Mortgage Banking

This Handbook Section provides an introduction to mortgage banking followed by specific guidance in each of the following areas:

- Production
- Secondary marketing
- Hedging
- Servicing
- Earnings
- Accounting considerations
- Capital.

It also includes regulatory references, a glossary, and an Examination Program. You can use this Handbook Section in its entirety for a comprehensive review of all mortgage-banking operations or refer to specific guidance to examine a particular area.

LINKS

Program

The Mortgage Banking section covers single-family residential mortgage banking and multifamily servicing. It does not address multifamily or commercial mortgage banking, which are specialized activities that few mortgage banking firms conduct.

The remaining part of this introduction describes the basics of mortgage banking, introduces some of its common terminology, and outlines OTS's general expectations for savings associations in the identification, assessment, and management of the risks of this activity. We discuss other important mortgage banking terms, functions, and areas in the appropriate mortgage banking sections that follow this introduction. The Glossary includes definitions of all mortgage banking terminology, agencies, and related items, which you will find at the end of this Handbook Section.

Mortgage Banking Basics

Mortgage banking involves the origination, sale, and servicing of mortgages. The fees on each transaction are generally small so the mortgage banker must process large volumes to generate reasonable profits. In processing a large volume of transactions, mortgage bankers must monitor the

information flow, risks, and the costs of the entire operation to ensure they remain profitable. The risks of mortgage banking include market, prepayment, transaction, operational, liquidity, compliance, credit, reputation, and legal risk. To monitor and manage its risks, a mortgage banker must have appropriate policies, procedures, and controls commensurate with the level of its activity.

The mortgage banking process begins with the mortgage banker taking an application from the borrower and issuing a commitment to that borrower. The mortgage banker may process the application and close the loan. The mortgage banker sells the loan to an investor and may retain or sell the servicing. 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.
- Acting as the investor's representative for other issues and problems.

Brokers concentrate on finding customers in need of financing and process the application and mortgage documents. Correspondents deal with the customer, then close and fund the loan before selling the loan to an investor. The broker and correspondent receive fees for their services and that fee varies based on the amount of work or responsibility they assume.

Some mortgage bankers purchase mortgages from brokers, correspondents, and other mortgage bankers. Mortgage bankers may also originate mortgages on their own. They either sell the loans to investors or pool them into mortgage backed-securities (MBSs) and then sell the MBS. They may sell the loans servicing retained or released. Mortgage bankers recognize as income the gain on sale generated from the capitalization of the mortgage servicing rights (MSR). Servicing can be on a recourse basis, where the servicer retains the risk of mortgage default, or a nonrecourse basis, which is much more common.

Each phase of mortgage banking has its own set of rules, laws, regulations, and guidance. From origination to payoff, the mortgage banker must maintain detailed documentation for each mortgage. Documentation includes the following:

- The disclosures provided to the potential borrower outlining the risks and costs of the mortgage (compliance disclosures).
- The information necessary to process the mortgage (application).
- Sufficient detailed information to underwrite the credit quality of the applicant and market value of the property (processing, appraisal, and underwriting).
- Closing documents provided to the borrower.

- Lien recordation and other information that supports the packaging and selling of the mortgage to an investor (secondary marketing and shipping).

- Records concerning customer payments, payment of taxes and insurance, and payments to the investor (servicing or loan administration).

- Information supporting the foreclosure and disposal of the property (foreclosure and property disposition).

The key elements in examining the mortgage banking function are to assess:

- How the strategy and operations of the mortgage banking entity align with the savings association's strategy and operations for portfolio mortgages.

- What risks the mortgage banking unit is taking.

- Whether the risk management systems, returns, and capital levels are sufficient for the risks assumed.

PRIMARY AND SECONDARY MORTGAGE MARKETS

In the primary market, a mortgage lender originates mortgages by lending directly to homeowners/purchasers. In the secondary market, lenders, brokers, and investors buy and sell the loans originated in the primary market. In addition to serving borrowers in the primary market, saving associations often participate in the secondary market to increase liquidity, manage risks, and generate income.

The two basic types of mortgages in the traditional primary market are conventional and government-backed mortgages. Conventional mortgages can be conforming or nonconforming. Conforming mortgages meet the underwriting and documentation standards set by the Government Sponsored Enterprises (GSEs). Nonconforming mortgages include, among other attributes, those whose principal balances exceed the size limits HUD places on the GSEs, that is, jumbo mortgages. Government-backed mortgages include those insured by the Federal Housing Administration (FHA) or guaranteed by the U.S. Department of Veteran Affairs (VA).

The U.S. government originally created the GSEs to enhance the liquidity of residential mortgages. The GSEs include the Federal National Mortgage Association (FNMA or Fannie Mae), Government National Mortgage Association (GNMA or Ginnie Mae), and Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac). The GSEs help create the secondary market for residential mortgages by buying loans, securitizing some of them into MBSs, and selling the MBSs to investors.

The secondary market has grown enormously over time. Investment banks and large financial institutions now also act as conduits that buy and sell as well as securitize mortgage pools to the public, primarily prime jumbo mortgages. However, these private conduits have expanded beyond jumbo prime loans to include the securitization and sale of subprime and Alt-A loans (those that generally

meet most but not all of the standards for the GSE programs), as well as nontraditional mortgage products.

Mortgage Servicing Rights

Most mortgage bankers focus on the creation (and value) of the servicing rights. In the sale of mortgages, brokers and correspondents are paid a separate fee based on the value of the cash flows that can be generated through the servicing of the mortgage. Servicers are typically paid a fee for collecting and managing the monthly payments from mortgages, and may be able to capitalize on the relationship they develop with the borrower.

When a company closes a mortgage loan (for sale), it creates two financial instruments: a loan and the right to service the loan. Mortgage bankers can sell these loans with servicing retained or released. If sold servicing released, the servicing value is part of the overall price. If sold servicing retained, the accounting guidelines require the company to record the servicing rights at fair value. Although servicing is a part of the value of a mortgage, it becomes a distinct asset or liability when contractually separated from the loan. A mortgage banker can separate servicing from a loan by selling a loan and retaining the servicing or by purchasing or assuming the servicing from a third party.

Sale and Servicing Agreements

Sale and servicing agreements are contracts between the buyer and seller that govern the terms of the mortgage sale and servicing, including servicing fees and any special conditions or warranties. These agreements can be long and complex or they may be short and only refer to an investor's guide. The agreement and/or guides cover most types of representations, warranties, guidelines, and recourse.

