performing prefunding underwriting and checklists, increasing the post-closing sampling percentage, and increasing the fraud reviews. Repurchase agreements from sellers for mortgage underwriting or documentation defects should not be the sole basis of purchase or table funding quality control.

Reporting and Fraud Reviews. The quality control group must be independent and report directly to senior management since it reviews the functions of all other areas. Regular reports to senior management should disclose noted areas of operational deficiencies at all steps in the origination process, and management should follow up with corrective efforts. Also, the quality control group should review applications and closed mortgages for fraud and make criminal referrals regarding discovery of any fraud. Quality control personnel should create regular management reports on checks for fraud or investigations in that area.

Regulatory Concerns

The primary regulatory concerns of mortgage production based on OTS experience to date are:

Lack of Accurate and Timely Pipeline Data. In order to properly plan for IRR, secondary marketing, production capacity, and quality control, management must have accurate up-to-date information on the pipeline in each phase of the production cycle.

Operational Risks. This refers to thrifts that become excessively reliant on origination income or to thrift's that have an excessive fixed investment in mortgage originations or both. Since mortgage banking is highly cyclical, such thrifts are excessively vulnerable to drops in the overall level of originations.

Nonconforming Mortgages. By originating mortgages that do not meet FNMA/FHLMC requirements, even if those mortgages are for the thrift's investment portfolio, the originator runs the risk of not being able to sell the mortgages if investment or secondary marketing needs change rapidly. If nonconforming mortgages are, as a practice, made for the thrift's investment portfolio, then the entire thrift's mortgage portfolio is worth significantly less than would be the case for conforming mortgages.

Poor Mortgage Quality or Quality Control. Thrift's that produce mortgages with consistently higher rates of missing documentation, errors in underwriting, or above average default rates will be forced to accept lower prices for their mortgages or will lose the ability to sell their mortgages at any price. Failure to test an adequate percentage of mortgage production, to report deficiencies to management, or to take corrective measures is a major regulatory concern.

Book Values. Since mortgages held for sale must be marked to market value, the warehouse held for sale versus portfolio investment distinction is

important. Some thrifts attempt to avoid the mark-to-market requirements for warehouse mortgages by falsely classifying almost all of their mortgages as portfolio investments. To check for this practice, the level of mortgages reported in the warehouse awaiting sale should be compared to, and should equal approximately the amount needed to support historical sales amounts. Also, examiners should verify that unsalable or below-market mortgages put into the thrift's investment portfolio are transferred to the thrift's portfolio at no more than their market value. (See Section 573, Accounting.)

Inadequate Separation of Portfolio and Mortgage Banking Activities. These two activities must be separated to achieve their different objectives and to determine both the fixed and marginal costs of origination for both operations. While it is possible to have one mortgage production area used by both operations, if this approach is used, the investment needs of the thrift's portfolio must be determined, tracked, and documented separately. Also, the investment needs of the portfolio should not govern mortgage banking originations.

Below Market and Unresponsive Pricing. The incremental costs of maintaining or increasing market share by originating mortgages at below-market interest rates should be considered origination costs even though they show up as losses on sale. Normally such costs far outweigh the benefits. Also, retail interest rates that are not quickly changed to correspond to secondary market changes can produce additional secondary marketing losses.

Long Interest-Rate Lock-In Periods. Since IRR is created from the date that the interest rate on a new mortgage is locked in for the borrower until closing, the longer this period the greater the potential for IRR losses. Because IRR for mortgages in the pipeline is so large, it should be hedged or covered by forward commitments to limit the worst case loss potential.

Failure to Investigate, Monitor, and Underwrite Mortgage Sellers. Since buyers of mortgages are exposed to losses from underwriting, processing, closing, and servicing of mortgages by the originators, these areas must be constantly monitored. Adequate due diligence and prepurchase underwriting should be employed to spot problems before purchase.

Conclusion

The consistent production of high quality mortgages that meet the investment and secondary marketing strategies of the thrift is the primary goal of the production function. Production of mortgages is also the basis for all mortgage banking activities and to some extent the quality of the mortgages produced affects the success of secondary marketing, servicing, accounting, and ultimately, profitability.

REFERENCES

Financial Accounting Standards Board (FASB), Emerging Issues Task Force (EITF)

No. 92-10	Loan Acquisitions Involving Table Funding Arrangements

Mortgage Banking — Production Program

Examination Objectives

To assess the quality control, internal controls, and risks of the thrift's mortgage banking production area.

To review the correspondent mortgage banking relationships for areas of risk.

Examination Procedures

Perform the following examination steps to ensure that the mortgage banking activities are profitable and not a drain on the thrift. Those steps that do not apply may be omitted; however, a notation should be made as to why they do not apply.

Level I

Wkp. Ref.

1. Review organization charts to determine the structure of the production function and its status within the thrift. Verify that the underwriting and quality control units are independent functions.

2. Review the previous report of examination and all mortgage banking production-related exceptions noted and determine if management has taken appropriate corrective action.

3. Determine the types of mortgage products offered and the company's target markets. Evaluate portfolio trends for overreliance on one product type and undue concentrations in one geographic area.

4. Review policies and procedures for retail origination and the extent to which they are being followed. Review the mortgage pricing policies for reasonableness and responsiveness to changes in the secondary mortgage market.

5. Determine if the thrift:

   - Has become excessively reliant on production income;

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- Has excessive amounts invested in fixed assets for production;
- Is originating a level of unsalable or nonconforming mortgages that is excessive; and
- Has interest-rate lock-in periods that are excessively long.

6. Determine whether commercial or multifamily mortgages are originated without specific written commitments. Determine if large commercial or multifamily mortgages are closed before the investor purchase.

7. Review policies and procedures for wholesale purchases. Determine purchase pricing policies and compare them to market prices. Determine whether purchase agreements are utilized and if they are adequate. Determine if the thrift has become excessively exposed to any one or two correspondents.

8. Review the method for approving mortgage brokers and specific programs under which mortgages are purchased. Determine whether there is an approved list of brokers; how it is updated; and how exceptions are made to the list, by whom, and under what authority.

9. Review the list of wholesale sources of mortgages. For each source, determine if the following were reviewed prior to purchases:

- References;
- Credit report;
- Financial and operating statements;
- HUD/FNMA/FHLMC/GNMA/PMI status;
- Delinquency, default, and foreclosure rates and trends;

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- Documentation deficiencies; and
- Nondelivery and history of other problems.

10. Determine if individual wholesale purchases are reunderwritten at delivery. If so, determine whether funding is delayed until reunderwriting is complete.

11. Determine if wholesale purchases are tracked by seller and if any seller has excessive delinquency, default, or documentation errors. Determine if those mortgages are repurchased or corrected by the sellers.

12. Determine if the book values assigned to PMSR from table funding purchases are in excess of approximate market values for similar PMSR.

13. Determine how MIS tracks mortgages through all the phases of mortgage production and if these systems are adequate. Determine if the mortgage type and production channel are tracked. Determine if exception reports are generated and monitored by management.

14. Evaluate procedures, checklists, and systems for closing mortgages. Determine if: (1) checklists are carefully observed; (2) all required documents are obtained from the borrower before funds are disbursed; and (3) suspense reports are prepared and monitored.

15. Determine if FNMA/FHLMC approved documents are used. Determine if the escrow accounts and closing documents conform to RESPA requirements and limitations.

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16. Review the post-closing procedures and determine if missing checklist items, final recorded mortgages, and final mortgage title policies (without serious exceptions) have been obtained.

17. Review the quality control function and determine if it meets investor guidelines for scope, timeliness, content, and independence and if it covers both retail and wholesale production.

18. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

19. Review a sample of reports issued by the quality control unit to determine if conclusions are adequately documented and communicated to management of the organization in a timely manner.

20. Determine if follow-up is performed by the quality control unit to ensure prompt and satisfactory correction of noted deficiencies and weaknesses in the retail origination process.

21. Determine if the quality control group samples wholesale purchases and if that sampling is adequate to protect the thrift. Determine the exceptions noted and whether they have been corrected.

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22. Determine if the fraud unit promptly investigates and effectively resolves fraud referral cases and that criminal referrals are promptly submitted. Review the effectiveness of the fraud unit's training program.

23. Evaluate the thrift's early warning system for detecting potential fraud and if management information systems (MIS) are adequate in this area.

24. See Section 573, Accounting, to determine if all five accounting requirements for table funded mortgages are being met on mortgages funded where PMSR is recorded.

25. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

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INTRODUCTION

The secondary mortgage market is the largest and fastest growing segment of the U.S. capital markets. Its growth was greatly accelerated in the 1980s because of the need for thrifts and other depository institutions to reduce their level of interest-rate risk (IRR) by selling much of their long-term fixed-rate mortgage production. As a result, most residential mortgages are tailored so that they are capable of being traded in the secondary market.

A distinction should be made between the retail or primary and the secondary mortgage market. The retail market encompasses mortgages originated directly between lenders and borrowers and is discussed in detail in Section 574, Production. The secondary mortgage market encompasses the sale or purchase of mortgages after they have been closed. In all of its many forms, the secondary mortgage market provides mortgage lenders with an outlet for their mortgages and provides investors a means of investing in mortgages without the necessity of originating or servicing mortgages themselves.

Today, mortgages are usually sold by mortgage banking originators and portfolio lenders such as thrifts. These sales occur either in the normal course of business or only as the need arises. Mortgages and more commonly mortgage-backed securities (MBSs) (see Section 542, Mortgage-Backed Securities) are bought by pension funds, insurance companies, and other institutional investors to satisfy their investment needs.

After a mortgage is closed and the final documents are received, a mortgage leaves the pipeline and enters what mortgage bankers call the warehouse, where it is either held for sale and marketed to investors, or shipped to a prearranged buyer. For many thrifts the mortgage bypasses the warehouse and directly enters the thrift's investment portfolio. When mortgages in the warehouse are sold, their documents, including the endorsed note, are usually shipped to the investor or a third-party document custodian. Copies of all documents, however, should remain in the file that is retained by the seller/servicer. The servicing on mortgages can then be sold for a quick profit or retained to build up a servicing portfolio.

While mortgages are being held in the warehouse, but before a contract has been signed agreeing to their sale price and terms, the thrift bears an enormous risk of the mortgages going down in value as a result of changes in overall interest rates or merely changes in the secondary mortgage market. How a thrift mortgage banking operation handles and hopefully minimizes this IRR risk is a primary concern of examiners.

Mortgage Sales

Mortgages are often sold directly to other thrifts, institutional investors, and to FNMA and FHLMC. GNMA does not buy mortgages as such, but guarantees MBS in exchange for the title to FHA, FmHA, and VA mortgages that are pooled by its issuer/servicers. Direct sales to other thrifts and institutional investors are the simplest and most traditional form of secondary marketing for thrifts. This is usually done on a servicing retained basis where the thrift continues to service the mortgages for the buyer. The servicing thrift often retains a small participation ownership in the mortgages being serviced.

Sales Using FNMA, FHLMC, or GNMA

On sales to FNMA or FHLMC there is usually no negotiation of sales terms, servicing fees, or requirements. Most direct sales are done through their standard programs at posted yields. The purchase and subsequent servicing of the mortgages sold to FNMA and FHLMC under these programs is dictated by their seller/servicer contracts (which are not negotiable), the type of sales program, and their selling and servicing guides. FNMA and FHLMC, however, do negotiate prices and terms for large purchases, called negotiated transactions. GNMA sale and servicing

requirements are stated in their MBS Issuer Guides.

Other than direct sale, the main method for selling mortgages is by swapping them for the MBSs of FNMA and GNMA or the PCs of FHLMC. To execute a swap with FNMA and FHLMC, sellers pool a group of similar mortgages that meet the specific program requirements. Then they ship the required documents that transfer title to those mortgages in exchange for the MBS or PC that the organization then issues to the seller or for cash. If the seller chooses to receive the securities instead of cash, the seller is then free to sell them in the mortgage securities market, hold them for later resale, or hold them as investments. Mortgage securities can be sold through the use of mortgage brokers, to FNMA or FHLMC, or directly to investors. (See Section 542, Mortgage-Backed Securities.)

Investors in MBSs or PCs receive monthly payments of principle and interest either directly from the servicer or, more typically, through the issuing organization or a central bank. MBSs timely repayment is guaranteed by the issuing organizations, FNMA, FHLMC, or GNMA. It is the timely repayment guarantee of these AAA rated organizations that allows their MBSs to be sold at a significant price advantage over the same mortgages sold directly to investors. This is in spite of the cost of the guarantee fee that must be paid monthly by the servicer of the MBSs or PCs. Some thrifts put all of their mortgages into FNMA, FHLMC, or GNMA MBSs or PCs even if they intend to hold them in their portfolio because the MBS form is more valuable and allows quicker sales than nonsecuritized mortgages should the thrift ever need to sell those mortgages.

In order to do business with any of these three organizations the first step is to become approved seller/servicers by meeting their financial strength and other requirements and by signing their seller/servicer contracts. These contracts require the seller/servicer to follow their Guides as they now exist or as they may be amended in the future.

Although there is still no central marketplace for trading mortgages, quotations from dealers and brokers for mortgage securities are generally close. This is because the market for mortgage securities is deep and liquid. As a direct outcome of the involvement of Wall Street in the secondary mortgage market, pricing in both the primary and secondary mortgage markets has become closely tied to the mortgage securities market. Brokers not only sell the original securities to investors, but also sell securities between investors and other clients.

Mortgage sales in the secondary market are usually accomplished through the sale and purchase of commitments, which are agreements to purchase mortgages on specific terms. Commitments can be for mandatory or optional delivery of the mortgages. Mandatory delivery commitments may be immediate (delivery within 30 days) or forward (delivery within some specified future time). Optional or standby delivery commitments are generally of the forward type and normally extend four months or more.

FNMA and FHLMC purchase mortgages through the commitment system both for their own portfolios and for resale. They pool mortgages that they own to sell them as mortgage securities, and they swap their mortgage securities with lenders in exchange for mortgages under many different programs.

In addition to the cost of the commitment, the seller is often charged one or more points and other fees at the time the mortgages are delivered, depending on the terms of the commitment. The interest rate of the mortgage, plus or minus the yield value of any points (or discount), less the servicing and guarantee fees, is usually equal to the investor's net yield. The exact meaning of these terms can vary and, therefore, should be carefully explained in each commitment.

A major contributor to increased mortgage liquidity and secondary market volume has been the use of standardized mortgage documentation. Thus, the use of the FNMA/FHLMC standard note, mortgage or deed of trust, application, verifications, and appraisal forms has become almost mandatory for mortgage sellers. Unless there are commitments that specify otherwise, mortgage bankers use the FNMA/FHLMC standard documentation for all originations because the use of other documentation significantly lowers the

other documentation significantly lowers the market value of the mortgages. These documents are available for most mortgage types and for every state and territory of the United States.

Some investors who are large purchasers of ARM products require the use of their mortgages and notes. This is particularly true for large ARM forward commitments. Even when other mortgages and notes are used, it is customary to use the remaining FNMA/FHLMC standard forms for the application, verifications, and appraisal.

Mortgage Sale Categories. There are an infinite variety of mortgage sale terms, however, these are the general categories:

- Whole mortgage sales are the sale of the entire mortgage at an agreed upon price. In whole mortgage sales the seller usually endorses the note, without recourse or guarantee, and delivers it to the buyer with an assignment. The assignment is then usually recorded at the buyer's request. The buyer normally receives all of the original mortgage documents such as the application, credit report, verifications, and appraisal.

- Servicing-released sales sell the servicing rights in addition to the mortgages and they are usually only for whole loan sales. For the seller they increase the sales price of the mortgages, but do not add to the servicing portfolio. When mortgages are sold with servicing released, the transaction is often priced separately, with servicing treated as a separate asset and priced according to its anticipated value.

- Participation sales are the sale of a percentage interest in the mortgages and is the sales method often preferred between thrifts. Typically, the buyer purchases 85% to 95% of the mortgage balance and the seller retains the remainder. Buyers prefer this method because the retainage of 5% to 15% by the seller/servicer tends to encourage good servicing. Mortgage bankers, however, rarely use this method because they do not have the capital or the deposits that permit this type of investment. Participation sales are usually executed by a sales agreement rather than by delivery of notes and assignments, and the seller usually continues as owner of record.