Types of Servicing Rights

There are two categories of servicing rights for accounting purposes:

- Mortgage servicing rights (MSR).
- Excess cash flow that can be separated from the servicing (interest only strips or other retained interests).

The Accounting guidance in this Handbook Section defines these categories of servicing rights in detail.

MORTGAGE BANKING AT SAVINGS ASSOCIATIONS

Many saving associations have adopted mortgage banking activities as a profitable addition to portfolio mortgage lending. By originating all or some of their mortgages for sale in the secondary market, savings associations can generate additional income that is recognized as a gain on sale. While portfolio lending and mortgage banking have much in common, they are different business disciplines requiring different monitoring and management skills and strategies. It is important that management

understands the different risks of each line of business. The associations must design financial strategies and risk management policies for each type of lending operation in order to be effective.

Differences between Savings Associations and Mortgage Bankers

Savings associations often originate mortgages as investments for their portfolios. The main income source is the spread between the assets and the liabilities. Mortgage bankers, on the other hand, originate mortgages for sale.

They face different types of risk. For example, while the savings association and the mortgage banker are both subject to market risk, the nature of these market risks is somewhat different. The savings association faces market risk from a mismatch in maturities between assets and liabilities. The mortgage banker faces market risk when adverse interest-rate movements erode prices while the mortgages are in the pipeline or warehouse. The sale of mortgage loans after origination reduces market risk for the mortgage banker, whereas the savings association that is originating mortgages both for portfolio and for sale is subject to both kinds of risk. MSR is also subject to market risk. As market rates fall, prepayments increase and the value of the MSR declines. A savings association bases the type of mortgages it offers on its investment needs, perceived competitive advantages and legal or regulatory requirements. If it offers other mortgage types to accommodate customers, it may price the less desirable mortgages 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 customers as well as the investors that purchase the loans.

Transactions in the Secondary Market

Savings associations and mortgage bankers use the secondary market to buy and sell mortgage loans based on their business needs. Savings associations often sell mortgages that they do not want to retain as investments or that exceed their balance sheet needs. They also sell them to generate short-term profits or buy them as investments when they are unable to originate them. Mortgage bankers use the secondary market continually to sell all mortgages originated. Mortgage bankers 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 they can sell the mortgages on a break-even or better basis.

Mortgage Servicing

Mortgage servicing rights are typically assets, not liabilities. In addition to the initial gain recorded upon initial capitalization of MSRs, mortgage servicing provides a stream of fee income. But long-term servicing profitability requires controlling costs. Economies of scale can reduce average costs, as can efficient use of staff and facilities. Because borrowers often refinance or pay off mortgages before maturity, servicers generally must continually replenish their portfolios to efficiently utilize their cost structure.

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 for servicing errors or underwriting exceptions. Sale and servicing agreements can contain conditions that do not transfer the risks and rewards of ownership. Because such agreements retain all or part of the risks of loss, OTS considers them full or partial recourse servicing. (See *Recourse and Loss Indemnifications Risk* in the discussion on Secondary Marketing.)

Accounting Requirements

Accounting for mortgage banking activities is complex. The accounting literature is extensive and continues to evolve. You should consult with your Regional Accountant about developments in accounting for mortgage banking activities. The Financial Accounting Standards Board (FASB), the FASB's Emerging Issues Task Force (EITF), and other standard setters issue accounting guidance in this area.

Each phase of mortgage banking requires unique accounting methods. From the time a commitment to originate a loan to a borrower is executed, the mortgage banker must record and value derivatives, assets, and hedges properly. The mortgage banker must account for each component individually as it sells or retains loans. The Accounting guidance provides detailed explanations of the appropriate accounting treatment for each phase of the mortgage banking operation. We encourage you to review this guidance due to the complexity of accounting issues in this area.

Management and Supervision

Mortgage banking comprises several separate, but interdependent activities. The efficiency and profitability of the entire mortgage banking operation depend on how well the association manages these activities. Senior management must define and communicate strategy, permissible activities, operational responsibilities, and acceptable risks for mortgage banking operations. The savings association should have written policies and procedures for its mortgage-banking activities, which it communicates to operating personnel.

A board-approved business plan should state the specific objectives for the mortgage banking operation. The plan should be consistent with the saving association's overall business plan, as well as consistent with its asset and liability management objectives. In addition, the plan should state management's acquisition and sales strategies for mortgage origination and servicing. The plan should clearly describe lines of authority and assigned responsibilities and include provisions for adequate financial, human, technological, and physical resources.

Because the disciplines and goals of mortgage banking operations can differ from portfolio lending, some associations conduct mortgage banking in a separate department, division, or subsidiary. No matter the structure, the association should have a reporting system to monitor the risks and profitability of the operation.

Whether in the savings association or in 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.

MORTGAGE BANKING RISKS

The following are significant sources of risk in mortgage banking:

Market Risk in the Pipeline is the interest rate risk from the time of locking in the interest rates on the mortgages in the pipeline until those mortgages are sold in the secondary market. The price a mortgage banker receives for the loan can change significantly with changing rates. This risk also includes fallout risk. Fallout risk is when more or fewer loans actually close than were originally projected.

Prepayment Risk is the danger that servicing will pay off before estimated, leaving unamortized MSR or retained assets that must be partially or fully charged off.

Transaction Risk can arise from problems with service or product delivery and can create large losses. This risk is a function of internal controls, information systems, employee integrity, and operating processes. Purchased loans may include fraudulent loans. The hedging of the pipeline or MSR may not be as effective as expected. An investor may find underwriting or loan documentation exceptions and require the association to repurchase the loan or indemnify the investor against losses.

Credit Risk is the risk that borrowers will not repay their mortgages as agreed in the loan contract. While mortgage bankers typically do not hold mortgages for long periods after origination, they are still exposed to credit risk while they hold the loans for securitization or sale. Even after loans are sold, the mortgage banker is exposed to credit risk while standard representations and warranties are in effect. Loans in a mortgage banker's "held for sale" portfolios that are put back or become delinquent are considered "scratch and dent." Mortgage bankers generally have to sell such loans at a discount.

Operational Flexibility Risk arises when resources devoted to mortgage origination or servicing cannot be easily changed during cyclical up- or downturns in those operations. It also arises when associations have long-term fixed-rate cost commitments in facilities and personnel that cannot be reduced in periods of lower production volume.