- Recourse sales or repurchase agreements transfer 100% ownership of the mortgage, but the seller agrees to either repurchase mortgages that go into default or absorb any foreclosure losses. Since the buyer is protected from loss, such sales bring higher prices for the seller, however, the seller has not transferred the risks. From the buyers standpoint the loss protection is only as good as the seller's performance.

These types of sales are not true sales in that the risks and rewards of ownership have not gone from the seller to the buyer. Because the seller still retains the risks of loss on this type of sale, OTS requires risk-based capital on the entire amount of the mortgages, just as if the thrift still owned them.

- Partial recourse sales are different from full recourse sales in that the seller retains only a portion of the risks.

- Guaranteed yield sales guarantee the buyer a certain yield from the mortgages outstanding in any month, regardless of the actual performance of the mortgages. Instead of receiving the actual amount of mortgage principal and interest collections each month, the buyer receives interest sufficient to produce the guaranteed yield even if that much interest was not collected. If guaranteed yield sales specify a yield to the investor in excess of the net yield of the mortgages sold, the seller suffers a loss on the sale. The operating effect of the transaction is that a loss is incurred each month for the life of the mortgages by the seller/servicer as the required interest is remitted to the investor. For accounting purposes, however, the seller must estimate the present value of the future loss and reduce the sales price of the mortgages sold by that total at the time of sale. (See Section 573, Accounting.)

Effect of Points or Discount on Yield. Mortgage investors usually specify their required yield in their commitments. Together with the interest rate

of the mortgage and the assumed prepayment rate, this required yield determines the price paid (premium or discount of the mortgage amount) by the buyer at delivery. Generally, the higher the yield required the less price or percentage the mortgage is worth (i.e., a price of 95 is equal to 95% of the mortgage principal balance or a discount of 5%).

The yield difference represented by one point or percentage in price is not a constant, but varies accordingly to the interest rate of the mortgage and the prepayment assumption. If the mortgages pay off earlier than assumed, the investor's actual yield will be higher for discounted mortgages and lower for mortgages purchased at a premium. If actual payoffs are slower, the opposite is true.

Pipeline and Warehouse Risk Management

Examiners will find that much of their time spent in examining a thrift's mortgage banking activities will be in the area of pipeline and warehouse risk management. It is critically important that a thrift's IRR is controlled, especially if the thrift's average pipeline volume is significant relative to its capital.

The term pipeline is typically used to describe mortgages that are in the process of being originated, while warehouse refers to the inventory of mortgages that have been closed and are awaiting sale in the secondary market. Making a distinction between the pipeline and the warehouse is important because the risks of mortgages that are already closed differ from those that have not, and might not, close. (For accounting purposes warehouse mortgages should be designated by the thrift as held for sale. See Section 573, Accounting.)

Assessing Types of Risk

Thrifts can only identify and quantify the nature of their risks if they have up to date and accurate data on the mortgages in their pipeline. The three major types of risk involved are price risk, product risk, and fallout risk.

Price Risk. The risk that a rise in market interest rates will decrease the value of a mortgage before it can be sold. This type of risk often occurs when a thrift commits to a borrower to lock in an interest rate during the origination process and market interest rates go up before the mortgage can be closed and sold. Price risk equally arises when mortgages are placed in the warehouse without locking in an interest rate for their eventual sale in the secondary market.

Reverse Price Risk. The risk that occurs when a commitment to sell a mortgage to an investor at a set yield is made prior to closing the mortgage. While both types of price risk result from mismatched commitment timing, reverse price risk exposes a thrift to the risk of falling, rather than rising, interest rates. This is because if interest rates fall borrowers will demand the new lower rates or they will take their mortgage applications elsewhere to get the lower rates. In this case, the thrift must deliver the lower interest-rate mortgages at a discount to provide the investor with the required yield.

Product Risk. Product risk reflects the uncertainty of whether the market value of a particular type of mortgage will decrease before it can be sold. This is because the value of a given type of mortgage can change even when market interest rates remain constant. It often occurs when an originator has an unusual type of mortgage in its pipeline or warehouse, for which it has not obtained a sales commitment or otherwise effectively hedged its value. Product risk can be considered a special form of price risk, because presumably a lender can always find an investor for a nonstandard mortgage, but only at the increased yields produced by lower prices.

The proliferation of new mortgage products in recent years has resulted in some mortgage products moving quickly in and out of favor with borrowers and investors, usually depending on the interest rate environment. As a result, market yields for particular products can vary greatly from the general level of rates.

Fallout Risk. The risk that mortgages in the pipeline will not close. Fallout can result in diminished profits or losses if the originator overhedges its pipeline. Mortgages in the pipeline do not close for a large variety of reasons, but borrower failure to close is particularly common when interest rates fall and opportunities arise for

borrowers to obtain better interest rates. Fallout risk is probably the most difficult type of risk for thrifts to gauge and hedge.

Hedging Pipeline and Warehouse Risk

The task of hedging the mortgage pipeline requires the continuous collection and consideration of information about the mortgages in the pipeline and warehouse. This includes types of mortgages and properties, profiles of borrowers, loan-to-value ratios (LTVs), the potential for borrower fallout, the status of closings, and forecasts regarding interest rates.

Any active mortgage banking operation of significant size should have a formal decision making process for hedging the pipeline and warehouse that is cohesively linked with the risk management for the whole thrift. This process should consist of: (1) a procedure for identifying and segmenting risks in the warehouse and pipeline; (2) a specified risk exposure limit that is linked to the risk-management operations of the whole thrift (usually via the assets and liabilities committee (ALCO)); and (3) a written secondary marketing policy approved by the board of directors.

Risk Identification and Segmentation. In general, a thrift should segment the risk in its mortgage pipeline and warehouse according to the certainty of mortgage closures. The risks of mortgages in the warehouse not closing are known since these mortgages have already closed; therefore, the risks of the mortgages in the warehouse should be hedged with firm sale commitments such as forwards or futures. The extent of the risk exposure to be hedged is dependent upon the thrift's chosen exposure or coverage ratio which should be specified in writing in the secondary marketing policies approved by the board.

The risk in the pipeline is determined by identifying the expected closure rates on the mortgages and segmenting the pipeline according to the likelihood of closure. The closure rate is the inverse of the fallout rate, which is the rate at which mortgages are expected to drop out of the pipeline for all reasons. Thrifts should have a logical and consistent process in place to estimate fallout (or closure) rates on either an individual mortgage or percentage of pipeline basis. The procedure for predicting fallout (usually based on historical experience) should be specified as a policy matter in the secondary marketing policy.

The mortgages in a pipeline should be segmented into at least three different categories of fallout (or closure) expectancy:

- High fallout likely means that a portion of the pipeline will not close regardless of the directional movement in interest rates or other factors. Included in this category are people who will not qualify for their mortgages, rate shoppers, and others who do not follow through with the origination process. Fallout rates in this category usually vary between 10% and 30%. This portion of the pipeline normally will not have any hedge protection.

- Unknown fallout rate means a portion of the pipeline will be uncertain as to fallout (or closure). Typically, this group of mortgages can be further segmented by those expected to fall out for reasons that are primarily related to movements in interest rates, and those whose fallout is related to other factors. The mortgages in the former category should be hedged with options, since the likelihood of closure is directly linked to the borrower's option on interest rates. Usually, at least half of the mortgages whose closure likelihood is tied to reasons other than movements in interest rates should also be hedged with options or firm commitments.

- Closure reasonably certain means that mortgages in the pipeline are reasonably certain to close should be further segmented into categories related to the likelihood of closure, on either an individual mortgage or a percentage of pipeline basis. Those mortgages that are identified as having a high closure expectancy should be hedged with firm commitments (forwards or futures), as with warehouse mortgages. Any portion of these mortgages that is uncertain as to closure should be lumped with the second category above and hedged with options.

A thrift with active mortgage banking operations should have: (1) a process to identify these segments of risk exposure in the pipeline; (2) a procedure for identifying expected pipeline fallout rates; and (3) management expertise to design, execute, and maintain an appropriate secondary marketing hedge program. All of these items should be explicitly addressed in a written and board approved secondary marketing policy.

Exposure Rate

The exposure rate is the extent to which the mortgage product exceeds the total hedge protection. It is the net amount of aggregate risk to which the thrift is exposed from its mortgage origination operations. The exposure rate is the inverse of the coverage rate, which is the portion of the portfolio that has been covered by hedge protection at any point in time.

A thrift engaged in mortgage banking activities should have a detailed exposure report that identifies the risks in the pipeline, broken down by firm and optional risks. The hedge protection used to cover the firm and optional risks should also be specified. The summary section of this report should present the operation's overall exposure (or coverage) rate. Incomplete, untimely, or otherwise inadequate exposure reports should be considered a major problem.

Thrifts vary in the extent to which the pipeline and warehouse risks are hedged. Since the warehouse and pipeline are subject to mark-to-market accounting, there are income volatility considerations in a mortgage banking operation that do not exist in a traditional thrift under historical cost accounting. As a result, it is usually preferable for thrifts to have too much coverage (low exposure) rather than too little for the warehouse and pipeline risks. A high coverage (low exposure) rate is typically 85-100% (0-15%) of the total pipeline less fallout.

Limits or targets for the overall exposure (or coverage) rate, or a process or formula for determining them, should be specified in the board-approved policy. This is crucial for thrifts with mortgage banking operations since these limits are a direct reflection of the board's desire to accept this type of risk. It is also a critical element of control with respect to secondary marketing operations.

The exposure (or coverage) rate should also be monitored by and linked to the thrift's overall IRR management operations. Secondary marketing functions that operate in a vacuum or independent from the other risk-management elements of the thrift are a serious problem.

In practice, the exposure rate is varied according to management's view regarding expected changes in interest rates. If interest rates are expected to decline (mortgage prices expected to rise), management may choose to increase the exposure rate (reduce the coverage rate), and vice versa if a rate rise is expected. If management anticipates that the yield curve will remain positive, it also may choose to reduce the coverage rate in hopes that the positive carry from the portfolio between origination and sale will overcome any loss on the sale.

Secondary-Marketing Policy

Thrifts with mortgage banking operations should have a board approved secondary marketing policy that provides the structure for the function's decision making process. Thrifts that do not have a secondary marketing policy, or thrifts whose policy is weak or ineffective should be considered as having a major weakness. Nonexistent or substantially inadequate policies are usually indicative of a fundamental lack of understanding of the risks involved in mortgage banking, which is usually an unsafe and unsound condition.

The secondary marketing policy should establish the parameters within which IRRs will be managed in the mortgage banking operation. It should state the objectives for the secondary marketing department, establish adequate internal controls, and describe the process by which risk will be controlled, as well as the types of financial instruments to be used in risk management. It is very important that the policy also link the secondary marketing/risk management process with the overall risk management for the thrift.

Hedges

Hedge Policies

The use of hedges should be carefully governed by board approved written policies that cover the objectives, functions, instruments to be used, authorizations, monitoring, and the internal controls needed to properly use them.

Objective. The objective section of the hedging policy should state that the goal is to control or limit the IRR caused by mortgage banking activities. Specific objectives stating the exposure limit(s) desired by the ALCO or the board of directors should also be addressed in this section.

Functions. The risk management functions of the hedging area should be stated in this section of the policy. These should include:

- Segment or stratify portfolio by product type, risk (i.e., probability of fallout), aging (stage in the pipeline), and other thrift criteria;
- Prepare a risk-exposure report (as frequently as possible);
- Design and implement hedges with approved instruments to offset the hedgable risks in the warehouse and pipeline;
- Prepare summary and status reports for the ALCO, management, and board (in addition to the risk-exposure report);
- Participate in the ALCO decision-making process and provide data to the ALCO function (the secondary marketing manager should be a member of the ALCO);
- Track fallout, the factors causing mortgages to fall out, and continually improve the ability to estimate fallout; and
- Monitor the financial condition of counterparties to hedges and originators from whom mortgages are purchased.

Internal Controls. Because of the highly specialized nature of the hedging function, and the substantial transaction volumes usually involved, internal controls should be adequate, and weaknesses should be considered serious. The written policies should specify guidelines, limits, and approvals for activities that present significant potential risk. These should include:

- List of board-approved brokers, dealers, investors, originators, and others;
- Approvals for employees who are authorized to transact business with brokers, dealers, investors, mortgage originators, and other external market participants (letters should be sent to these organizations stating that only these employees can conduct business on behalf of the mortgage banking operation);
- Transaction limits for each authorized employee (dollar amounts per transaction, per day, per dealer, per instrument, or other criteria);
- List of approved instruments to be used in hedging operations, descriptions of how those instruments are to be used, and the risks that they will offset;
- Specifications for internal management reports to monitor hedge positions, new commitments, origination activity, quality control, etc.; and
- Procedures to control the concentration of risks with any one counterparty.

Description of Hedge Risks. The credit risks associated with: counterparties to hedge transactions and closure, settlement, or delivery related risks, should also be described in the policy, as well as the procedures to be used to offset these risks.

Hedge Instruments. There are various instruments that are used to hedge IRR in the secondary marketing area. The instruments used by a thrift should be approved by the board in the written policy, and the mortgage banking operation should have the requisite internal expertise to manage them. In addition to explicit board approval, the policy should describe the authorized instruments in detail, and the particular risk forms to which each instrument will be applied.

The two most often used hedges are forward sales agreements and options on interest-rate-futures contracts. These and other hedging instruments are described in Section 543, Derivative Instruments, and hedging secondary marketing operations is discussed in Section 541, Hedging.

Hedging Activity and Effectiveness

The activity in hedge instruments should be examined very closely in conjunction with commitment and origination activity. There are many hedging instruments or combinations of instruments that may not result in material risk reduction, or that may even exacerbate risk. The exposure report may, however, classify these as providing full hedge protection. Therefore, static management reports, which simply list the current notional amount of hedge protection relative to the warehouse and pipeline exposure, may not be representative of the underlying net exposure. The best framework for viewing secondary marketing related risks (and the impact of hedges in reducing risks) is to use a model and report format that performs a sensitivity analysis including all related positions (warehouse loans, commitments, and hedges).

The OTS NPV model (discussed below) is one such format for a report. The bottom line of the report represents the net warehouse and pipeline exposure after subtracting the impact of the hedges. Hedges can then be constructed and analyzed to offset the remaining exposure to the extent desired (within the bounds of the exposure limit). The OTS NPV model is also discussed further in Section 520, Interest Rate Risk Management.

The performance or effectiveness of the hedging operation can usually be gauged by analyzing the profitability of the secondary marketing department over time, by reviewing retrospective analyses of hedge correlation, and by reviewing management decisions and responses to market conditions over the examination period. Extreme income volatility in this function usually means that IRRs are not being properly hedged. The minutes of ALCO meetings and studies of transaction activity over time usually yield useful information about management's intent with regard to risk management, as well as the effectiveness of related decisions.

Forward Sales Agreement. The most common type of forward sale commitment is for cash and mandatory delivery. Under such commitments, usually with FNMA and FHLMC, the mortgage banking operation is obligated to sell mortgages to them at the posted yield, but there is usually no fee for the commitment. To meet the terms of the commitment the originator must deliver, at the required yields and before the expiration of the commitment period, eligible mortgages that meet all of the underwriting and legal criteria. Also, the mortgages must have aggregate unpaid principal balances that equal at least some specified percentage (usually 95%) of the commitment amount.

Forward sales of mortgages in the pipeline permit lenders to eliminate both the price and product risk by establishing simultaneously the terms of origination and sale. If both closing and delivering mortgages were a certainty, forward sales would represent a perfect arbitrage; that is, they would provide complete interest-rate protection and introduce no additional risks. Unfortunately, there is always the possibility of fallout during the origination process, especially if interest rates decrease substantially. In the event that a seller is unable to close and deliver mortgages at required yields, it may be liable for the pair-off costs of repurchasing mandatory delivery commitments.

Options on Interest-Rate Futures. Some thrifts are concerned that the pair-off costs arising from the failure to deliver mortgages into a forward sales agreement can be substantial. One method of reducing such risks is to purchase over-the-counter (OTC) mortgage options. For example, an originator may purchase an option to sell a FHLMC PC with a certain coupon at a specified price by a certain date. Here, the originator is long a put option, which is the most common option used to hedge a mortgage pipeline.

OTC mortgage options are traded in the dealer market. They are less liquid and have higher premiums than exchange traded options on U.S. Treasury futures. Mortgage options, however, have significantly less risk than options on Treas-

ury futures and they can be customized with respect to strike price and maturity.