Liquidity Risk arises when credit or transaction risk weaknesses prevent the institution from selling mortgage inventory or servicing rights in a timely manner. It may also arise if investors require the association to repurchase loans or indemnify investors from losses for loans with underwriting exceptions or servicing errors. The amount of production may exceed the association's ability to fund the operation through normal sources. Servicers face liquidity risk from defaulted loans, which require continued remittance of principal and interest to investors during the liquidation process. Failure to appropriately manage the liquidation process can result in delayed or denied expense reimbursement from the insuring agency.

Legal and Reputation Risk results from misrepresentations, breaches of duty, administrative lapses, compliance and fair lending failures, and conflicts of interest. These failures can result in lawsuits, financial loss, and/or damage to the company's reputation. Any association that originates and/or

services mortgages is responsible for complying with applicable federal and state laws. This responsibility becomes more complex when there are multiple channels of loan originations in a mortgage banking operation. In particular, mortgage banking managers must be aware of fair lending requirements and must implement effective procedures and controls to help identify practices that could result in discriminatory treatment of any borrowers.

Compliance Risk arises from violations of, or nonconformance with, laws, rules, regulations, prescribed practices, or ethical standards. This risk also arises when the laws or rules governing mortgage banking loan products or activities are ambiguous to the general consumer. Failure to maintain adequate control of compliance exposes the association to reputation risk, fines, civil money penalties, payment of damages, and even the voiding of contracts. In addition, failure to comply with disclosure requirements could make the association a target of class-action litigation. Several federal consumer protection laws and regulations apply to real estate lending activities. Refer to the Compliance Chapter of the Examination Handbook. In addition, see the References at the end of this section for compliance related regulatory guidance

CONCLUSION

The success of a mortgage banking operation depends on proper corporate governance, effective policies, strong internal controls, diligent strategic planning, and comprehensive management information systems. Weaknesses in any of these areas can jeopardize the institution's financial condition.

Proper corporate governance is critical to the safety and soundness of a savings association's mortgage banking and mortgage servicing business. Appropriate organizational structure, communication, and reporting are key aspects that determine the effectiveness of an association's corporate governance. Segregation of duties is an important feature of both corporate governance and internal controls.

Effective policies and strong internal controls are necessary in mortgage banking. Policies should provide mortgage banking personnel with a consistent message that appropriate underwriting standards are necessary to ensure that loans meet investor requirements for sale into the secondary market. Strong internal controls are essential to enable management's effective supervision. The board of directors and senior management should define the mortgage banking operation's permissible activities, lines of authority, operational responsibilities, and acceptable risk levels.

A mortgage banking operation's business plan should include specific financial objectives. The plan should be consistent with the association's overall strategic plan and should describe strategies management intends to pursue when acquiring, selling, and servicing mortgage banking assets. The plan should also provide for adequate financial, human, technological, and physical resources to support the operation's activities.

Comprehensive management information systems are another essential element to a successful mortgage banking operation. Systems should provide accurate, up-to-date information on all functional areas and support the preparation of accurate financial statements. Management Information System (MIS) reports should facilitate identification and evaluation of operating results and monitoring of

primary sources of risk. Management also should establish and maintain systems for monitoring compliance with laws, regulations, and investor requirements.

Mortgage banking can present pipeline, interest rate, prepayment, operational cost, operational flexibility, liquidity, compliance, legal, and transaction risks, among others. Savings associations that engage in this activity should have a robust risk management process in place that allows them to identify, assess, manage, measure, control, and report these risks. In addition, they should be able to assess the costs and ensure that sufficient earnings and capital are available to cover the risks involved.

We address each of these elements in more detail in the remainder of this Handbook Section.

PRODUCTION

Introduction and Overview

Production begins the first step in the mortgage banking cycle. Production involves the origination, processing, underwriting, and closing of mortgages. Each process within the production function has its own set of risks, including compliance with consumer requirements during the marketing and initial application period, sound underwriting practices and closing procedures, and appropriate internal controls and risk management practices over the entire production period.

Mortgage banking production is highly competitive, cyclical, and lacks significant barriers to entry for the origination of mortgage loans. That competition, as well as customer preferences, high home prices, and heavy debt loads have compelled many institutions to expand their loan product offerings in an attempt to maintain or increase their production and revenues.

Because many mortgage companies and mortgage brokers originate loans, but do not hold them in their portfolios, they focus their product offerings on popular loan products for which there is a ready secondary market. For example, nontraditional residential mortgage products have become more prevalent in mortgage banking. These products include loans that permit borrowers to defer repayment of principal and/or interest. In a quest to increase volume and improve profitability, some institutions originate loans to borrowers with lower quality credit and offer risk-layered products by combining any of the following features:

- Low credit score
- Low documentation, such as stated income
- High loan-to-value (LTV) ratio or a concurrent first and second mortgages that result in a high combined LTV.

Any savings association actively involved in mortgage banking production should establish sound lending standards, risk management systems and controls, and a board-approved, comprehensive quality control program. Savings associations should also maintain written policies, procedures, and controls that detail the types of loans originated or purchased, the sources of these loans, and the procedures for assessing risk and monitoring these lending activities. Please refer to Examination Handbook Section 201, Lending Overview, and Section 212, One- to Four-Family Residential Real Estate Lending, for information on loan policies and real estate lending standards.

Loan Channels

Savings associations involved in mortgage banking typically produce loans through retail and wholesale channels. For a depository institution, the retail channel involves transactions directly with the borrower. The retail channel may not generate sufficient volume to achieve the economies of scale necessary to support a full-scale mortgage banking operation. Therefore, many associations also use the wholesale channel where they acquire loans originated by mortgage brokers or other lenders. This

channel permits an association to expand production volume without increasing related fixed costs. It also provides more flexibility in managing costs when loan volume expands or contracts because the expense of a wholesale relationship is more flexible than the fixed cost of association employees and offices.

Retail Production

Savings associations advertise loans for origination through various means, including direct customer contacts, mailings, websites, flyers, newspapers, radio, television, and telemarketing. Lenders have more control over requests through the retail channel, which also provides opportunities to market other products.

Any significant loan production volume requires account officers who market loan products to borrowers, realtors, and homebuilders; take applications; and may counsel borrowers regarding loan options. They also assist applicants during the approval and loan closing process. Account officers are typically compensated through commissions, which can constitute a significant amount of an originator's compensation. Savings associations should not base an originator's compensation solely on loan volume, but should also factor loan quality into the evaluation. Originators should not have the authority to set or significantly influence the company's loan pricing decisions, product terms, or rate of commissions paid, since this potential conflict can result in significant risk to an association.

Originators acting in a fiduciary capacity should be diligent in safeguarding applicants' and borrowers' confidential information. Lending staff must be educated about the association's loan products and federal and state regulatory requirements, including consumer and fair lending laws. These include the Equal Credit Opportunity Act, Fair Housing Act, Fair Credit Reporting Act, Fair Debt Collection Practices Act, Real Estate Settlement Procedures Act, Home Mortgage Disclosure Act, Home Ownership Equity Protection Act, the Truth-in-Lending Act, and the Bank Secrecy Act.

Technology and automation play an increasingly important role in the application and loan processing functions. Most originators utilize laptop or web-based origination systems that interface with their internal underwriting systems. Many companies require originators to submit data electronically, and may use an automated underwriting system (AUS) to do the underwriting.

Wholesale Production

Savings associations often use third parties, such as mortgage brokers or correspondents, and other third-party sellers such as affinity groups to originate mortgage loans.

Many large volume lenders use mortgage brokers to augment loan production. Brokers help the borrower select the appropriate loan program and complete the loan application. They also order credit reports and appraisals. Brokers receive a fee from the borrower or the lender when the loan closes. Normally, brokers do not underwrite or fund the loan. In fact, many broker loans are table-funded, wherein they are closed in the broker's name and subsequently transferred to the funding lender. States regulate and license brokers where they operate. The National Association of Mortgage Brokers (NAMB) is the trade organization that provides certification, education, and networking opportunities.

Loan correspondents perform most loan processing functions, underwrite, fund, and then sell the loan to the association. The mortgage loan is closed in the correspondent's name, and the correspondent may either service the loan (servicing retained) or sell the loan servicing to the lender or a third party (servicing released). Sometimes the lines between brokers and correspondents are not readily distinguishable. Therefore, you should confirm how the association defines, uses, and monitors brokers, correspondents, and other third party arrangements.

Wholesale production through an affinity group occurs when an association arranges with a large corporation or membership group to provide mortgage loans to its employees or members. This is a low cost method of increasing mortgage origination volume without increasing loan origination staff and incurring additional fixed costs.

Financial institutions are responsible for establishing appropriate policies, procedures, and controls over their wholesale production relationships. Institutions should have strong systems and controls in place for establishing and maintaining relationships with third parties, including procedures for performing due diligence, annual recertification/approval, routine monitoring, maintaining a thorough quality control function, and establishes guidelines for entering/exiting a wholesale relationship.

Oversight of third parties should involve monitoring the quality of originations so that they reflect the institution's lending standards and compliance with applicable laws and regulations. Monitoring procedures should track the quality of loans by both origination source and key borrower characteristics. This will help institutions identify problems such as early payment defaults, incomplete documentation, and fraud.

Mortgages acquired through wholesale channels can increase the potential for fraud if the institution does not establish and follow proper policies, procedures, and controls. Before entering into arrangements with wholesalers, the institution should establish guidelines for managing these relationships. These guidelines should contain procedures for evaluating the financial condition and background of brokers and correspondents, as well as the criteria for their initial approval and annual recertification/approval. These guidelines should also specify contractual requirements, underwriting criteria, compliance with consumer fair lending laws, specific warranties, and recourse provisions.

Savings associations should closely monitor loans obtained from brokers and correspondents through post-purchase underwriting reviews, evaluation by the quality control unit, and ongoing monitoring of loan performance. When large volumes make individual loan review unfeasible, institutions should establish procedures to review a statistically valid sample of such loans. The association should backtest these sampling procedures to ensure ongoing reliability. As covered in the Secondary Marketing guidance, associations should establish procedures for monitoring the level of fall-out, churning (a large quantity of loans that refinance shortly after closing), delinquency, loan defects, and loan documentation deficiencies for loans obtained through each broker and correspondent.

If continuous or significant problems unfold, the association should take appropriate remedial actions. This may involve terminating a relationship with the wholesaler. You should review the policies, procedures, and reports used to monitor third party originators (TPOs) and the criteria for watch list suspension or termination of the wholesaler. You can observe an association's proactive measures by

evaluating wholesalers terminated during the review period. Refer to Thrift Bulletin 82a – Third Party Arrangements.

Loan Types and Programs

Both wholesale and retail mortgage banking production can offer a wide variety of loan types and programs. These loan types include fixed rate, adjustable rate, hybrid, nontraditional, subprime, subordinate lien, Alt-A, and reduced documentation mortgage loans. For additional information regarding these loan types as well as appropriate underwriting standards, please refer to Examination Handbook Section 212, One- to Four-Family Residential Real Estate Lending. You should also refer to the reference section for further guidance on nontraditional mortgage products.

Financial institutions that purchase or sell mortgage loans as part of a mortgage banking operation are responsible for maintaining appropriate underwriting standards, following OTS and interagency guidance, and complying with all applicable state and federal lending laws.

Conventional (nongovernment backed) loans include both conforming and nonconforming mortgage loans. Conforming loans are typically higher quality loans that meet the standards set by the Federal National Mortgage Association (FNMA) or the Federal Home Loan Mortgage Corporation (FHLMC). These government-sponsored enterprises (GSEs) establish underwriting guidelines, maximum loan amounts and amortization periods for conforming loans. The GSEs have also developed many standard forms and uniform documentation such as applications, appraisals, notes and mortgages that are widely used in the mortgage industry. This standardization has enhanced the marketability of conforming loan products and contributed to secondary market growth.

Nonconforming loans are those mortgages that do not meet one or more of the GSE standards. Some of the more common nonconforming loans are jumbo, Alt-A, and subprime loans. Jumbo loans are loans whose dollar amounts exceed the GSE maximum loan amounts. Savings associations have varying definitions and underwriting standards for Alt-A loans. Alt-A loans are generally prime loans with some form of reduced documentation requirements but may include loans to borrowers with marginal credit. Alt-A loan definitions can vary among associations, so the risks can vary. Subprime loans have higher default risk since these borrowers have lower creditworthiness as indicated by adverse or incomplete credit histories and lower credit scores.