Put options may be used in a hybrid strategy with forward contracts to hedge borrower fallout. For example, in a $10 million pipeline, if 20% of the pipeline is expected not to close, then the originator could purchase OTC options to sell $2 million in mortgages. The choice of strike price on these options is dictated by the degree of protection desired by the originator. For instance, an at-the-money option will provide greater protection than an out-of-the-money option. However, an at-the-money option would be obtained at a higher option premium. The trade off between the degree of protection and the price paid for the option, which is determined by its strike price, is similar to an automobile insurance deductible.

Pipeline and Warehouse Risk Exposure

Management Reports. To operate the mortgage banking operation safely, management must have current information detailing the mortgages in the pipeline and warehouse and projecting how those positions are likely to change in the short term. If there is a substantial volume of mortgages in the production process relative to capital, a stress test estimating the effect of worst case interest-rate shocks to the pipeline and warehouse should be calculated and compared to the maximum limits established by the board.

Net Portfolio Value (NPV) Model. The NPV model is used to assess the level of IRR for thrifts required to submit Schedule CMR of the Thrift Financial Report each quarter. When compared to the MVPE model used by the OTS in 1989-92, perhaps the most significant improvement is the model's ability to estimate IRR arising from off-balance-sheet contracts, including mortgages flowing through the pipeline and various hedging instruments. The improvement is from the higher level of specificity possible, in coding off-balance-sheet contracts on Schedule CMR, which also allows thrifts to include an estimate of its base case fallout rate. Unlike the MVPE model, which used a static assumption for fallout, the NPV model will estimate changes in fallout rates for alternate rate scenarios.

IRR Exposure Report. This report is produced quarterly by the OTS for each reporting thrift, and includes a CMR printout that details the volume of each type of contract, along with price/rate and maturity information. This information can be compared by examiners to quarter-end pipeline and warehouse reports that the thrift should have as support for their CMR reports. The IRR Exposure Report also has present value estimates for each off-balance-sheet category in the base case and alternate rate scenarios. With respect to the estimates relating to the mortgage pipeline and warehouse, the model acts as if there have been rate shocks overnight with nobody around to mind the store. The present values, if the input is reliable, should be viewed as worse case estimates to serve as an indicator of the relative risk position.

Conclusion

The primary purpose of secondary marketing is either to maximize profits on servicing released sales, or to sell mortgages with servicing retained on the best terms available, while avoiding as much IRR as possible. Avoiding IRR involves the use of all types of commitments and hedges in addition to fast turnover. Minimizing IRR is usually the main concern of secondary marketing operations and examiners.

REFERENCES

FHLMC Contract and Sellers' and Servicers' Guides

FNMA Contract and Sellers', MBS, and Multifamily Guides

GNMA Issuer Guides

Mortgage Banking — Secondary Marketing Program

Examination Objectives

Determine if secondary marketing policies, procedures, and practices are adequate to effectively hedge the pipeline and warehouse at reasonable risk levels.

Determine the amount of mortgage sales involving recourse or partial recourse.

Determine the adequacy of tracking systems to monitor pipeline and warehouse mortgages and their changing effect on the overall IRR of the thrift.

Examination Procedures

Perform the following examination steps to ensure that the mortgage banking activities do not pose concerns that historically have indicated trouble. Those steps that do not apply may be omitted; however, a notation should be made as to why they do not apply.

Level I

Wkp. Ref.

1. Determine if the board has adopted written polices and procedures governing:

    - Separation of mortgages awaiting sale from those going to the thrift portfolio;
    - Tracking and obtaining missing mortgage documents;
    - Responsibilities for sale and delivery of mortgages;
    - Generation and review of reports for: (1) warehouse reconciliation; (2) inventory aging and turnover; and (3) fallout;
    - Employees authorized to engage in trading and hedging activities;
    - Hedging strategies and if they are supported by correlation analysis;
    - Acceptable hedging instruments and policies for linking hedges to specific mortgages or pools;
    - Position, hedging, and loss limits for individual employees and the entire operation;

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- The basis risk incurred as a result of hedging products;
- The formal process for granting exceptions to policies and limits; and
- Management's regular review of reports on pipeline, warehouse, and hedging activities.

2. Review the previous report of examination and all secondary market-related exceptions noted and determine if management has taken appropriate corrective action.

3. Obtain lists of all mortgage sales transactions for the previous twelve months and determine:

   - If mortgages are sold with full or partial recourse provisions, or other special features such as guaranteed yields;
   - The amount of credit risk caused by these sales and the amount of the actual losses; and
   - If these recourse sales are properly reported, identified, and accounted for on internal documents.

4. Determine the types of mortgages originated that are sold to the thrift and those that are sold to investors. Determine if sales to the thrift match investment needs and historical purchase types and amounts. Examine procedures for transferring mortgages from the held-for-sale portfolio to the held-for-investment portfolio to ensure that the thrift is not originating and keeping unsalable mortgages (i.e., below the standards of the secondary marketing organizations).

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5. Review the most recent audits from FNMA, FHLMC, GNMA, HUD, and any private conduits to determine if those organizations have concerns or if remedial action has been taken by them to correct origination, marketing, shipping, or other errors or problems.

6. Determine management's strategy for funding its mortgage pipeline and warehouse:

   - For external credit agreements or lines of credit, review the rates and terms, documentation requirements, and funding mechanics; and
   - If credit arrangements are with an affiliate, ensure that all credit agreements are well documented and are consistent with Sections 23A and 23B of the Federal Reserve Act.

7. Determine the methods used to price mortgages originated for sale. Review the profitability objectives of the secondary marketing division and determine if its mortgage pricing is consistent with such goals.

8. For thrifts required to submit Schedule CMR of the TFR, compare the most recent filing to the thrift's internal mortgage pipeline reports for the same day:

   - Verify notional amounts, origination/discount fees, and rates for optional commitments to originate mortgages. (These should have contract codes 1002 through 1016 on the Off-Balance-Sheet Position Report of CMR, and should include only those mortgages for which the borrower is not obligated to take the mortgage and for which a rate-lock has been offered.)
   - For firm commitments to purchase, sell, or originate mortgages (contract codes 2002 through 2076), verify notional amounts, rates, and prices. (These items should include any forward commitments used for pipeline hedging);
   - Optional commitments to purchase or sell mortgages or MBSs (including exchange-traded or over-the-counter calls and puts on MBSs) should be coded 3002 through

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3076 on schedule CMR. Verify notional amounts, days until expiration, coupon or pass-through rates, and prices; and

- If futures or options on futures on non-mortgage instruments are used for pipeline hedging, ensure that these instruments are also entered on schedule CMR (consult the CMR instructions, if needed, and verify entries).

9. Review the most recent OTS IRR Exposure Report and determine the impact of pipeline activities on the thrift's balance sheet. Compare the OTS pipeline sensitivity estimates to the thrift's internal sensitivity analysis.

10. Determine if the exposure (or coverage) rate limits approved by the board have been followed in practice. Determine if the exposure rate and any changes are coordinated with the thrift's overall risk management.

11. Determine if there is a policy limiting the total amount receivable from any one investor. Does the thrift diversify its risk by dealing with various investors?

12. Evaluate the overall policies, procedures, and controls for secondary marketing activities to determine if:

- Commitments to deliver mortgages are periodically compared to volume authorizations for each investor;
- Profit and loss records for individual transactions are periodically reconciled to general ledger accounts;
- Post-closing documentation tracking systems are in place; and
- Procedures are in place to ensure that mortgage pools are certified in a timely manner.

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13. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

14. Determine if risk limits for individuals and the entire operation are reasonable and supported by written analyses. Determine if the amount of risk approved by the board for the secondary marketing area is safe and sound for the size and capital level of the thrift.

15. If the pipeline is hedged, examine the methods for determining hedge ratios and evaluate whether they are adequate. If fallout assumptions are used in hedging, determine how fallout projections are made (e.g., whether historic fallout has been tracked).

16. If options are used for pipeline hedges, determine if the costs are excessive. If forward commitments are used, review pair-off fees for the most recent period and determine if they are excessive.

17. Review the daily mark-to-market procedures and assess the adequacy of the methods used to determine the gains or losses on pipeline activities.

18. Review internal tests of correlation for instruments used to hedge the pipeline. Based on these tests, determine the extent of the basis risk.

19. Make a determination of whether the secondary marketing policies, procedures, and practices are adequate to protect the mortgage banking operation and the thrift. If not, determine corrective measures needed.

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20. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

Examiner's Summary, Recommendations, and Comments

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INTRODUCTION

This Section discusses profitability; the components of mortgage servicing; the general valuation of mortgage servicing; the valuation of PMSR for regulatory capital purposes; dealings with new, unknown, or unregulated servicers; and the issues of most concern to regulators.

Servicing Profitability

For most thrifts, mortgage servicing is viewed as an expense that reduces the total return on the portfolio. For a mortgage banker, however, servicing is an asset that is the single most important component of profitability, and that must be actively managed to be profitable and to retain its value. Servicing provides relatively stable earnings and servicing rights may be sold at a profit. To achieve long-term servicing profitability, however, thrifts must treat servicing like the mortgage banker by achieving the economies of scale that reduce servicing costs per mortgage and by maintaining that scale by replenishing the portfolio with new servicing as servicing pays off.

Today the largest servicers tend to be most profitable since they have the lowest servicing costs per mortgage. This has led to a great deal of consolidation among servicers, with many small- and medium-size servicers being bought out by the industry giants. For the thrift entering mortgage servicing for others, it is important to carefully plan for the types and volumes of mortgages needed from each new investor to earn an adequate profit. Without such planning, new mortgage servicing activities can produce a portfolio that is unprofitable. It is usually better to sell servicing for release fees than to retain small amounts of servicing types.

Mortgage bankers have come to rely increasingly on automation as the one tool that can stabilize servicing costs in the face of rising investor demands. For the larger and more profitable mortgage bankers, automation no longer is confined to computerized accounting but is used in every aspect of servicing; from the payment of taxes and insurance to collections and investor reporting. These computer systems are very expensive to design and to implement and are even more expensive to maintain in the face of ever-changing investor demands. Computer systems that meet the requirements of today's investors are usually operated by only the larger servicers and specialized service bureaus. Servicing for investors is usually unprofitable without these sophisticated computer systems; however, thrifts servicing their own portfolios can usually get by with very basic systems. The challenge for thrifts entering servicing for others is to pick the most cost efficient computer and other systems for the types of mortgages and investors that will be serviced.

Main Areas of Mortgage Servicing

Mortgage servicing includes the functions of cash management, investor accounting and reporting, escrow administration, collections and foreclosure, real estate owned (REO), and customer service. The precise servicing functions required by the owner of each group of mortgages as well as the servicer's compensation are spelled out in the individual investor servicing agreements, which vary widely. These agreements specify the servicing policies that are to be used for that investor's mortgages, such as collections, assumptions, and instructions for investor accounting and reporting.

Cash Management. Cash management is the collection of customer payments and the deposit of those funds into custodial accounts at financial institutions that meet investor's requirements for safety and soundness; usually the thrift's accounts are adequate. The principal and interest (P&I) portion of the payment is segregated from escrow and remitted to the investor as required under the servicing agreement. The escrow portion is placed into a separate account that also meets investor requirements and this money is retained in that account until needed to pay property taxes or insurance. Principal curtailments and payoffs are

usually remitted to the investor on an expedited basis.

Monthly payments of P&I are generally due on the first of the month and contain provisions for late charges of 5% of the P&I amount for payments not received by the fifteenth of the month, in accordance with FNMA, FHLMC, and GNMA requirements. The escrow portion of monthly payments is generally excluded from late charge requirements. Monthly mortgage payments may be returned by the thrift to the borrower for the payment of late charges.

Investor Accounting and Reporting. Investor reporting covers all of the investor's requirements for various reports and for remitting cash. Since FNMA, FHLMC, and GNMA all require servicers to advance mortgage payments for their mortgage securities on certain dates, whether or not the payments have been made, those dates are the critical ones for most investor reporting. In private sales, however, the nature and timing of the reports are specified by the servicing agreements, which vary widely.

With GNMA I servicing, the servicer remits P&I directly to individual MBS holders. With GNMA IL FNMA, and FHLMC servicing, the servicer sends remittances to a central processing center which remits to the security holders. For other types of servicing, the types of investor reports and their timing are usually specified in the servicing agreements. Most investors are paid once a month and receive reports of collections, delinquencies, and a trial balance. Reports of foreclosures, property inspections, and REO are usually sent as needed.

Document Custodian. Although many investors retain the original note and mortgage assignment or use third-party custodians, the remaining mortgage documents are usually safeguarded by the servicer. These documents should be stored in a secured and protected area that is fireproof, but accessible. Controls should exist for files that are removed. Some servicers only use microfilmed copies to work with so that original file documents are better protected.

Escrow Administration. Escrow account administration includes: (1) the maintenance of the escrow funds in a safe account meeting investor requirements; (2) tracking the city, county, state, and other property taxes and paying them by the due dates to avoid penalties; (3) making sure that property insurance is maintained at all times and obtaining temporary coverage when necessary; (4) maintaining adequate insurance records to maintain the loss payable clause in favor of the servicer which usually means holding the original property insurance policies and paying the renewal premiums on those policies as they come due; (5) annually analyzing the escrow account balance in relation to anticipated expenses and adjusting escrow payments, if necessary; and (6) annually reporting the escrow account activity and its analysis to the borrower.

Escrow funds can only be collected and held up to the limits established by the Real Estate Settlement and Procedures Act § 12 U.S.C. 2609 (RESPA). RESPA limits funds held in escrow to the amount required to make anticipated payments over the next twelve months plus an additional one-sixth of that amount (two months). State laws, and the mortgage itself, may also establish limits and roughly 30 percent of the states require servicers to pay interest on escrow accounts; usually one or two percent annually.

Vendors and subservicers are often used to assist in paying taxes and insurance, to conduct property inspections, to perform the legal work on foreclosures, and to perform document custody functions. Servicing management should regularly assess the quality of vendors' work and annually evaluate their adequacy and financial strength.

Collections. One of the major tasks of the servicer is collecting overdue payments on mortgages. The servicer must closely follow investor requirements on the timing, type, and manner of collection activities. Collection efforts usually include sending late notices every 15 days, making telephone calls, setting up face-to-face contacts for serious delinquencies, conducting property inspections, and executing foreclosures according to investor's requirements and state law. Collection procedures must also be performed in compliance with the Fair Debt Collections Act. (See the Compliance Handbook.)

FNMA, GNMA, and FHLMC require servicers for their MBSs to advance their own funds to pay the investor monthly for both principal and interest when individual mortgage payments from borrowers are not received on schedule. This is true no matter how long the delinquency exists, and even if the mortgages are in bankruptcy or foreclosure for several years. The secondary market organizations only become involved in this payment process if the servicer fails to make scheduled payments or otherwise defaults. GNMA also requires their servicers to absorb all foreclosure costs in excess of the amounts paid by FHA, FMHA, and VA.

In order to reduce the cost of advancing delinquent payments on bankruptcy, foreclosure, and other extended delinquencies, many servicers now buy seriously delinquent mortgages from the pools. This is possible because the servicer's cost of funds is usually less than the pass-through rate on the MBS. This technique can also reduce foreclosure costs on GNMA MBSS, however, its use in all cases should be carefully monitored to prevent inappropriate use and abuse. *The repurchase of each seriously delinquent mortgage should be supported by written policies, a detailed cost/benefit analysis, and approved by the appropriate officer. A repurchase monitoring report should also be utilized by management to continuously monitor the total amount of repurchases, the mortgages involved, and the causes for the repurchases.*

Real Estate Owned. Depending on the provisions of the servicing agreement the servicer may be required to take title to foreclosed property as real estate owned (REO). In some cases the servicer is also required to perform property inspections, make essential repairs, market, and sell REO on behalf of investors. In other cases, the servicer has only administrative responsibilities as agent for the investor or may be bypassed entirely.