Fixed rate (FRM) and adjustable rate mortgages (ARM) constitute the two primary loan programs. ARM loans have interest rates that reset periodically over the term of the loan, based upon the value of a specified index at the time of the reset, plus a margin. Common ARM indices include the constant maturity treasury rate (CMT), the London interbank offered rate (LIBOR), and the moving treasury average (MTA). Other indices used, based on an institution's cost of funds, are the Eleventh District Cost of Funds (COFI) and the cost of savings index (COSI).

ARM loans often contain periodic and lifetime interest rate caps. These caps establish the maximum amount the interest rate can change at each interest rate reset period and over the life of the loan. Hybrid ARM loans provide conversion features that involve a fixed rate of interest for a certain period such as three, five, seven, or ten years. After this fixed rate period, the loans convert to an ARM loan that adjusts periodically thereafter.

The percentage of market share held by government-backed loans has tended to decrease as other types of loan offerings have gained popularity and market share. Some of the more common remaining government-backed loans include those insured by the Federal Housing Administration (FHA) and those guaranteed by the Department of Veteran Affairs (VA). FHA loans allow for a purchase or refinance with a low down payment and are particularly attractive for first-time homebuyers. VA loans permit military veterans the opportunity for home ownership with a minimum or no down payment. The FHA and VA establish maximum mortgage amounts and specific underwriting standards.

Nontraditional Mortgage Products

Some institutions offer a broad menu of loans that permit borrowers to defer payment of principal and sometimes interest, thus lowering monthly minimum payments. While these offerings have been available for a long time, the market for these products and the number of institutions offering them has expanded significantly. Nontraditional mortgage loans include interest only (IO) and pay option ARM loans. Some of these loans are underwritten with less stringent underwriting standards, such as reduced documentation, where a borrower's income or assets are subject to minimal or no verification. Some lenders "risk-layer" several high risk loan features as discussed on page 750.10.

For IO loans, the borrower payments cover only interest for a specified number of years, such as three, five, or ten years. IO loans can be fixed rate, hybrid, or ARM. Under certain circumstances, the monthly payment on IO loans and payment options ARMs can rise substantially at reset. Other loans may also contain payment shock potential. For example, hybrid ARM loans with low initial (teaser) interest rates, followed by higher adjustable payments, may result in a similar significant increase to the required monthly payment, possibly increasing the chance of default.

Subordinate Lien Loans

The number of institutions offering simultaneous second lien, or piggyback, loans has expanded. These loans typically combine a first lien mortgage with either a closed-end second lien or a home equity line of credit (HELOC) originated simultaneously with the first lien. Institutions typically configure the first mortgage amount to meet secondary market loan amount and loan-to-value (LTV) requirements, thus avoiding requirements for private mortgage insurance (PMI). Some investors require PMI for loans that exceed an 80 percent LTV. The first lien mortgage holder may hold the second lien or may sell it into the secondary market.

Simultaneous second lien mortgages increase a borrower's leverage, reduce owner equity, and increase credit risk. Historically, increases in the combined first and second lien loan-to-value (CLTV) ratios have increased default risk. A delinquent borrower with little or no equity in a property has less incentive to avoid foreclosure. In addition, second lien HELOCs that have adjustable rates increase borrower exposure to increasing interest rates and monthly payment burdens. This situation may be exacerbated for HELOCs with no payment or interest rate cap. Also, the popularity of placing simultaneous seconds behind negatively amortization loans can further heighten risk.

Low/No documentation

Many lenders offer varying forms of reduced or low documentation loans. Lenders may offer them as limited doc, low doc, no doc, no income/no asset, or stated income loans. With these loans, institutions set reduced documentation standards to substantiate the borrower's income and assets. The lack of key financial information makes it more difficult to properly assess a borrower's repayment ability. When reduced documentation underwriting is used, prudence dictates utilizing compensating factors such as lower LTV, higher credit scores, or other more conservative underwriting standards. When granting stated income loans, it is important to consider the borrower's occupation, job history, debt load, savings, and liquidity position.

Subprime Loans

Subprime mortgage lending expanded as intense competition in the prime market prompted lenders to enter the subprime market, seeking higher margin products. Subprime lending provides many borrowers who cannot qualify for prime mortgage financing with the opportunity for home ownership. Subprime lending also permits financially challenged borrowers the ability to access the equity in their home through refinancing.

Subprime borrowers typically are charged higher fees and interest rates, and have lower initial loan balances than prime borrowers. Subprime borrowers often have higher delinquency and foreclosure rates than prime borrowers.

Subprime originators typically sell all or most of their production, either through whole loan sales or through securitizations. When reviewing subprime lending and securitizations, you should review the *Interagency Guidance for Subprime Lending and Securitizations* and other guidance in the References section. Confer with national and Regional credit specialists when necessary.

Abusive and Predatory Lending Practices

Savings associations must not engage in abusive or predatory lending practices. These associations should comply with the Home Ownership and Equity Protection Act, which was designed to protect consumers from abusive lending practices. Savings associations should also understand state predatory lending laws, and determine to what extent they must comply with these state laws. Examiners responsible for reviewing mortgage banking should confer with the examiners responsible for the review of asset quality and compliance to determine that the association complies with all applicable federal, state, and regulatory requirements.

Processing

Loan processing consists of gathering information for income, employment, and credit verification; collateral valuation; down payment source; hazard and flood insurance, and other required closing documents. This information allows the underwriter to more accurately assess the applicant's ability to service the mortgage debt and facilitates better evaluation of collateral coverage. FHA/VA loans contain unique requirements that may require specific training for loan processors dealing with these government-insured or government-guaranteed loans.

The use of automated underwriting systems (AUS) has shortened the time frame for loan approval and has significantly reduced the processor's workload. AUS will qualify certain loan applicants for streamlined or reduced documentation loans. Processors must ensure that all necessary information has been obtained and files are adequately completed before delivery to the underwriting unit.

Underwriting

Underwriters determine whether to approve or deny a loan. They evaluate the borrower's ability and willingness to repay the loan based on credit history, financial resources, income level and stability, owner occupancy status, and the collateral coverage. They also must ensure compliance with federal and state regulations, including consumer fair lending requirements. Underwriters determine if the loan qualifies for various loan programs, including those established by the GSEs or private label issuers. This will determine the loan's secondary market salability.

Automated Underwriting Systems

The use of automated origination, underwriting, and appraisal systems has expanded significantly. This technology has reduced loan approval and processing time, thus lowering production costs. On the negative side, the incidence of mortgage fraud and improper use of confidential borrower information has increased. Institutions continue to improve accessibility for customers, including Internet application and online access to customer account information.