A Department of Veterans Affairs (VA) no-bid occurs on foreclosures of VA mortgages in GNMA pools when the VA exercises its no-bid option at a foreclosure. The VA/GNMA no-bid option permits the VA to pay the servicer its maximum percentage claim for a VA mortgage foreclosure rather than buying the property at the foreclosure sale. The servicer is then required to buy the property and dispose of it under GNMA regulations. Because GNMA servicers are required to absorb all losses, any costs or losses on the sale of a property securing a VA/ GNMA mortgage that are in excess of the amount paid by VA must be paid by the servicer. These losses can be very large. In cases where the VA mortgage is not in a GNMA pool, the servicing agreement controls whether the owner of the mortgage or the servicer pays no-bid losses, but usually such losses are the mortgage owner's responsibility.

Data Processing. Since servicers are so dependent on data processing services, adequate systems are vital to meet marketing and investor needs, management controls, audit coverage, and to keep costs low. Data systems for thrifts servicing their own portfolios and a few private investors are often not capable of producing the reports and cash management services required by FNMA, FHLMC, GNMA and other participants in the secondary mortgage market. Service bureaus are generally the lowest cost data processing source for new and small mortgage bankers because they spread development and maintenance costs over a large number of clients.

The more complex the data system, the more effort that is required by the servicing department to maintain it. Servicing must update the information in the data processing system as often as needed to ensure accurate reports and must maintain controls over those changes to limit the number of errors and the possibilities for fraud or embezzlement.

Other Servicing Functions. Customer service encompasses the remainder of mortgage servicing functions and generally includes payoffs, assumptions, new mortgage set-up, purchases and sales, questions, problems, and other miscellaneous items. In handling all servicing functions the servicer should always be careful to follow the investor's requirements. Employees should have access to and be encouraged to use the servicing manuals of all of the investors that they deal with; especially FNMA, FHLMC, and GNMA. A failure to follow an investor's policies or procedures can be very expensive.

Multifamily Servicing. The servicing of multifamily mortgages under one of the FNMA, FHLMC, or GNMA programs usually requires special expedited payment and payoff remittances, special accounting procedures, aggressive delinquency collections, occasional use of the assignment of rents clause in the mortgage, detailed property inspection reports, and sometimes REO management, renovation, and sale (see the multifamily servicing sections of those organization's Guides). Because of these requirements, multifamily servicing can be very expensive to service and, thus, has much less value than one- to four-family servicing. The failure of the multifamily servicer to follow investor servicing requirements can leave the servicer liable for damages.

Due to the high servicing costs, FNMA and FHLMC multifamily servicing is rapidly being consolidated into organizations with large FNMA and FHLMC multifamily servicing portfolios. Thrifts with a small amount of this type of servicing should consider selling that servicing since it can be unprofitable in small quantities.

Commercial Servicing. Generally these mortgages will be more carefully monitored than one- to four-family or even multifamily mortgages. Their servicing should carefully follow the servicing instructions of the investors, which vary widely. Generally, collection efforts should begin earlier and be more intensive; however, finding and curing the cause of commercial mortgage delinquencies is of primary importance. Also, the liabilities for errors or failure to follow investor instructions can be a major potential liability for smaller thrift servicers.

The servicing of commercial mortgages for investors is also consolidating into firms that specialize in these mortgages. The efficiencies achieved through volume and the ability to afford the experts needed to handle these mortgages are critical factors in profitability.

General Valuation Factors

The number of servicing sales and the dollar volume of servicing rights purchased and sold have become a significant part of the mortgage banking business. Among the factors driving servicing transfers are the: (1) economies of scale; (2) servicing sales to produce current earnings; (3) accounting profits through servicing swaps; (4) desires to increase the servicing portfolio; and (5) general asset and income growth of the mortgage banking operation.

The book values of originated mortgage servicing rights (OMSR) or retained normal servicing, excess servicing fee receivables (ESFR), and purchased mortgage servicing rights (PMSR) are determined by GAAP and are discussed with a chart in Section 573, Accounting. Only accounting treats mortgage servicing rights differently based on the method of acquisition (i.e., purchased versus originated) and only GAAP values the normal and excess portions of servicing fees separately. Thus, in the servicing marketplace ESFR generally cannot be traded separately from the remainder of the servicing cash flows. The separate market values for only a portion of the servicing rights are further restricted by FNMA and FHLMC which prohibit splitting the servicing ownership for servicers of their mortgages.

For accounting purposes, the theoretical market value of the OMSR and ESFR are calculated by using different parts of the same cash flows. The normal portion usually equals the present value of 25bp, 37.5bp, or 44bp depending on the type of servicing. The excess portion equals the remainder of servicing fee after deducting the mortgage pass-through rate, guarantee fee, and normal servicing fees. For example, if a fixed-rate conventional mortgage in a FNMA/FHLMC security with a 10% coupon rate has a pass-through rate of 9% and a guarantee fee of 25bp, then the normal servicing fee is 25bp, which leaves 50bp as the remaining excess portion of the servicing fee (10%-9%-.25%-.25%=.50% or 50bp). (See Section 573, Accounting.)

The real market value for whole servicing rights are estimated by determining the present value, discounted at a market rate, of: (1) the cash flows generated by servicing fees; (2) plus ancillary fee income; (3) plus the float income from escrow balances and payments; (4) minus the operating costs of servicing. The valuation process utilizes historical data, current income and expense figures, and assumptions regarding future economic

and portfolio performance. It is in the future category that major divergences in value tend to occur.

Servicing purchases are an investment opportunity and need to be evaluated for their risks and earnings potential in comparison to the risks and benefits of alternative investments. The market value of servicing is most appropriately calculated using a required pretax rate of return or discount rate without debt leveraging which is called the return on investment (ROI). This is because the value of debt leveraging and taxes varies from buyer to buyer.

The present value of the estimated future cash flows from the servicing portfolio in the hands of a specific servicer is known as its economic value. The economic value or return on equity (ROE) is unique to each servicer because of the inherent differences in each servicer's ability to optimize servicing revenues and costs. ROE is calculated by using the fully allocated costs of servicing and includes both income taxes and debt leveraging. ROE is more appropriate for a thrift's internal planning purposes than ROI.

The factors that ultimately determine the value of servicing rights fall into several major categories:

- Servicing portfolio characteristics:
  - — Mortgage type;
  - — Program type and investor;
  - — Geographic location;
  - — Interest rate;
  - — Average mortgage balance;
  - — Remaining term;
  - — Servicing fee;
  - — Average escrow balances;
  - — Ancillary income; and
  - — Delinquency/ foreclosure experience.

- Internal operating characteristics:
  - — Cost structure;
  - — Servicing capacity; and
  - — Cash management efficiency.

- Assumptions and forecasts about the future:
  - — Future prepayment rates;
  - — Interest-rate scenarios;
  - — Delinquency/foreclosure rates and related
  - — costs;
  - — Growth in escrow balances and future earnings rates; and
  - — Servicing costs.

- The required rate of return or discount rate.

Valuation of PMSR for Regulatory Capital

The following guidelines for the Valuation of PMSR for regulatory capital are from Thrift Bulletin 60. Significant clarifications, additions, and emphasized items are shown in italics.

FIRREA, FDICIA, and the OTS' implementing regulations limit the amount of PMSR that thrifts may include in regulatory capital to the lower of: (1) 90% of current fair market value determined at least quarterly; or (2) 100% of the remaining unamortized book value.

In addition to the foregoing restrictions, PMSR equal to no more than 50% of a thrift's core capital may be included in calculating core and tangible capital. PMSR purchased, or under contract to be purchased, on before February 9, 1990, however, are not subject to these concentration limitations and are thus grandfathered. All PMSR, regardless of purchase date, are subject to the two-part test described in the preceding paragraphs and, thus, are subject to these valuation guidelines.

Independent Fair Market Valuation

An independent (i.e., third party) fair market valuation must be obtained at least annually if the unamortized book value of PMSR exceeds 25% of a thrift's core capital. The OTS may also require independent PMSR valuations for troubled thrifts, even if the level of PMSR is less than 25% of core capital.

Valuation and Appraisal Guidelines

Thrifts must follow the guidelines below for both quarterly and annual PMSR market valuations. *Departures from these guidelines may result in the exclusion of PMSR from a thrift's regulatory capital.*

A fair market valuation of PMSR is required at least quarterly by F IRREA and FDICIA. *The estimated fair market value of* PMSR *should be based on the prices currently paid for servicing rights that are similar to those being valued. Other values of PMSR, such as the economic value to the thrift owning the rights (where it differs from fair market value), are impermissible values for PMSR that are included in regulatory capital.*

The estimated fair market value of a portfolio of PMSR is defined as the single net price that the portfolio would reasonably be expected to sell for in the current market between an informed buyer and a willing seller. The estimated fair market value of PMSR should be based on the assumption that the PMSR would be marketed in portfolios of a size and composition that will bring the highest price, with the seller providing the customary representations and warranties.

Since no two PMSR portfolios are exactly the same, perfectly comparable PMSR trade data are not available. Moreover, PMSR sales data are not generally available to the public. Therefore, estimates of the fair market value of PMSR should be determined through a present value, or discounted cash flow analysis that is similar to current industry practice. Under this methodology, fair market value is determined by estimating the amount and timing of future cash flows associated with the servicing rights and discounting those cash flows using market discount rates.

The fair market value of PMSR is the present value of the expected income from the portfolio less the present value of the projected expenses. The income stream includes servicing fees, float income from payments and escrow accounts, and ancillary income. The expenses include general servicing costs, foreclosure costs, and interest expenses for funds advanced.

Where there is a range between the high and low points for each guideline below, the average or midrange of *active PMSR buyers* should normally be used rather than the high or low end of the range.

Servicing Costs. General servicing costs include expenses for data processing, personnel, occupancy, foreclosure and REO servicing, escrow expenses for the payment of taxes and insurance, and any interest expenses. The costs of amortizing the purchase price of the PMSR should be *a separate expense item* and excluded from servicing costs.

Long-term servicing cost projections used in valuations should be comparable to those currently used by most market participants to value similar types of PMSR. Neither the servicing costs of the thrift owning the PMSR nor marginal cost estimates are appropriate for determining the market values required under FIRREA and FDICIA unless those costs are consistent with the marketplace. The costs of servicing for FHA and VA mortgages in GNMA pools should be shown separately in the valuation report since these costs are generally higher than for conventional mortgages.

Prepayment Estimates. The prepayment assumptions used to estimate market value should be based on long-term consensus or average prepayment estimates for mortgages with characteristics similar to those being serviced. In general, the prepayment estimates should represent the average prepayment estimates for pools of geographically dispersed mortgages made by the major mortgage market dealers (i.e., national prepayment estimates). National prepayment estimates for 15-year, 30-year, and balloon payment FNMA/FHLMC and GNMA, fixed-rate mortgages can be obtained from various reporting services *such as Bloomberg, Knight-Ridder, and Telerate.*

Historical rates of prepayment may be used as a basis to modify national prepayment estimates or as the basis to estimate future prepayments instead of the national prepayment estimates: (1) if national prepayment estimates are not available for a particular type of mortgage; (2) if the portfolio being valued is highly concentrated in certain

geographical areas; or (3) if the appraiser can demonstrate that historical rates better indicate future prepayments for that portfolio than national prepayment estimates. Such historical data should come from recognized mortgage dealers, the federally sponsored secondary market organizations, the FHA Mortality Tables, generally accepted private reporting services, or the thrift's own documented long-term experience.

Historical prepayment experience used to base estimates of future prepayments should be for similar types of mortgages, should at a minimum cover twelve months (preferably thirty-six months), and should be documented or clearly referenced. Merely projecting that future prepayments will be the same as in the past is generally not acceptable without consideration of whether those prepayment rates are likely to continue. In all cases, the thrift will be responsible for justifying any prepayment estimates that deviate from the national prepayment estimates.

Prepayment rates should be expressed in terms of a CPR (constant percentage or prepayment rate) or PSA, a standard prepayment measure developed by the Public Securities Association. The use of the average life method or any measure other than CPR or PSA is not acceptable. Exceptions to this rule may be made for nonstandard mortgages such as multifamily and balloon payment mortgages. All prepayment estimates used in valuations should be supported with documentation.

Computer models that use static or fixed estimates of future prepayments are normally preferred because they are the predominant method currently used in the PMSR secondary market. Models that use option adjusted spread (OAS) or vector prepayment projection methodology are generally acceptable provided that those models produce values that are consistent with the PMSR secondary market *and are supported by adequate documentation.*

Discount Rates. The discount rates used to value each segment of a portfolio should correspond to the *pre-tax rates* currently demanded by investors for similar types of PMSR. In selecting comparable discount rates for PMSR valuations, the discount rates for the most similar type of PMSR should be chosen considering such factors as mortgage type, agency program, original amortization period, geographic location, and other market factors. The discount rates used by the thrift when the PMSR were purchased, the interest rate of the underlying mortgages, and the yield on interest only strips should not be used to estimate current fair market value unless they correspond to the PMSR marketplace.

Projected Interest Rates. The interest rates used to project interest income from escrow, principal and interest (P&I), and prepayment float and to project expenses for escrow and investor advances should be realistic, shown in the valuation, based on the average duration of each type of float or advance, and consistent with the Treasury yield curve.

Escrow and Other Float. The assumptions made as to the average yearly balance of escrow accounts per mortgage, the number of days of P&I float, and the *net* number of days of prepayment float should all be shown separately in the valuation report. They should be based on the past experience of the portfolio of PMSR being valued, the remittance requirements of the investors, *and should be consistent with the prepayment assumptions. Also, any interest costs on escrows should conform to state law and be included in the calculations of market value as a separate expense item.*

Delinquency and Foreclosure Rates. Projected delinquency and foreclosure rates should be based on the actual experience of the portfolio of PMSR. When mortgages are less than 12 months old, the valuation should be based on the national or state averages of delinquency and foreclosure rates published by the Mortgage Bankers Association (MBA) for similar mortgages. *PMSR in excess of 60 days delinquent, in bankruptcy, or in foreclosure, must be excluded from the valuation and regulatory capital.*

Foreclosure Costs. Foreclosure costs should be shown separately in the valuation report. They should be the anticipated costs and should reflect the differences in costs among the types of mortgages (FHA, VA, conventional, multifamily, and commercial) and, if material, their state location, since states have different foreclosure laws.

Growth of Escrows/Servicing Costs. The rates used to estimate the growth of escrow accounts and servicing costs should be based on realistic long-term projections and not short-term experience. The rates of growth should be shown in the valuation and supported by market practice and historical trends.

Portfolio Segregation/Stratification. To determine market value, portfolios of PMSR should usually be segregated by mortgage type (conventional, FHA, VA, etc.), property type (one- to four-family, multifamily, and commercial), repayment terms (15- and 30-year fixed, ARMS, and balloon payments), investor (FNMA, GNMA, FHLMC, private, etc.), recourse and nonrecourse, and coupon interest-rate ranges. The stratification of pools by interest-rate ranges should generally encompass no more than a 50bp range except for small percentages of the portfolio. Small segments of the portfolio may be combined with similar servicing for valuations when the differences are not material. *(See Section 573, Accounting, for the requirements for the calculation of book value.)*

Ancillary Income. Ancillary income is generated by such items as late charges, insurance premiums, and assumption and payoff fees. The yearly ancillary income per mortgage should be shown separately in the valuation report and should be based on the actual performance of the portfolio without an allowance for inflation, but less any anticipated runoff as a result of sale and transfer. For PMSR portfolios less than 12 months old, industry averages of ancillary income as reported by the MBA should be used. *Fees related to refinances and other non-servicing asset related activities may not be included in the valuation of PMSR.*

Transfer Costs. Transfer costs are the buyer's expenses of conducting due diligence on servicing portfolios prior to purchase and transfer. These costs are included in the market bids of buyers and, therefore, must be included in the determination of fair market value even if no sale of the PMSR is ever intended. The costs used should reflect the current market estimates as reported by PMSR brokers. Sales expenses, including brokers' commissions, should not be included in transfer costs or in the PMSR valuation because they are not included in marketplace prices.

Debt Leveraging. Borrowing to finance the purchase of PMSR, or debt leveraging, increases the internal rate of return for PMSR buyers by lowering the investment needed to produce the same PMSR earnings. Debt leveraging, however, is not relevant to the calculation of the market value of PMSR.

ARMS, GPARMS, Recourse, etc. Relative to fixed-rate one- to four-family residential mortgages, the servicing and foreclosure costs as well as discount rates and prepayment estimates are generally higher for ARMS, Graduated Payment ARMs (GPARMs), negative amortization mortgages, second mortgages, multifamily mortgages, mortgages not conforming to agency guidelines, wrap-around mortgages, and recourse servicing. Some types of PMSR, such as nonconforming GPARMS, are not readily marketable and, therefore, may have little fair market value. Each type of PMSR should be valued based on its unique costs, discount rates, prepayment estimates, and other factors.