In the 1990s, FNMA and FHLMC developed proprietary AUS for conventional conforming loans. FNMA's Desktop Underwriter (DU) and FHLMC's Loan Prospector remain the two most widely used AUSs. The use of these systems has expanded to FHA/VA, nonconforming, and subprime loans. Private mortgage insurance companies and many large lenders have also developed proprietary AUS. For associations with proprietary AUS, you should consult with national and regional credit and compliance specialists.

Most AUS operate in a similar manner. Loan data is submitted through various loan origination systems that are often laptop or web-based. The lender must verify that the data entered into the AUS is accurate. AUS do not approve or deny a loan, but will provide an underwriting recommendation such as accept or caution.

AUS determine the creditworthiness of an applicant by using an equation that assigns values to an applicant, based on certain attributes and facts. Normally, these systems contain a borrower credit assessment based on a credit score, a financial ratio analysis of the borrower's ability to repay, and a property value collateral assessment. AUS typically access databases that contain large quantities of loans tracked over many years for payment performance, default, and loss comparisons. These systems evaluate and score each applicant, thus assisting lenders in risk assessment and determination of secondary market salability.

Given adequate scale, AUS can facilitate significant cost savings over nonautomated systems, provide the opportunity for faster loan approval, and reduce the time until closing. Some AUS provide a status report that details the completion stage for each document necessary for loan closing. AUS are used to order credit reports, appraisals, flood insurance, and tax information. These systems help price the

loans based on risk, determine the appropriate loan program for sale into the secondary market, and in some instances help manage mortgage pipeline risk.

Collateral Value

A key aspect of the underwriting process is the evaluation of a security property's value. In this regard, the association must comply with all OTS and Interagency appraisal guidance, including the independent selection of qualified and experienced individuals to appraise or evaluate real estate (see OTS 12 CFR 564, Appraisals). Mortgage transactions of less than $250,000 and secured by one- to four-family residential properties are exempt from certain appraisal requirements; however, associations must perform evaluations pursuant to OTS regulations and interagency appraisal guidelines.

Automated Valuation Models (AVMs) are one method for evaluating property values. AVMs use a statistically based computer model to estimate property value. The model is based on comparable sales in the subject property area, property characteristics, tax assessments, and price trends. AVMs depend on the accuracy, comprehensiveness, and timeliness of the data they use. Data issues can include incomplete public records, insufficient sales of comparable properties within a specified geographical area, and a time lag between when a market is established and when the AVM uses the data to estimate value.

AVMs can provide accurate value estimates in circumstances when there is current data, when properties are homogenous, and when a property's condition and marketability are typical for the area. Savings associations must be alert for properties in markets with declining values or in neighborhoods where deferred maintenance is common. In these situations, real estate price stability and property condition can vary greatly, and a more comprehensive valuation method might be necessary. To address a number of these concerns, some lenders use licensed appraisers in conjunction with the AVM (appraiser assisted automated valuation model or AAAVM).

As part of its risk analysis, FNMA's DU will make a property inspection recommendation based on the credit risk of the transaction and how robust the data is for the subject property. These automated recommendations may require an appraisal with interior and exterior inspection, an exterior-only appraisal (also known as a drive-by), or an exterior-only inspection. An exterior-only recommendation means no appraisal is required. The lender continues to be responsible for the representations and warranties on property condition and marketability. Not all loans qualify for AVM use. Lower risk loans, especially those with low LTV ratios, often qualify for AVMs.

A serious shortcoming of AVMs is that there is no property inspection to assess the physical condition and relative marketability of a property. Also, there are a variety of AVM products from multiple vendors that vary in quality and accuracy. Savings associations should carefully select an AVM and regularly monitor the results for ongoing effectiveness and accuracy.

Closing

Closing a residential mortgage loan involves:

- Gathering and executing all of the documents required to create a valid obligation to repay the debt.
- Recording the security interest of the lender or investor.
- Establishing the rights and responsibilities of the mortgagor.
- Obtaining all required closing documents.
- Disbursing the mortgage funds.
- Obtaining trailing documents.

The savings association must obtain all required documents, such as the note, preliminary title insurance, mortgage assignment, and property insurance, before disbursing the funds.

State law governs most of the steps necessary to close a mortgage loan and create a valid security interest in the real estate. The savings association's staff, an escrow agent, the title company, or an attorney may close the loan. Some investors require a closing agent that the title company has approved and accepted. The loan closer should maintain control over the closing package and submit it to the mortgage company prior to closing.

The savings association must maintain controls and review procedures that adequately prevent mortgage fraud and ensure compliance with all applicable laws and regulations, including the Real Estate Settlement Procedures Act (RESPA). The savings association should review each loan after closing to ensure that the loan was properly closed, and that all documents were properly executed. Any missing or inaccurate documents must be identified, obtained, or completed. The post-closing review should monitor documents obtained after closing, which may include the recorded mortgage, assignments, and the final title insurance policy.

Mortgage Electronic Registration System

The mortgage banking industry created the Mortgage Electronic Registration System (MERS) to streamline the mortgage process, using electronic commerce to eliminate paper. MERS allows mortgage lenders to register new mortgage loans and to record ownership transfers of mortgage loans and servicing in a similar fashion. MERS acts as nominee in the county land records for the lender and servicer. The chain of title is simplified because it begins and ends with MERS. MERS reports the status of all loans' beneficial interests, servicing, and sub-servicing arrangements. Any loan registered on MERS is protected against future assignments because MERS remains as nominal mortgagee no matter how many times servicing is traded. FNMA, FHLMC, GNMA, FHA/VA, and most of the other significant secondary market participants approve and advocate MERS use.

The percent of mortgage loans registered with MERS continues to grow and currently includes most newly originated mortgage loans. Under MERS, mortgage lenders do not have to go to the local courthouse to register ownership changes, thus saving considerable time and money. Recording numerous assignments at various courthouses costs significantly more than the expense of registering on MERS.

Quality Control

Savings associations involved in mortgage banking should have a quality control program supported by a written plan. The quality control department should be independent of the production function, and the department should not report to personnel involved in the production of loans. FNMA, FHLMC, GNMA, and most private investors require that a lender have a quality control program that independently assesses the quality of loan production.