Book Value Limits. Pools or packages of PMSR are sometimes obtained at below market prices or for other reasons have minimal or no accounting cost basis. These pools may be included in valuations in excess of their individual book value, however, *the total amount of PMSR included in regulatory capital may not exceed the lower of 90% of market value or 100% of the total remaining unamortized book value*. (The value of retained servicing (OMSR) and ESFR on the thrift's originated portfolio are not includable with PMSR for regulatory capital purposes.)

Market Value of Hedging. The value of any financial instruments that are used to hedge PMSR should not be included in the market value of PMSR. They have their own separate market values and are traded separately.

Market Value of Insurance. FNMA and FHLMC recourse servicing that includes recourse loss insurance or prepayment insurance for PMSR may be included in the determination of market value. The OTS permits the value of such policies (i.e., conversion of recourse PMSR to nonrecourse) to

be included in the value of PMSR, provided the cost of the insurance policy is deducted from servicing income or added to the per mortgage servicing cost of the PMSR portfolio. The OTS reserves the right to disregard this type of insurance if concerns exist about the insurance firm's ability to meet its financial obligations.

Split PMSR. PMSR whose ownership is shared by two or more parties in violation of servicing contracts should not be included in the appraised value or regulatory capital of either the buyer or the seller. (FNMA and FHLMC servicing contracts contain prohibitions against splitting the ownership of servicing.) If allowed under the servicing contract, split ownership servicing must always leave the servicer a minimum spread of no less than the GAAP normal servicing fee for the OTS to allow its inclusion in regulatory capital. Servicing owned by two or more affiliated companies should have formal servicing agreements in place that specifically allow the split ownership of servicing and that provide for at least a normal servicing fee in order to be counted in regulatory capital.

PMSR Not Included in Capital or Grandfathered. PMSR that is not included in regulatory capital does not have to be valued either annually or quarterly. However, all PMSR that is included in regulatory capital should be valued each quarter to comply with FIRREA and FDICIA.

OTS NPV Model. The servicing values from the OTS Net Portfolio Value (NPV) model should not be used as the fair market value of PMSR.

Contents of PMSR Valuation Reports. Valuation reports should be self-contained products that identify the portfolio being valued and provide all the data used in the calculation of each segment's fair market value. Valuations should explain the methodology used and state that its purpose is to estimate the current fair market value in compliance with these guidelines. Valuations should be supported with adequate documentation and should be signed and dated by the appraiser. Independent valuations should also contain a statement of conformance with *Principals of Appraisal Practice and Code of Ethics authorized June 30, 1968, revised June 1990 by the American Society of Appraisers (ASA), 535 Herndon Parkway, Herndon, Virginia 22070.*

Appraiser Due Diligence. Appraisers are not required to perform on-site verifications of the thrift's PMSR computer tapes that are sent for valuation. Appraisers should, however, investigate any significant discrepancies or inconsistencies where there is a reasonable basis to doubt the accuracy of the information supplied by the thrift.

Appraiser Qualifications. PMSR appraisers should be experts in valuing mortgage servicing rights. The qualifications and experience of the appraiser should be described in each valuation report.

Independence of Appraisers. In addition to the independence definition already given, independent PMSR appraisers should comply with the ASA's *Principals of Appraisal Practice and Code of Ethics.* Among other things, these principles preclude appraisers from basing their appraisal fees on the amount of the appraisal value or related business, such as brokerage services performed for the thrift. Free appraisals or substantially reduced price appraisals offered by firms because they provide other services for the thrift are also not acceptable.

Separate valuation divisions and affiliated corporations of PMSR brokers *generally will be considered independent appraisers if there is a clear separation and independence from the PMSR brokerage area. Consultants who are not brokers and brokers acting only as appraisers generally will be considered independent appraisers as long as they did not advise or assist the thrift on the purchase of more than 25% of the current dollar amount of PMSR being appraised. Past appraisals of PMSR will not be considered by OTS as disqualifying brokers from future brokerage services with that thrift, as long as the brokerage business was not planned at the time of the appraisals.*

Amortization. *The costs of purchasing the PMSR portfolio and its transfer costs should be amortized proportionately to the positive cash flows over the expected life of the mortgages under FAAP. To determine PMSR market value the*

level yield or interest method of amortization should be utilized because it confirms *to GAAP and is the dominant market practice. (See Section 573, Accounting.)*

Safeguards for Outside Servicers

Some thrifts have suffered losses and had other serious problems with mortgage servicers; especially with servicers that are new, unregulated, or unknown. Most of these problems are the result of negligence, incompetent servicing staffs, or simply sloppy servicing. Occasionally, however, fraud or diversion of the mortgage P&I payments, payoffs, or escrow funds is discovered. The following are some of the problems that thrifts have encountered with servicers:

- Excessive delay in the servicer's remitting mortgage payments or prepayments so the servicer can earn additional float income;
- Diversion of escrow payments, that should have been paid for taxes or insurance, to the servicer's use;
- Keeping the funds received on full prepayments and representing to the thrift that the mortgage continues to make monthly payments;
- Missing, lost, damaged, or out-of-date records;
- Sending NSF checks to the thrift;
- Canceling insurance or bond coverage to save money;
- Falsely representing the level of delinquencies and foreclosures; and
- Sloppy handling or no attention to delinquencies, tax or insurance payments, PMI claims, or ARM adjustments.

Thrifts should be aware that some state laws view the servicer as an agent of the owner of the mortgages and, thereby, hold the owner liable for the actions of the servicer. While some states regulate servicers, the regulations are usually geared toward consumer protection, as opposed to safety and soundness. The following are the basic steps thrifts should utilize with any new, unregulated, or unknown servicers to lessen the risk of problems and losses.

New Servicers. Before using any servicer that is new or unknown to the thrift, especially unregulated servicers, the thrift should:

- Obtain financial and historical background information;
- Obtain and check references from several other financial institutions;
- Confirm the servicer's approval and check for any recent adverse audit findings or suspensions by HLTD, FNMA, FHLMC, GNMA, and all PMI companies involved in the prospective servicing;
- Perform an on-site due diligence visit;
- Determine the adequacy of the servicer's external auditor and obtain a copy of the last audit; and
- Check the adequacy of the servicer's directors and officers (F5&0) liability insurance, errors and omissions (E&O) insurance, and surety bond.

Servicing Agreement. If the servicer is acceptable to the thrift, a written servicing agreement should be drawn up that:

- Clearly specifies the servicing policies and procedures to be used by the servicer for all common or anticipated servicing situations;
- Permits on-site audits of the servicer at any normal business time by the thrift, its agents, or OTS;
- Requires the use of separate deposit accounts at financial institutions acceptable to the thrift for both P&I and for escrows with the statements going directly to the thrift;
- Requests that the PMI companies make all claim check payable to the thrift or notify the thrift o payments to the servicer;

- Gives the thrift direct access to the MIS service bureau or servicer's MIS department for audit purposes;
- Specifies the dates and frequencies that the P& and payoff funds are to be remitted to the thrift;
- States the servicing fees and the manner of payment to the servicer and who is to receive the ancillary income and float revenue;
- Permits termination of the servicing agreement, for cause, and transfer of the mortgage servicing files, records, insurance policies, computer records, and other related documents to the designee of the thrift. "For cause" should be clearly defined to include fraud, embezzlement, diversion of mortgage payments or payoffs, failure to follow any provision of the servicing agreement, or for continued sloppy servicing after the thrift has sent a formal written warning to the servicer;
- Permits the transfer of the same servicing records at any time without cause by payment of a stipulated termination fee to the servicer; and
- Requires direct notification to the thrift of E&O insurance, D&O liability insurance, and surety bond of cancellation or nonrenewal.

Past failures to take these basic precautions have led to significant losses for some thrifts.

Servicer Performance and Audit. The following procedures should be utilized to minimize the risk of loss from servicers:

- Monthly review remittance reports and other computer reports from the servicer to detect discrepancies and errors;
- Monthly review and reconcile bank statements with borrower's monthly payments, remittances from the servicer, and escrows held by the servicer;
- Quarterly compare the servicer's delinquency and prepayment rates to the national averages from the MBA delinquency survey;
- Annually verify mortgages, property owners, and loan balances by direct mail;
- Annually review the servicer's independent audit and financial reports;
- Annually check the servicer's E&O and D&O insurance, and surety bond; and
- Annually verify continued approval by PMI companies, HUD, FNMA, FHLMC, and GNMA.

Discovery of any of these problems should result in immediate thrift action. If fraud or diversion of funds is detected, the thrift should move immediately to transfer payments and bank accounts to its name or another servicer and should transfer the servicing for cause as soon as possible. For other less serious problems, usually working with the servicer to correct the problems is the best solution. Thrifts, however, should not be hesitant to transfer servicing for cause if any of the provisions of the servicing agreement are not followed or if the servicer does not correct problems promptly after notice.

Primary Regulatory Concerns

Our primary concerns with mortgage servicing operations usually are servicing sales with recourse, prepayments, loss of the servicing, swapping retained servicing for PMSR, excessive amounts of PMSR included in regulatory capital, abusive ESFR practices, operational cost risks, and poor servicing transfers or inadequate servicing.

Recourse Servicing. Of primary concern to regulators are servicing agreements that require servicers to pay the credit losses on mortgage foreclosures. Normally servicers are responsible for losses as a result of their own mistakes, but the owner of the mortgage is responsible for losses from normal foreclosures. These losses are called credit losses. Under almost all of the purchase programs of FNMA and FHLMC, those organizations hold the risk of credit losses, however, each agency has some recourse servicing programs.

GNMA servicing, which contains almost all of the FHA and VA mortgages made today and some FMHA mortgages, requires servicers to absorb any losses in excess of the amount paid by FHA insurance or VA guarantees. Since VA no-bid losses have become large and commonplace, VA/GNMA recourse losses can be significant and average in excess of $5,000 per no-bid after the VA has paid its guarantee. FHA/GNMA servicing contains a much smaller, but still significant amount of recourse losses in the form of unreimbursed costs.

Both FNMA and FHLMC sales and servicing agreements hold the current servicer responsible for origination defects or servicing errors. This applies even if the current servicer merely purchased the servicing and did not originate the mortgage or make the servicing error. These agreements are often used to require servicers to repurchase mortgages that have gone into foreclosure. Such repurchases usually produce large servicer losses.

In sales to other investors, the examiner should verify that no type of full or partial recourse back to the servicer exists or that any recourse is covered by an enforceable agreement with a financially strong seller. Common types of recourse include buy-back agreements (both written and verbal), credit loss indemnifications, prepayment indemnifications, and yield guarantees. Any sale that does not transfer all of the risks and rewards of ownership should be considered at least partial recourse. If a sale of the servicing is with recourse, the seller must account for the transaction as a financing and not a sale. (See Section 573, Accounting.)

Prepayments. Regulators are concerned with the prepayment risk attached to mortgage servicing especially where the thrift has capitalized either ESFR or PMSR. This is because increases in the prepayment speed above the estimates used in initially calculating the value of those assets produce immediate and direct losses for the thrift. Also, prepayment losses from OMSR or retained off-balance-sheet servicing must be considered a loss since these are valuable assets that can be sold for a profit. Prepayment risk is difficult to hedge except for the natural hedging effects of the thrift's own mortgage portfolio and an active origination system. (See Section 541, Hedging.)

Loss of Servicing. Loss of mortgage servicing for cause can occur under most servicing agreements in three ways. This occurs when the servicer: (1) diverts mortgage payments or commits any other type of fraud or illegal action; (2) fails to adequately service the mortgages in accordance with the servicing agreement; or (3) does not adhere to the financial strength or other general requirements of the servicing agreement. When servicing is transferred from a servicer for cause, the servicer receives no compensation even though a valuable asset has been taken away. Because of the financial loss and the terrible publicity involved, most servicers go to extremes to avoid the loss of servicing for cause.

Under most conditions that do not involve fraud or embezzlement, investors commonly give the servicer enough time to sell the servicing to an acceptable servicer. This is usually done under threat of loss for cause if the sale does not occur within the required time frame. Other less extreme measures that investors take to cure violations of servicing agreements include requiring the servicer to move the escrow custodial accounts to a stronger financial institution, the use of custodial agents, the use of tax payment services, or hiring subservicers. The movement of escrow funds from a thrift can be devastating if those funds are a large percentage of total deposits.

FNMA, FHLMC, and GNMA all try to work with servicers to correct deficiencies and meet their servicing requirements. These organizations generally treat thrifts as customers and seek to preserve and enhance the seller/servicer or issuer relationship whenever possible. Usually small dips in the level of capital below requirements or temporarily not having adequate directors and officers liability insurance are not major problems. In most situations these organizations will even leave the servicing with a thrift after it has been placed into a conservatorship by the OTS. The critical issue for these agencies is usually whether any mortgage related money is in any danger.

FNMA, FHLMC, and GNMA all consider the loss of an adequate financial strength rating for

thrifts that hold escrow custody accounts as a serious violation. Currently FNMA and FHLMC require, for both escrow and P&I custodial accounts, an insured depository with an IDC Financial Publishing (DDC) rating of 75 or better, or a Thompson Bank Watch (TBW) rating of C or better. GNMA requires a minimum rating for their depositories from Thompson Bank Watch of C, Moody's of P-3, or Standard and Poor's of A-3. FHLMC and GNMA allow some other types of ratings in addition to these basic ones as stated in their seller/servicer or issuer guides.

Swapping Retained Servicing for PMSR. The objective of many servicing trades is not to add to the value of their servicing portfolio, but to convert retained servicing (OMSR) from off-balance-sheet assets to PMSR which are on-balance-sheet assets. The conversion process requires the retained servicing to be sold and the proceeds taken into income while capitalizing the purchase price of the PMSR that replaces it.

Small errors in calculating the value of PMSR can become actual losses quickly from not only prepayment risk and market changes, but also from errors in any of the estimates used to calculate the PMSR purchase price. The more aggressive the PMSR price paid, the more likely that it is to be over-valued and subsequently require charge-offs. Even if PMSR purchases are completed at realistic prices, the costs of the broker used to sell the retained servicing rights, the costs of performing due diligence, and the costs of transferring the PMSR are significant. None of these risks or costs are incurred if the thrift retains the off-balance-sheet servicing and takes its servicing profits into income as they are earned.

Excessive Amounts of PMSR Included in Regulatory Capital. Under FIRREA, FDICIA, and OTS Capital Regulations, PMSR are limited for inclusion in regulatory capital to the lower of 90% of their fair market value or 100% of the remaining unamortized principal balance. Also, the amount of PMSR included in regulatory capital may not exceed 50% of core capital unless grandfathered. The 10% haircut, the 50% limit, and 100% risk-weight category for PMSR under the risk-based capital rule, all make the ownership of PMSR inadvisable for thrifts that have minimal capital levels. That is not to say that OTS does not support mortgage servicing for others. We do, however, large amounts of PMSR relative to capital is a risk that only thrifts with adequate to strong capital positions can afford.

Excessive Amounts of ESFR. In spite of the fact that GAAP classifies ESFR as tangible assets, our experience with this asset has not been good. Many thrifts have failed with one of the main contributing factors being grossly overstated ESFR. In addition to the initial valuation issues and quarterly impairment tests, the practice of putting mortgages into unnecessarily low interest-rate securities appears to be a major indicator of abuse. *The repeated creation of more than 50bp of excess servicing spread, that was present valued to calculate ESFR, strongly indicates abuse based on experience with other thrifts.* (See Section 573, Accounting, for the valuation guidelines for ESFR.)

Operational Costs. These are the risks that thrifts take when they make substantial investments in buildings, computer systems, and personnel for either servicing or subservicing. The risks are that the amount of servicing will not remain constant or grow in order to hold down per mortgage servicing costs and that the future costs of these overhead items on a per mortgage basis will exceed their value compared to alternative costs. Another part of operational cost risks are the servicing cost estimates used to purchase PMSR. If future servicing expenses rise substantially faster than projected, future losses could be built into PMSR purchases. The enormous costs of in-house computer systems for mortgage servicing are a particularly large risk for all but the largest servicers.

Poor Servicing Transfers and Inadequate Servicing. The Cranston-Gonzalez National Affordable Housing Act of 1990, among other things, amends RESPA to protect mortgagors during transfers of mortgage servicing. The requirements are all basic to good mortgage servicing; however, the abusive practices of some servicers triggered the amendment. Borrowers must be given adequate notice of transfers, the name of the new servicer, a toll-free telephone number to call to ask questions or report problems, any late charges as a result of the transfer must be waived, and the new servicer must be generally responsive to problems

caused by the transfer. Violations of this law and other types of poor or abusive servicing such as violations on the limit of escrow amounts required by the servicer are often reported to the OTS Consumer Compliance Area.

Conclusion

Servicing is the primary earning asset of mortgage banking operations, however, it must be actively managed by experienced professionals to preserve its maximum value. Transactions that only increase the book value of servicing should be avoided and, whenever possible, servicing income should only be recognized as earned. In addition, excessive concentrations of capital in servicing assets, overstated values of servicing, and exposure to recourse and prepayment risk should all be avoided.

REFERENCES

American Society of Appraisers, *Principal of Appraisal and Code of Ethics*

Barrentine, Lott, and Associates, *Servicing Valuation Model Tutorial Version III*

Cranston-Gonzalez National Affordable Housing Act of 1990

Federal Deposit Insurance Corporation Improvement Act (FDICIA)

FHLMC Servicer's Guide

FNMA Servicer, MBS, and Multifamily Guides

Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA)

GNMA I & II MBS Issuer/ Servicer Publications

Mortgage Bankers Association, *National Delinquency Survey and Cost Studies*

Real Estate Settlement and Procedures Act (RESPA)

Mortgage Banking — Servicing Program

Examination Objectives

To assess the adequacy of the servicing systems and internal controls.

To determine the profitability and risks of the mortgage servicing operation.

To assess the accuracy of the PMSR assets reported as regulatory capital.

Examination Procedures

Perform the following examination steps to ensure that the mortgage servicing is profitable, complies with regulatory limits, and does not pose dangers to the thrift. Those steps that do not apply may be omitted, however, a notation should be made as to why they do not apply.

Level I

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1. Determine the characteristics of the servicing portfolio paying specific attention to the investors (GNMA, FNMA, FHLMC, private), the types of mortgages, the delinquency rates including 30-day delinquencies, the amount of mortgages in foreclosure, and the amount of REO.

2. Review the previous report of examination and all servicing-related exceptions noted and determine if management has taken appropriate corrective action.

3. Obtain the organization chart and determine the experience and qualifications of key servicing personnel. Evaluate whether they can adequately handle the amounts and types of servicing.

4. Review the most recent set of management reports outlining operating results for the servicing unit. Determine if the detail is sufficient for management.

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5. Review the most recent analysis of servicing costs per mortgage for each mortgage type and determine if the analysis includes all marginal, fixed, overhead, management, and indirect servicing costs. Determine if marginal costs are calculated for servicing and if it excludes overhead and fixed expenses. Estimate the servicing operation's current and future profitability.

6. Determine if the thrift assesses the financial capacity of all servicing sellers, private guarantors, and major subservicers annually.

7. Review sales and purchases of servicing since the last examination to:

   - Determine whether the board of directors approved these transactions in advance;
   - Assess the adequacy of due diligence activities performed prior to funding bulk purchases or sales;
   - Determine whether servicing sales and purchases have been with or without recourse and whether there have been any implied, partial, or verbal recourse agreements; and
   - Verify that comprehensive sales and servicing agreements are maintained for each purchase and sale.

8. Verify that a disaster recovery plan is in place that covers all major servicing and subservicing functions.

9. Review available audit reports from private investors, FNMA, FHLMC, GNMA, FHA, VA, and state agencies to determine if violations of their servicing policies have been found and then determine if those violations have been corrected. Determine if the thrift meets or is in danger of failing these agencies' requirements for custodial accounts.

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10. Evaluate the safeguards for holding mortgage documents. Determine if the documents are kept in a secure area. Determine whether an adequate documentation tracking system exists.

11. Review the procedures for receiving payments, escrows, and payoffs, depositing those funds into separate custodial accounts, and disbursing payments to investors to:

- Evaluate if cashiering systems for the receipt of payments are adequately safeguarded from fraud, accidental errors, and misuse of funds;
- Assess if the duties and access to custodial accounts is properly segregated;
- Determine if systems are in place to ensure timely payments to investors;
- Determine if custodial accounts are reconciled on a timely basis;
- Ensure that funds are in financial institutions acceptable to the investors;
- Determine whether adequate controls exist over disbursements from custodial accounts; and
- Determine if a monthly report is sent to each investor that details principal, interest, and escrow collections from each mortgagor, delinquency rates, foreclosure actions, principal balances, and escrow disbursements and balances.

12. Review the escrow policies and practices and the method for determining the required escrow amount. Determine whether escrows comply with 12 U.S.C. 2609 (RESPA) limits on escrow accounts and that the servicer is using the aggregate method for escrow calculations. Determine whether an adequate annual statement showing the method of escrow correction is sent to the mortgagor.

13. Review the system for ensuring the timely payment of taxes and insurance and evaluate its effectiveness. Determine the volume of mortgages without escrows and determine how each mortgage's tax and insurance are kept current. Determine if there is adequate

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coverage under a blanket or errors and omissions insurance policy to cover against uninsured property losses and tax penalties.

14. Review policies and procedures for collecting late payments to:

- Determine when collection efforts start (other than late notices);
- Verify that the thrift documents all collection events;
- Determine if collection practices agree with the servicing agreement and comply with applicable laws and regulations; and
- Determine if late charge collections are in compliance with the servicing agreement, the mortgage, and state law.

15. Review a sample of delinquency reports for loans 121 days delinquent to:

- Determine if foreclosure proceedings are started in a timely manner;
- Determine if PMI companies are promptly notified of foreclosure actions;
- Verify that forbearance agreements and payment plans are documented;
- Determine that property inspections are performed promptly; and
- Verify that foreclosure practices comply with investor guidelines.

16. Review investor, late charge, and escrow advances/receivables to:

- Evaluate their collectability;
- Determine if reimbursement claims are sent to investors promptly;
- Determine the average foreclosure costs for each mortgage type;

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- Determine if foreclosure and late charge loss reserve accounts are adequate and charged on a timely basis; and
- Verify that uncollectable advances, other charge-offs, recoveries, and expenses are charged directly to the reserve in a timely manner.

17. Determine the number and dollar volume of delinquencies repurchased prior to investor requirements, evaluate the control and reporting systems in place to limit this practice, and evaluate its net effect on profitability.

18. Determine if the excess servicing spread used in the computation of ESFR is in excess of 50bp. Investigate whether this amount was in excess of that required to sell the mortgages and leave adequate servicing and guarantee fees under market conditions at the time of the mortgage sale. If so, determine if this practice is abusive or is unsafe and unsound.

19. Verify that the thrift is correctly calculating and reporting the 10% nonqualifying servicing and other types of servicing on the TFR. Determine if the ratio of total servicing assets (ESFR plus PMSR) to the total dollar amount of loans serviced for others (LSFO) is in excess of 200bp. If so, determine why and if it is unsafe or unsound.

20. Review the internal quarterly market valuations of PMSR. Determine if the amount of PMSR reported in regulatory capital exceeds 50% of core capital. Determine if the excess over 50% of core capital is grandfathered.

21. Determine if the amount of PMSR included in regulatory capital exceeds the lesser of 90% of fair market value or 100% of the remaining unamortized book value (grandfathering does not apply).

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22. Determine if the investigation of prospective new, unknown, or unregulated servicers and sub-servicers is adequate to protect the thrift. Determine if sale and servicing agreements are adequate.

23. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from performance of Level I procedures.

Level II

24. Determine the number and dollar volume of REO by geographic location, evaluate regional concentrations, compare the volume of REO with historical levels and industry averages, and evaluate the impact of REO on profitability.

25. Review the polices, procedures, and actual practices for REO and investor owned real estate property supervision, accounting, and marketing to ensure that they are consistent with TFR instructions and investor requirements.

26. Determine if the thrift has implemented a quality control program for the servicing unit and evaluate its effectiveness.

27. Determine if the servicer's monthly bank statements and remittance reports are checked and reconciled. Determine if other audit steps are taken monthly.

28. Determine if the thrift annually: (1) checks to verify that the servicer's continued approval with the agencies and PMI companies is maintained, (2) analyzes the servicer's financial statements, (3) verifies that insurance and bond coverage remains in effect, (4) verifies mortgages and balances by direct mail to borrowers, and (5) checks the servicer's

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reported levels of delinquency and prepayments for the thrift's portfolio against reported national averages.

29. Verify that an independent PMSR appraisal is obtained annually for thrifts with PMSR in excess of 25% of core capital that meets the independence and fair market value requirements. Review the valuations of PMSR to determine if:

- They are being performed by qualified appraisers;
- Economic value was reported instead of fair market value;
- The prepayment speeds used in the analysis are adequately supported;
- Prepayments are measured by PSA, CPR, or the FHA tables;
- The discount rates were comparable to the market on the appraisal date;
- Servicing cost estimates were comparable to market costs;
- The mortgages are segregated into types and interest rate segments;
- The escrow inflation rate is realistic;
- The reinvestment interest rates conform to the Treasury yield curve;
- Transfer and due diligence costs are deducted;
- The value of hedges are not included;
- The valuation conforms to the ASA guidelines;
- No OMSR, ESFR, or subservicing is included;
- No PMSR over 60 days delinquent is included; and
- The value from the NPV model is used for PMSR market value.

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30. Obtain copies of the most recent quarterly internal calculations of PMSR market value. Reconcile these amounts to the values reported on the general ledger and TFR.

    - Select a sample of calculations for review. The sample should represent a cross section by mortgage type and interest rate, and should include FHA/VA mortgages, fixed-rate conventional mortgages, ARMs, and mortgage pools with interest rates near market rates as well as above market rates;

    - To ensure that the assumptions used in the internal valuation process are valid, employ the steps in No. 29 above. Review the delinquency rates to determine if they are comparable to the averages reported in the MBA Delinquency Survey. Any other atypical characteristics should be properly reflected in the valuations;

    - As a test-check, compare the assumptions in the most recent independent appraisal and the internal valuations. Any material deviations should be adequately supported;

    - If no material deficiencies are noted with respect to the model assumptions, select a small sample for calculation using the OTS Servicing Valuation Model. A sample of one government and one conventional mortgage package should be chosen for the initial review. If the model produces results similar to those reported by the thrift, no further review is necessary. If material deviations exist, however, the sample should be expanded to determine the extent of any overstatement of PMSR; and

    - In the event that a material overstatement of PMSR is discovered, the thrift should be required to recalculate the value with more appropriate assumptions, obtain an independent valuation, or write down the value of the PMSR for regulatory capital purposes.

31. Section 573, Accounting, for PMSR and ESFR book value procedures and for table-funded See PMSR requirements.

32. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

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Mortgage Banking — Servicing Program

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INTRODUCTION

Since the 1950s, major corporations and financial institutions have increasingly replaced checks with electronic funds transfers as the principal means of payment. As a result, several payment networks have been established to process the bulk of the transactions. For financial institutions, these transactions are handled by wholesale or large dollar systems such as Fedwire or private networks like the Clearing House Interbank Payment System (CHIPS).

WHOLESALE OR LARGE DOLLAR FUNDS TRANSFER SYSTEMS

Fedwire is a nationwide electronic payments network operated by the Federal Reserve System. It provides immediate and irrevocable payments for electronic transfers, and it functions as both a clearing and settlement facility. Institutions make up the network, and each member is required to maintain a reserve or clearing account with the Federal Reserve Bank in order to be eligible to use the network's services.

CHIPS is a private international payments clearing system for transactions between U.S. domestic and foreign institutions. The Federal Reserve Bank of New York provides an escrow account for CHIPS in which settlement payments are accumulated and disbursed. CHIPS participants settle at the end of each business day by making transfers to the escrow account through Fedwire. Unlike Fedwire, all payments are provisional and subject to final settlement.

DAYLIGHT OVERDRAFTS AND RISK

Increased activity in electronic transfers of funds has heightened the concern regarding the risks involved in these activities. On both Fedwire and private networks (e.g., CHIPS), institutions are subjected to risk by permitting customers to make transfers against uncollected or insufficient balances in anticipation of their coverage before the end of the business day. Intraday or daylight overdrafts occur when funds are transferred from an account in excess of collected balances during the same day. Daylight overdrafts can occur anytime during a business day when transactions are debited or credited to an institution's account.

On Fedwire, all transactions are immediate and irrevocable. The Federal Reserve Bank of the sending institution guarantees that funds are immediately available to the receiving institution. The receiving institution can immediately pass collected funds to its customer and will bear no risk if the sending institution fails to settle its obligation. This risk of participants not paying their creditors at the end of the business day is known as settlement risk. The Federal Reserve Bank assumes direct risk in the event a participant fails to settle its net position. Potential loss exposure due to errors and omissions and fraud is another risk associated with Fedwire.

Since October 1990, CHIPS has had controls in place to help ensure timely end-of-day settlement in the event that a participant with a large intraday net debit position is unable to cover its obligations by the close of business. Concrete commitments between participants of CHIPS are in the form of loss-sharing arrangements backed by either collateral or lines of credit. These features help to ensure the liquidity and resources needed to guarantee settlement in the event of default by one or more participants.

PAYMENTS SYSTEM RISK POLICY STATEMENT

The Board of Governors of the Federal Reserve System issued the Payments Systems Risk (PSR) policy statement on May 17, 1985 in its approach to control and reduce the risks to institutions participating in large dollar wire transfer systems. The policy statement defined the role of the Federal Reserve Bank and other financial institution supervisors in monitoring, examining, and counseling institutions to reduce the credit risk associated with their participation in these systems.

The policy statement established limits on intra-day credit exposure for institutions and private networks that exchange large dollar transfers and settle their net positions on Federal Reserve accounts. An amendment established a 25% reduction in limits as of May 19, 1988. Three further amendments in the areas of an exempt category, a *de minimis* cap, and a revised capital definition were adopted by the Federal Reserve in January 1991.

ELEMENTS OF THE PSR POLICY STATEMENT

Self-Assessment and Net Debit Cap

If institutions do not qualify for one of the exemptions below, then they must conduct a self-assessment before incurring daylight overdrafts. Under the PSR policy statement, institutions that incur daylight overdrafts are encouraged to adopt caps that restrict their net dollar payment volume for both an individual network basis and an overall system basis.

Each private network participant establishes a maximum ceiling on the aggregate net debit position that an individual sender can incur on a single private network during the day at a point in time. This cap is referred to as the net debit cap.

The net debit cap is a maximum ceiling or cap on the aggregate net debit position (i.e., the value of all funds sent in excess of all funds received) that an individual sender can incur at any point during the day.

The net debit cap is based on a self-assessment of three criteria: (1) creditworthiness, (2) operational controls, policies, and procedures, and (3) credit policies and procedures. An overall assessment is developed consolidating the evaluations for each area to establish the net debit caps. The caps are expressed as multiples of an institution's total capital, as defined under the policy statement, and limit transfers on both a daily and two-week average basis. The self-assessment and resultant cap are meant to be used for internal self-disciplinary purposes.

Total Capital

Effective January 10, 1991, the Board of Governors amended its capital policy to replace adjusted primary capital with the capital qualifying for risk-based capital for the purpose of calculating maximum permissible daylight overdrafts. Risk-based capital, or total capital for savings associations, includes-until 1995-a declining amount of supervisory goodwill.

De Minimis Cap

Certain institutions that meet appropriate standards of safety and soundness, with the approval of their boards of directors, are able to adopt *de minimis* caps. The *de minimis* cap allows the institution to incur daily peak overdrafts equal to 20% of total capital without conducting a self-assessment.

Institutions choosing the *de minimis* cap option are required to submit to their Federal Reserve Bank the annual board-of-directors' resolution that approves the use of daylight overdraft credit up to the level of the *de minimis* cap. This *de minimis* cap is useful to larger depository institutions that may have overdrafts of an amount between the exempt-from-cap category amount and the lowest cap level that requires a self-evaluation and board-of-directors' resolution. Institutions using *de minimis* should not habitually incur daylight overdrafts, as it is clear from the PSR policy that the *de minimis* option is for occasional use only.