The quality control program should:

- Establish review procedures for the full scope of the association's mortgage banking production activities.
- Cover all channels of production, employees involved in loan production, and all vendors or contractors involved in the process.
- Evaluate, monitor, and document the overall quality of mortgage loan production.
- Ensure that underwriting practices are sound and that loan files are accurate.
- Address the loan sample selection process, file review, and documentation procedures.
- Ensure compliance with GSE, government, and private investor requirements.

The quality control function should report findings to the appropriate level of management, the audit committee, and/or board of directors when necessary. The reports should provide conclusions, summarize scope and work performed, and detail loan-specific findings when necessary. These reports should be issued in a timely manner to ensure that the underlying causes of deficiencies are resolved promptly.

Some associations outsource the quality control function to an outside vendor. The association must exercise proper oversight even if it outsources quality control. The association is still responsible for overseeing quality assurance procedures and must monitor and measure the quality of the vendor's work. The association should assign qualified personnel to manage and oversee this process.

The quality control group must be proactive in fraud prevention and detection. This requires verifying that there is proper training for all employees involved in loan production. The association may subscribe to various fraud databases, which indicate geographic areas where fraud is more prevalent, and the types of mortgage fraud that persist. Key aspects of fraud prevention and detection include

closely examining all business relationships and aggressively sampling and reviewing files. Upon detecting fraud, quality control must promptly report it to management and the board. Management is then responsible for notifying appropriate regulatory agencies and pursuing a resolution. This includes filing suspicious activity reports and criminal referrals to regulatory and law enforcement agencies as required by regulation and law.

SECONDARY MARKETING

The secondary market, where loans and mortgage backed securities (MBS) trade, has grown enormously. The breadth of loan product offerings has expanded with the growth in subprime, Alt-A, and nontraditional products. Additionally, there have been expanded types of MBS, collateralized mortgage obligations (CMOs), and other mortgage-related structures. The secondary market provides a ready source of liquidity for companies involved in mortgage banking activities. These companies, along with traditional savings associations, banks, and credit unions, provide this market's primary underlying product, residential mortgage loans.

The secondary marketing unit in a mortgage banking operation does the following:

- Develops new loan products
- Manages pipeline and warehouse risks
- Prices loans
- Manages recourse obligations
- Oversees related loan repurchases and loss indemnifications
- Sells and securitizes loans
- Delivers loans to investors.

The secondary market unit generally does not operate as a profit center. Many mortgage banking companies attempt to operate this unit at break-even. The secondary marketing unit should structure its operations to control risk and protect the production margins and achieve best execution for loan sales.

Secondary Marketing Policies

As with all major functions within a savings association, the secondary marketing unit should operate under specific, board-approved policies, procedures, limits, and risk metrics that coincide with the size and complexity of the mortgage banking operation. Savings associations should maintain written, board-approved policies that detail:

- Types of loan programs offered and types of origination channels utilized.
- Loan pricing strategies and methodologies
- Areas of responsibility and levels of authority for personnel
- Risk limits

- Reporting requirements
- Types of permissible hedging instruments
- Counterparty risk management, including financial capacity requirements
- Concentration limits for high-risk loans and derivative assets.

Loan Product Development

The secondary marketing department normally works closely with loan origination and other production personnel when developing new loan products and entering new geographic markets. Production personnel can offer insight into local competition and market demand, garnered through their frequent contact with real estate brokers and local builders.

Test marketing a new loan product before expanding the offering can provide valuable feedback into potential loan product weaknesses. Before offering new loan products, the secondary marketing department can use test marketing to ascertain its marketability, and the savings association's ability to price, deliver, and service the product. Secondary marketing personnel must ensure that new loan products comply with the savings association's loan policies and procedures, and applicable state and federal laws and regulations. The unit should also ensure that any new loan products targeted for sale comply with investor guidelines.

Savings associations that offer nontraditional, subprime, or Alt-A loan products should factor the unique characteristics, including performance and collection requirements for each of these products into loan product development. Savings associations should also closely review new loan product marketing materials for clarity and completeness of risk disclosures to prospective borrowers.

When loans are underwritten for sale in the secondary market using investors' underwriting guidelines, the originating lender retains risks through standard representations and warranties for at least 120 days after the sale. One typical warranty is that the investor can "put back" any loan that defaults within the 120-day period. Therefore, loans should be prudently underwritten, even if they are originated for sale to third parties.

Secondary marketing personnel closely monitor the financial markets and are familiar with investor activities and preferences, often structuring products to meet their requirements. The secondary marketing department often connects to online financial services that provide MBS, CMO, bond, and various other derivative and financial instrument price and yield quotes. Federal National Mortgage Association (FNMA or Fannie Mae), Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac), and the Federal Home Loan Bank (FHLB) also directly provide some of this information, particularly current price and yield indications. For Government-sponsored Enterprise (GSE) loan product pricing, the servicing option and remittance cycle will impact the loan or mortgage price.

MBS and, to a lesser extent, mortgage loans trade in an over-the-counter market with participants electronically linked. Large brokers and dealers make a market in many of these MBS and loan

products, thus creating a liquid market with reasonably tight bid/ask price and yield spreads. Bid prices represent the price a purchaser will pay, while ask prices reflect the price at which a seller is willing to sell. Since the MBS are backed by the loans, loan pricing in both the primary and secondary mortgage markets are normally closely linked. However, periodically these spreads may diverge, such as during a refinance boom when lenders may be reluctant to reduce the primary rate because of the significant loan volume.

When pricing loan products, management must consider the company's business plan and earnings objectives. MBS and loan prices and yields constantly change intra-day. Savings associations must have appropriate systems and controls that ensure loan prices reflect market changes, and that these loan price changes are communicated in a timely manner to all loan originators. Secondary marketing personnel typically establish prices, but they often request input from other association personnel. Secondary marketing personnel must also consider other objectives including market share targets, loan portfolio growth targets, servicing volume, and the opportunity to market other loan and deposit offerings.

Many associations incorporate risk-based loan pricing models that include borrower's credit scores, property loan-to-value (LTV) ratios, and various product offerings such as payment option and interest-only adjustable rate mortgage (ARM) loans. For example, an association may require a higher interest rate for loans with higher LTV ratios or lower Credit scores. Management must ensure that risk-based pricing models are based on empirically developed credit, interest rate, and market risks and do not result in discrimination or any actions that violate consumer laws.

Institutions should perform a detailed profitability analysis for each loan product type. This analysis should consider the loan's dollar amount (conforming or jumbo), the loan type (GSE and private issue MBS), and the source of the loan (wholesale or retail). Additional factors include the cost of hedging price risk through the loan's sale date, servicing values created, risk-based capital assessments for credit risk, funding costs, and internal rate of return requirements.