Institutions that adopt a *de minimis* cap and that regularly incur daylight overdrafts will be counseled by their Federal Reserve Bank. Reserve Banks have the discretion to limit their own risk exposure from *de minimis* cap Depository Institutions (DIs) by imposing on individual DIs unilateral collateral requirements, or a lower cap or a zero cap, or all of the above. Institutions that fail to respond to counseling will be required to file for a higher cap (and do a self-evaluation) if their overdrafts exceed 20% of total capital.

Exemptions

Effective January 10, 1991, healthy depository institutions that only rarely incur Fedwire overdrafts that are in excess of the lesser of $10 million or 20% of total capital are excused from filing board-of-directors' resolutions or self-evaluations with their Reserve Banks. However, even for depository institutions meeting these size and frequency standards, the exemption is granted at the discretion of each Reserve Bank, which could-on the basis of consultation with supervisory personnel within the Reserve Bank or at other agencies-limit its own risk exposure to institutions that are under financial duress or that otherwise present unusual risk to the Reserve Bank by unilaterally imposing collateral requirements and a lower cap or a zero cap. Depository institutions on which the Reserve Banks have imposed a zero cap are prohibited from incurring funds overdrafts and-if they had access to the discount window-would have to collateralize any book-entry overdrafts. Depository institutions are free to file for a cap if they choose to do so and are required to do so if they exceed their exemption limits.

Role of the Board of Directors

The role of an institution's board of directors under the policy is threefold:

- *Understanding* the institution's business as it relates to the payment systems and the risks both accepted by their institution and imposed on others by virtue of its participation in large dollar payment systems.
- *Controlling* the risk associated with cross-system activity by establishing either a *de minimis* cap or a net debit cap based on its assessment of creditworthiness, operational controls, and credit policies, and, if necessary, by approving interaffiliate funds transfer arrangements.
- *Reviewing* the institution's performance within the parameters of the program adopted to assure compliance.

The threefold role assumes that directors will be actively involved in the establishment and oversight of policy on electronic payments system activities and will be alert to the risks in extending daylight overdraft credit to customers and participating with other institutions on private networks.

The board of directors is required to communicate the self-assessment results by providing the Federal Reserve Bank with a copy of the annual directors' resolution. A directors' annual resolution should include: (1) the date the board of directors acted; (2) the rating for creditworthiness; (3) the rating for operational controls, policies, and procedures; (4) the rating for credit policies and procedures; (5) the overall self-assessment; (6) the associated cap for a two-week average period; and (7) the associated cap for a single day.

The Self-Assessment Process

In general, an institution need not complete a self-assessment if it establishes a *de minimis* cap, is in the exempt category, or does not incur daylight overdrafts on Fedwire.

For all other institutions, the key elements of the PSR policy statement can be summarized as follows:

- The program is based on voluntary compliance. Institutions are encouraged to conduct self-assessments focused on three criteria that are evaluated separately:
  - — Creditworthiness;
  - — Operational controls, policies, and procedures; and
  - — Customer credit policies and procedures.
- The three evaluations are consolidated in a single overall assessment falling into one of four cap classes. Each category corresponds to a cap multiple of total capital, as defined in the PSR policy statement, to determine the maximum allowable single-day and two-week daily average cross-system daylight overdraft:

Cap Class	Cap Multiples: Single Day	Cap Multiples: Two-Week Average
High	2.250	1.500
Above Average	1.875	1.125
Average	1.125	0.750
No Cap	0.000	0.000

- The self-assessment should be reviewed and endorsed annually by the institution's board of directors or by the board of directors of a higher- level unit within a holding company structure.
- Regulators review the institution's self-assessment, documentation, and performance, taking appropriate action when warranted by safety and soundness considerations.
- The Federal Reserve Board of Governors periodically reviews performance under this voluntary program to determine if the net debit caps need to be modified or if a more formal regulatory approach is necessary.

Self-assessment review guidelines are provided in Appendix A. The Federal Reserve Board is in the process of amending its self-assessment guidelines. When the new guidelines are issued, the Office of Thrift Supervision (OTS) will revise its examination procedures and Appendix A to reflect any changes applicable to savings associations.

OTS RESPONSIBILITIES

The Board of Governors of the Federal Reserve System established the following key responsibilities of the OTS:

- Regulators should review the self-assessment file of each institution that has established net debit caps.
- Regulators should determine whether the institution diligently applied the guidelines of the PSR policy statement, whether the underlying analysis and methodology were reasonable, and whether the resultant self-assessment is consistent with the overall findings of the examination.
- An institution whose self-assessment rating is considered unreasonable is to be given the opportunity to review its self-assessment.
- Regulators should include any material findings as comments in the relevant sections of the report of examination, and these comments should be discussed with the board of directors.
- In the event the regulators determine that an institution's net debit caps should be lower than that reported to the Federal Reserve Bank, that determination should be reported to the specified liaison officer at the appropriate regional office.
- The appointed regional office liaison officer will notify the Federal Reserve Bank if an examination indicates that an institution's self-assessment is unreasonable.

OTHER PAYMENTS SYSTEMS RISK

Regulation F

On December 18, 1992, the Federal Reserve Board issued Regulation F (OTS Transmittal No. 79, dated January 22, 1993) to implement Section 308 of the Federal Deposit Insurance Corporation Improvement Act. The rule requires federally insured depository institutions to develop and implement internal control procedures to evaluate and control their exposure to their correspondent banks. Federal Home Loan Banks and Federal Reserve Banks are not considered correspondents for the purposes of Regulation F.

Regulation F requires savings associations to maintain written policies and procedures that mitigate excessive exposure to any individual correspondent. The regulation also requires periodic reviews of the overall financial condition of any correspondent to which the association has significant exposure. Furthermore, Regulation F requires associations to limit credit exposure to any individual correspondent to no more than 25% of the savings association's total capital unless the correspondent is at least adequately

capitalized (as defined in 12 CFR 565.4 - total risk-based capital ratio of 8% or greater and Tier 1 capital ratio of 4% or greater). Because examination ratings are confidential and cannot be disclosed, Regulation F makes no provision for a lower leverage ratio if the correspondent has a composite rating of "1" under the CAMEL rating system.

Although Regulation F was effective December 19, 1992, savings associations had until June 19, 1993, to establish their policies and procedures for selecting and monitoring correspondents. Furthermore, the 25% limit on credit exposure to less than adequately capitalized correspondents is phased in. For the one-year period beginning June 19, 1994, the credit exposure for correspondents that are less than adequately capitalized is 50% of the association's capital. After June 19, 1995, the 25% limit becomes effective.

During regular examinations, examiners should determine: (1) if a savings association uses correspondents; (2) if it has credit exposure to its correspondents; (3) if it has written policies in place with regard to the selection and monitoring of its correspondents; and (4) if its exposure is limited as required by Regulation F.

Unposted Electronic Transfer Funds

Another type of electronic transfer system gaining widespread use, known as the Automated Clearing House (ACH), arose as a computer-based counterpart to the paper-based system for facilitating the collection and settlement of check-like payments. An ACH transaction is any data transmission from one institution to another via the ACH system. Payment instructions are sent from a Federal Reserve Bank to the ACH who then transmits the payment instructions to the receiving institution. The receiving institution posts the payments to the checking or saving accounts of the recipient. These ACH payments, chiefly salaries and benefits, are also known as direct deposits payments. ACH payments are governed by sections 210.7(e) and (f) of the Federal Reserve regulations.

Increased use of direct deposit payments for distribution of government transfer payments has heightened the risk of an institution's failure to return funds transmitted via ACH that cannot be properly posted to recipients' accounts. Common reasons payments cannot be posted are the death or legal incapacity of a recipient, the death of a beneficiary, or the recipient does not have a current account.

Sections 210.7(e) and (f) of the Federal Reserve regulations requires institutions to immediately return any payments that cannot be posted. The Financial Management Service (FMS), a bureau of the Department of the Treasury, issues Operational Guides that outline procedures for returning unposted funds and notifying government agencies of corrections or changes to recipients' account information.

Recovering unposted funds can be a complicated and time-consuming process that is not expected of regulators. Rather, regulators are requested to identify institutions that fail to post funds and to refer institution management to the appropriate procedures for returning funds.

FMS has developed an awareness program that includes training, self-auditing, and detailed guidance with a goal of promoting a higher degree of industry compliance with returns and reclamation regulations. The detailed guidelines are found in the Green Book, a supplement to the Treasury Financial Manual.

REFERENCES

United States Code (15 USC)

§ 1693	Electronic Funds Transfer Act

Code of Federal Regulations (12 CFR)

Federal Reserve Board

§ 205.2	Electronic Funds Transfer (Regulation E)
§ 206	Limitations on Interbank Liabilities (Regulation F)
§ 210.25	Wire Transfers of Funds (Regulation J)

Other References

Federal Financial Institutions Examination Council, Electronic Data Processing Handbook

Board of Governors of the Federal Reserve System, Policy Statement on Large Dollar Transfer Systems

Board of Governors of the Federal Reserve System, User's Guide to the Payments Systems Risk Policy Statement

U.S. Treasury Financial Manual, Green Book Supplement

Payments Systems Risk Program

Examination Objectives

To evaluate the institution's self-assessment process and resultant net debit caps when applicable.

To determine the adequacy of electronic funds transfer internal controls, policies, practices, and procedures and the level of compliance within each.

To determine whether the institution has unposted electronic transfer funds.

To determine the adequacy of the board of directors' oversight of electronic funds transfer activities and monitoring of unposted electronic transfer funds.

To determine if the association is in compliance with Regulation F.

To determine compliance with applicable laws, rulings, and regulations.

To initiate corrective action when internal objectives, policies, or procedures are deficient, or when violations of laws, rulings, or regulations have been noted.

To ensure that institutions without self-assessments have adequate controls to prevent daylight overdrafts.

Examination Procedures

Level I

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1. Review the most recent Electronic Funds Transfers (EFTs) policies and procedures for large dollar wire transfer system(s) used by the institution. Any weaknesses should be reviewed as part of the payments systems risk review.

2. Review the previous report of examination and all payments systems risk-related exceptions noted and determine if management has taken appropriate corrective action.

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3. Review scoping materials applicable to this program. If the review of scoping materials is performed by others, obtain a summary of the review of items concerning this program. Refer to the examiner in charge for instruction if needed.

4. Determine the level and frequency of the institution's daylight overdraft activity. Institutions may comply with the PSR policy statement by:

   - Not incurring daylight overdrafts. In this case, the institution will not have a self-assessment file. However, the examination should include a review of controls established to ensure that no daylight overdraft will occur;
   - Qualifying for a de minimis daylight overdraft cap. Although self-assessments are not required of such institutions, the policy sets forth guidelines for institutions electing this option;
   - Qualifying for the exempt category; or
   - Completing a self-assessment and establishing a net debit cap.

5. Determine if correspondents are used and whether the correspondent relationship creates a credit exposure to the association. Review the association's written policies with regard to the selection and monitoring of correspondents and determine if the policies comport with the requirements of Regulation F.

6. Review Level II procedures and perform those necessary to test, support, and present conclusions derived from the performance of Level I procedures.

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Level II

7. Determine whether the institution effectively monitors its payments activity for daylight overdrafts, if necessary.

8. Determine whether the institution has received counseling from the Federal Reserve Bank regarding daylight overdraft activity in excess of its appropriate limit.

9. If a de minimis cap is used, review the board of directors' approval of the cap on the institution's daylight overdrafts.

   - Determine whether the board of directors has submitted a copy of the certification of the de minimis cap to its Federal Reserve Bank within the past 12 months.
   - Based on the results of the overall examination, determine if the de minimus cap poses undue risk.
   - Determine whether the institution meets the exempt category requirements, if it has filed for exempt status.

10. For institutions that incur daylight overdrafts and do not qualify for a de minimis cap, determine if a self-assessment review has been performed.

11. If self-assessment is used, determine whether an annual resolution by the institution's board of directors has established the self-assessment rating of the institution, and whether the current board of directors' resolution has been submitted to the institution's Federal Reserve Bank.

    - Determine whether the self-assessment is complete, reasonable, and reflective of the examiner's findings on the overall condition of the institution.

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- Determine whether the net debit cap assigned by the institution accurately reflects the self-assessment findings of the institution and the findings of the regulator.

- Review monitoring reports submitted to the institution by the Federal Reserve Bank to ensure that the institution's funds transfer activity remains within the limitations of its self-assessment rating.

12. If the institution has not voluntarily established a net debit cap on funds transfer activity:

- Determine the adequacy of controls implemented to prevent daylight overdrafts.

- Initiate, through the institution or the OTS regional office's liaison officer, remedial action in the event of inadequate controls to prevent daylight overdrafts.

13. Review any arrangement that permits a depository institution to have its Fedwire business conducted by a correspondent with Fedwire accessibility. The correspondent may be an affiliate of the institution or an unaffiliated company. In such cases, the PSR policy statement requires that the third-party-access arrangement conform to certain requirements or have been phased out by June 30, 1990.

- Determine whether the institution either approves each individual transfer or has established individual customer credit limits to limit each transfer.

- Review the adequacy of controls on the service provider to ensure adherence to the institution's net debit cap and approved credit limits.

- Review the board of directors' approval of the service provider and the necessary agreement with the institution's Federal Reserve Bank to allow direct postings of funds transfer activity to the institution's reserve account.

- Review the adequacy of the institution's monitoring of the service performed.

- Determine that the institution has confirmed the absence of conflicts for the service provider and its own funds transfer activity.

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14. Determine whether the institution has any unposted funds that need to be returned to the appropriate government agencies.

15. If the institution has unposted funds:

    - Determine the adequacy of controls for returning funds or notifying the government agencies of changes in recipients' account information.
    - Initiate remedial action in the event of inadequate controls.

16. Review the institution's credit files on correspondents (obtaining outside data, if necessary) and determine if the association has limited its credit exposure to correspondents as specified by the requirements of Regulation F.

17. Summarize findings, obtain management responses, and update programs and the continuing examination file (CEF) with any information that will facilitate future examinations. File exception sheets in the general file (GF).

18. Ensure that the Objectives of this Handbook Section have been met. State your findings and conclusions, as well as appropriate recommendations for any necessary corrective measures, on the appropriate work papers and report pages.

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Payment Systems Risk Questionnaire

General Questionnaire

This questionnaire addresses the de minimis cap procedures and the review of the self-assessment file and board of directors' minutes. Separately, the regulator should review considerations outlined in EDP Handbook Section 10, Electronic Funds Transfer Systems (EFTS), regarding funds transfer risk.

De Minimis Cap Procedures

		Yes	No
1.	Do the board of directors' minutes reflect consideration of the Federal Reserve's PSR policy statement and its implications for the institution?		
2.	Did the board of directors approve a de minimis cap on the institution's funds transfer activity?		
3.	Has the board of directors submitted a copy of the certification of the de minimis cap to its Federal Reserve Bank within the past 12 months?		
4.	Can the institution monitor its payment activity for daylight overdrafts?		
5.	Are controls in place to keep the institution from exceeding its net debit cap?		
6.	Are the controls effective?		
7.	Does the institution use daylight overdrafts only on an occasional basis?		
8.	If the institution consistently incurs daylight overdrafts, has the board of directors considered implementing a self-assessment review?		
9.	Based on the results of the overall examination, does the daylight overdraft activity within the de minimis cap present undue risk?		

Review of the Self-Assessment File

		Yes	No
1.	Does the file contain adequate documentation addressing all components of the self-assessment?		
2.	Does the file indicate annual updates of the self-assessment and reports submitted to the board of directors detailing those updates?		

Review of the Board of Directors' Minutes

		Yes	No
1.	Do board minutes reflect adequate consideration by the directorate of the self-assessment requirements at least annually?		
2.	Do board minutes reflect consideration of correspondence or counseling efforts by the Federal Reserve or other supervisory agency?		
3.	Does the board resolution formally establishing the institution's cap identify the following:		
	• The rating for each of the three separate rating components?		
	• The institution's overall rating?		

Comments

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Self-Assessment Review

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Three factors make-up an assessment of an institution's risk in participating in a large dollar wire transfer system: creditworthiness, operating controls, and credit policies. The following instructions for making the assessment call for separate assessments of each factor.

The institution and the regulator should each make this assessment. Self-assessment is not required if the institution adopts a *de minimis* cap, does not incur daylight overdrafts, qualifier for the exempt category, or does not participate on any large dollar wire transfer networks and is willing to accept a zero cross-system net debit cap.

I. Creditworthiness (Steps 1 through 9)

Step 1: Answer the following questions about each of the primary factors in an assessment of creditworthiness (asset quality, capital adequacy, and earnings):

	Yes	No
A. In determining the institution's asset quality self-assessment rating, have management and the directorate considered:		
1. Comments from the latest supervisory examination report on asset quality and management effectiveness?	___	___
2. Level, distribution, and severity of classified assets?	___	___
3. The level and composition of nonaccrual and reduced-rate assets?	___	___
4. Loss history and adequacy of valuation allowances?	___	___
5. Ability to foresee, administer, and correct problem credits?	___	___
6. Concentrations?	___	___
7. Other factors?	___	___
B. In determining the institution's capital adequacy self-assessment rating, have management and the directorate considered:		
1. Comments from the latest supervisory examination report?	___	___
2. Capital guidelines established by regulators?	___	___
3. Asset quality and off-balance-sheet activity?	___	___
4. Growth?	___	___
5. Profitability?	___	___
6. Other factors?	___	___

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C. In determining the institution's earnings self-assessment rating, have management and the directorate considered:

		Yes	No
1.	Comments from the latest supervisory examination report?	___	___
2.	Return on assets?	___	___
3.	Quality of earnings?	___	___
4.	Growth?	___	___
5.	Asset quality?	___	___
6.	Provisions for loan losses?	___	___
7.	Tax considerations?	___	___
8.	Interest-rate sensitivity?	___	___
9.	Earnings history?	___	___
10.	Dividend requirements?	___	___
11.	Capital adequacy?	___	___
12.	Other factors?	___	___

Step 2: Answer the following questions for each primary factor.

	Asset Quality		Capital Adequacy		Earnings	
	Yes	No	Yes	No	Yes	No
1. Does the institution consider available peer group and other data for institutions with similar operating characteristics, such as consumer lending or wholesale activities?	___	___	___	___	___	___
2. Do peer group comparisons generally support the self-assessment according to the guidelines in the Primary Factor Rating Form (Step 3)?	___	___	___	___	___	___

Step 3. Both the institution and the examiner should assign an overall rating to each primary factor. Use the Primary Factor Rating Form.

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Primary Factor Rating Form

	Asset Quality		Capital Adequacy		Earnings	
	Institution	Examiner	Institution	Examiner	Institution	Examiner
Excellent	_____	_____	_____	_____	_____	_____
Very Good	_____	_____	_____	_____	_____	_____
Adequate	_____	_____	_____	_____	_____	_____
Below Standard	_____	_____	_____	_____	_____	_____

Comments: _____

_____

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Guidelines for Rating Primary Factors

Excellent: Performance consistently above the 75th percentile, with most key measures above the 90th percentile.

Very Good: Performance consistently above the 50th percentile, with most key measures above the 75th percentile.

Adequate: Performance consistently above the 25th percentile, with most key measures near peer averages and no significant measures in the lowest 10th percentile or below standards set by supervisory authorities.

Below Standard: Performance measures consistently below average, with significant weakness in one or more key measures.

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Step 4: Answer the following question for each primary factor.

	Asset Quality		Capital Adequacy		Earnings	
	Yes	No	Yes	No	Yes	No
1. Is the institution's self-assessment rating consistent with guidelines?	___	___	___	___	___	___
2. If the institution's self-assessment rating is not consistent with guidelines, has management developed sufficient data to justify the inconsistency?	___	___	___	___	___	___

Step 5: Answer the following questions about to the two modifying factors (liquidity and holding company and affiliates):

A. In determining the effect of the institution's liquidity position, have management and the directorate considered:

	Yes	**No**
1. Comments from the latest supervisory examination report addressing liquidity and overall condition of the institution?	___	___
2. Management controls and policies?	___	___
3. Borrowing history?	___	___
4. Adequacy of policies and procedures?	___	___
5. The institution's asset/liability structure?	___	___
6. Off-balance-sheet funding sources and needs?	___	___

B. If applicable, in determining the position of the institution's holding company and affiliates' self-assessment modifier, have management and the directorate considered:

1. Comments from the most recent supervisory examination report?	___	___
2. Factors relating to capital, asset quality, and earnings of the holding company and affiliates?	___	___
3. Management?	___	___

Step 6: Based on the review of modifying factors, both the institution and the regulator should assign a level to each modifying factor.

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Rating Form for 1) Liquidity and 2) Holding Company and Affiliates

Liquidity

Institution Examiner

_____ _____ (o) Liquidity is neutral. (Generally means the institution has a stable funding base with a reasonable cushion of assets or untapped funding sources available to meet contingencies.)

_____ _____ (-) Liquidity is negative. (Generally means the institution has a funding vulnerability or is experiencing or has experienced a deterioration in the normal funding base.)

_____ _____ (+) Liquidity is positive. (Generally means the institution is extremely liquid and has demonstrated asset liquidity as well as sound liability policies.)

Comments: _____

_____

_____

Holding Company and Affiliates

Institution Examiner

_____ _____ (o) Influence is neutral. (Generally means holding company was characterized as being in satisfactory condition at its most recent examination.)

_____ _____ (-) Influence is negative. (Generally means holding company may be experiencing or expecting significant losses at the parent or in its nonthrift affiliates and debt service requirements necessitate high dividend payout ratio at depository institution subsidiaries and affiliates.)

_____ _____ (+) Influence is positive. (Generally means holding company has demonstrated record of active support.)

Comments: _____

_____

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Step 7: Answer the following questions for each modifying factor:

	Liquidity		Holding Company and Affiliates	
	Yes	No	Yes	No
1. Does the institution consider available peer group and other available data for institutions with similar operating characteristics, such as consumer lending or wholesale activities?	___	___	___	___
2. Do peer group comparisons generally support the self-assessment?	___	___	___	___
3. Is the institution's self-assessment rating consistent with guidelines?	___	___	___	___
4. If the institution's self-assessment rating is not consistent with guidelines, has management developed sufficient data to justify the inconsistency?	___	___	___	___

Step 8: As a first step in integrating the assessments of the primary and modifying factors, answer the following questions:

1. Do procedures employed by management and directorate to determine the creditworthiness self-assessment appear reasonable?	___	___	___	___
2. Are conclusions adequately documented?	___	___	___	___

Step 9: In the space provided, integrate the assessments of the primary and modifying factors into one combined rating for creditworthiness, using one of the following categories: excellent, very good, adequate, or below standard. The combined rating should be no higher than the lowest rating assigned in Step 3, adjusted for the ratings in Step 6 as well as the answers to the questions in Steps 4, 7, and 8. Comment on any adjustments necessary.

Combined Rating for Creditworthiness

_____

Comments _____

_____

_____

_____

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II. Operating Controls, Policies, and Procedures (Steps 10 through 18)

Note: There are two components to the assessment of the institution's operating controls, policies, and procedures. These are assessments of the institution's monitoring positions: (1) relative to net debit caps and (2) for customers.

Steps 10 through 14 are for assessing the institution's monitoring position relative to net debit caps. In addition, the regulator should conduct the operations activities addressed in the Federal Financial Institutions Examination Council (FFIEC) procedures and Section 10 of the EDP Examination Handbook.

Step 10: Complete the Average Daily Activity Table and answer the questions immediately following it.

Note: This table should reflect the institution's average daily volume on each system in which it participates.

Average Daily Activity Table

System	Dollars Sent	Percent of Total	Dollars Received	Percent of Total
CHIPS	_____	_____	_____	_____
Fedwire	_____	_____	_____	_____
Total	_____	100%	_____	100%

	Yes	No
1. Does the institution update the table at a frequency consistent with its fluctuations in activity?	___	___
2. Does the table correctly reflect current level of activity?	___	___
3. Are all large dollar payments systems considered when completing the table?	___	___

Step 11: Answer the following questions about individual system monitoring:

1. What is the monitoring frequency currently used?

System	Real Time	Interim (Note frequency)	No Interim
CHIPS	_____	_____	_____
Fedwire	_____	_____	_____

	Yes	No
2. Does the institution update the table at an acceptable frequency?	___	___
3. Is the monitoring capability appropriate for the volume of funds transfer activity?	___	___

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Step 12: Answer the following questions: **Yes** **No**

1. Does the institution monitor its payments activity on a cross-system basis? ..... ___ ___

2. At what frequency?

Real time monitoring _____ Periodic (note frequency) _____ No interim monitoring _____

3. Is this information reflected in the self-assessment file? ..... ___ ___

4. Does the information reflect current activity? ..... ___ ___

Step 13: Using the information from Steps 10 through 12, rate the institution according to the guidelines in the following form:

Rating Form for Monitoring Position Relative to Net Debit Caps

_____ **Strong:** 95% of total dollars sent and received are monitored on a real time basis, or at least every 15 minutes; and

– A cross-system calculation of the institution's net debit/credit position is computed and compared with established limits on a real time basis, or at least every 15 minutes.

_____ **Satisfactory:** 80% of the total average daily dollars volume sent is monitored on a real time basis, or at least every 30 minutes; and

– A cross-system calculation of institution's net debit/credit position is computed and compared with established limits on a real time basis, or at least every 15 minutes.

_____ **Unsatisfactory:** Any other condition.

Step 14: Make any necessary adjustments to the rating in Step 13, based on the following:

1. Provide a brief discussion of the institution's monitoring system, analyzing the appropriateness of the monitoring procedures in use for the volume and nature of the institution's wire transfer activity.

2. Is the institution's self-assessment rating consistent with the guidelines?

3. If the institution's self-assessment rating is not consistent with the guidelines, has management developed sufficient data to justify the conclusions?

Comment on any adjustments necessary _____

_____

_____

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Note: Steps 15 through 17 are for assessing the institution's monitoring positions for customers.

Step 15: Answer the following questions: Yes No

1. Has the institution identified customers who regularly participate in a large volume of wire transfer activity or in frequent large wire transfers? ..... ___ ___

2. Are criteria for placement of names on the list reasonable? ..... ___ ___

3. Can the institution monitor these accounts, taking into account the source of significant transactions? ..... ___ ___

4. Do the monitoring systems include the opening collected balance? ..... ___ ___

5. Does the institution have a system for updating the customer's balance to reflect intra-day activity? ..... ___ ___

   * Is the frequency of updating appropriate? ..... ___ ___

6. Does the overall system for monitoring positions of customers cover:

   (a) All significant sources generating customer account entries? ..... ___ ___

   (b) Total transactions over established dollar limits? ..... ___ ___

   (c) Overdraft limits? ..... ___ ___

   (d) Single transfer limits? ..... ___ ___

7. Are daily transactions reports generated and reviewed? ..... ___ ___

8. Have transaction limit guidelines been established? ..... ___ ___

   (a) If yes, are guidelines reasonable? ..... ___ ___

   (b) Do transaction limits include a $50 million par value size limit on market book entry Fedwire transfers? ..... ___ ___

   (c) Are guidelines reviewed regularly? ..... ___ ___

9. Does the system prohibit any transaction in excess of the established limits until appropriate action is taken? ..... ___ ___

10. Is analysis of those accounts intensified for transactions that are over the limit? ..... ___ ___

11. Is staff trained in exception procedures? ..... ___ ___

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	Yes	No
12. Are exception reports generated and reviewed by appropriate management?	___	___
13. Do exception reports reflect all activity in excess of transaction limits?	___	___
14. Do internal or external auditors review the funds transfer environment at least annually? (These reviews should conform to the standards established by the Bank Administrative Institute and the Federal Financial Institutions Examinations Council.)	___	___
15. Are auditors independent?	___	___
16. Do audit reports reflect weaknesses in physical controls?	___	___
17. Are audit-exception-clearing procedures adequate?	___	___
18. Does the institution frequently incur daylight overdrafts and send large transfers to affiliates?	___	___
(a) Are controls in place to ensure that these extensions of credit stay within approved lines?	___	___
(b) Have the limits been adhered to?	___	___
(c) Have over limit extensions been approved at the appropriate level of management?	___	___
19. Are transfers to affiliates:		
(a) Made pursuant to a written agreement?	___	___
(b) Approved by the board of directors as part of an internal credit policy?	___	___

Step 16: Rate the institution's monitoring positions for its customers according to the guidelines in the following form:

Rating Form for Monitoring Positions for Customers

_____ **Strong:** Responses to all of the above are positive and comprehensive customer monitoring is in force for both debits and credits on a real time basis or at least intervals of 15 minutes or less.

_____ **Satisfactory:** Responses to all of the above are positive and comprehensive customer monitoring is in force for all debit transactions greater than or equal to the monitoring threshold on a real time basis or at intervals of 30 minutes or less.

_____ **Unsatisfactory:** Any other condition.

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Step 17: Make any necessary adjustments to the rating in Step 16, based on the following:

	Yes	No
1. Provide a brief discussion of the institution's monitoring system, specifically analyzing consistency between monitoring procedures in use and volume and nature of the institution's wire transfer activity.		
2. Is the institution's self-assessment consistent with guidelines?	___	___
3. If the institution's self-assessment rating is not consistent with guidelines, has management developed sufficient data to justify the inconsistency?	___	___

Comment on any adjustments necessary _____

_____

_____

_____

Step 18: Using the information obtained in Steps 9 through 17, especially the ratings in Steps 13 and 16, determine a combined rating from the following table (circle the appropriate row):

If the rating for monitoring positions is:	and the rating for monitoring customers is:	the overall rating should be:
Strong	Strong	Strong
Strong	Satisfactory	Satisfactory
Satisfactory	Strong	Satisfactory
Satisfactory	Satisfactory	Satisfactory
Any	Unsatisfactory	Unsatisfactory
Unsatisfactory	Any	Unsatisfactory

Combined Rating for Operational Controls

_____

Comments _____

_____

_____

_____

_____

_____

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III. Credit Policies and Procedures (Steps 19 through 22)

Step 19: Answer the following questions:

		Yes	No
1.	Does the institution have a board of directors'-approved credit policy that specifically addresses daylight overdrafts and bilateral net credit limits if the institution is a participant on a private transfer network?	___	___
2.	Does the policy address any regular extension of intraday credit to affiliates?	___	___
3.	Have customers' aggregate exposures been identified?	___	___
4.	Have aggregate customer limits been approved and established?	___	___
5.	Do monitoring systems identify usage in excess of approved facilities on a timely basis?	___	___
6.	Do reporting systems provide adequate information to support evaluations of credit usage?	___	___
7.	Does the institution have exception identification and approval systems that are tailored to the speed, volume, and size of credit approvals required by its payment-system--generated exposures?	___	___
8.	Are the institution's review systems geared to identify and take action on deteriorating risk situations?	___	___
9.	Are all controls and procedures reviewed and tested by the institution's internal auditors?	___	___
10.	Is adequate training available and required for operations, credit, and account officer staff responsible for monitoring the intra day overdraft-exposure system?	___	___

Step 20: Explain compensating controls, if any, where responses are negative.

Step 21: Rate the institution's credit policies and procedures as acceptable or unacceptable, according to the following guide:

Acceptable: All or most responses to the questions in Step 19 are positive.

Unacceptable: All or most of the responses to the questions in Step 19 are negative.

Rating for credit policies and procedures is _____

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Step 22: Combine the three component evaluations from Steps 9, 18, and 21 into a single overall assessment using the following table (circle the appropriate row):

If the rating for credit policies and procedures (Step 21) is:	and the rating for operating controls, policies, and procedures (Step 18) is:	and the rating for creditworthiness (Step 9) is:	then the overall assessment should be:
Acceptable	Strong	Excellent	High Cap
		Very Good	Above-Average Cap
		Adequate	Average Cap
		Below Standard	No Cap
Acceptable	Satisfactory	Excellent	Above-Average Cap
		Very Good	Above-Average Cap
		Adequate	Average Cap
		Below Standard	No Cap
Acceptable	Unsatisfactory	Any	No Cap
Unacceptable	Any	Any	No Cap

Final Overall Rating _____

Step 23:

		Yes	No
1.	Is this rating consistent with the rating reported by the institution?	___	___
2.	If not, can management justify any inconsistency?	___	___
3.	If there is an inconsistency, will management review its self-assessment rating?	___	___
4.	If management will not review its self-assessment rating, has the Regional office liaison Officer been notified of the inconsistency?	___	___