In the past, companies sold or swapped mortgage loans, particularly FNMA, FHLMC, and Government National Mortgage Association (GNMA or Ginnie Mae), MBS, with pass-through rates 0.50 percent below the mortgage note rate. These entities and market participants historically assumed that FNMA and FHLMC guarantee fees and normal servicing fees should approximate 25 basis points for each. GNMA I MBS, comprising Federal Housing Administration (FHA)/Veterans Administration (VA) loans, provided 44 basis points for servicing and paid six basis points to GNMA for the guarantee.

Savings associations can now negotiate lower guarantee fees with the GSEs. Advances in technology have significantly reduced the cost of loan servicing. Consequently, many large mortgage banking companies with significant servicing portfolios negotiate a reduction in the required minimum servicing fee. This reduces the amount of recorded servicing values and lessens the potential volatility of this asset. Some rating agencies emboldened this position by reducing the assumed servicing fees for loans backing FNMA and FHLMC MBS to significantly less than 25 basis points in their models.

Pipeline

Loans enter the pipeline when a savings association takes an application from a prospective borrower, and remain there during the processing, underwriting, and preclosing phases of production. Effective pipeline management depends on the accuracy and detail of management information systems. Savings associations must maintain systems that report the volume and status of loan applications as they progress through production. Savings associations should also maintain records that identify those pipeline loans intended for sale, and those loans that will be held for portfolio. These records are important for risk management purposes and accounting requirements. We discuss this more fully in the Accounting section.

Interest rate changes affect the volume of loan applications, the percentage of applications that will eventually close, and the value of pipeline commitments. The likelihood of a loan closing depends on factors such as the lock-in price (or rate) relative to the current market price (or rate), loan status, time until lock expiration, and loan purpose. If the applicant qualifies for the loan, the association normally grants the prospective borrower the option to lock-in the loan's interest rate for a certain period of time prior to closing. This lock period can be several months, but generally extends for 60 days or fewer. These are known as rate lock loan commitments.

Those prospective loans to qualified applicants that have not yet locked in the loan's interest rate are floating loans. These loans pose no immediate interest rate risk. However, many associations closely monitor the dollar amount and characteristics of these loans, and consider those aspects in their pipeline risk management decisions. If interest rates increase, many of these floating loan borrowers will lock the loan's interest rate, creating interest rate risk or price risk for the association.

The value of locked loans moves inversely with interest rates. If interest rates increase, the value of these locked loans will decrease. The association's level of interest rate risk from locked loans depends on the dollar amount and types of loans in the locked pipeline. Fixed rate loans or hybrid ARM loans with extended fixed rate periods pose the highest levels of interest rate risk.

An association must measure, monitor, and manage pipeline interest rate risk. As discussed in the Hedging section, this risk can be managed using many different instruments. Savings associations use forward commitments to sell FNMA and FHMLC MBS as the most common instrument to hedge fixed rate mortgage loans, but may also employ some optional form of coverage to offset the lock option granted to prospective borrowers.

Fallout Risk

Locked pipeline loans are subject to fallout risk. This risk represents the possibility that loans may not close in sufficient quantities to satisfy the outstanding commitments to sell. Fallout primarily occurs when interest rates decrease during the lock-period. The longer the lock period, the higher the probability that interest rates may decrease, encouraging the borrower to obtain a lower interest rate from another lender.

Fallout risk varies by loan and borrower type. It is more prevalent for fixed rate than for ARM loans, and for refinance loans than for purchase loans. Refinance borrowers have flexibility, since they have

less stringent timelines than home purchasers, who have real estate contract and closing deadlines. Subprime and marginal credit borrowers may be less subject to fallout risk, since these borrowers have less opportunity to find comparable financing in a short time. Associations typically stratify fallout analysis by salient loan and borrower characteristics.

To offset fallout risk, some lenders impose fees or offer other options to borrowers in the event of declining rates. Sometimes an association will assess a commitment fee that the borrower forfeits if the loan does not close. However, market competition often prohibits lenders from charging this fee. Another option is to provide a one-time step-down of a locked rate if rates decline. The lender often charges a commitment fee for this option.

Management must closely manage fallout risk, and estimates often involve tracking the historical experience of an association's locked-loans. Management should utilize an adequate sample of historical interest rate fluctuations to provide enough information for decision-making. However, past experience does not always portend future performance. Therefore, associations should continually evaluate, backtest, and document fallout estimates. Lenders will often calculate either a fallout or a pull-through ratio, which quantifies the number of loans in the pipeline that close. Pull-through is the inverse of fallout and is the term used to describe pipeline loans that ultimately close. For example, if 25 percent of the locked loans fallout, 75 percent of these commitments pull-through.

Savings associations should maintain appropriate models to estimate fallout risk based on the pipeline's dollar amount exposure and the loan characteristics. If interest rates decrease and the amount of fallout is greater than expected, reverse price risk occurs. Under these conditions, the savings association may not be able to meet its outstanding commitments to sell loans or MBS based on those loans. Therefore, the savings association may need to repurchase or pair-off forward commitments at a loss. Alternatively, it may have to purchase unfavorably priced loans in the secondary market to fill outstanding firm commitments to sell. Savings associations must factor fallout risk into their hedge models, using various interest rate scenarios.

Warehouse

The warehouse is the inventory of closed loans intended for sale. Loans remain in the warehouse until delivered to investors as part of a whole loan or securitized sale. The ability to sell and deliver a warehouse loan to an investor depends on whether the loan meets investor underwriting, documentation, and operational guidelines. Loans often remain in the warehouse pending documentation completion. Lower volume loan categories may remain in the warehouse until there are enough loans to sell them efficiently in bulk.

Warehouse loans are normally hedged with forward commitments to sell the loans or MBS backed by the loans. Warehouse loans that are not fully hedged expose the savings association to market risk. If interest rates increase, the savings association may have to sell uncovered loans at a loss. ARM loans are sometimes not hedged because they reprice more frequently and represent less interest rate and price risk.

Mortgage bankers strive to deliver warehouse loans to investors minimizing the time loans remain in the warehouse. Higher warehouse turn rates can result in higher liquidity and profitability. For example, reducing the time loans remain in warehouse from 60 days to 30 days halves funding requirements, enabling higher production levels or reduction of interest expense. Warehouse turn rates average below 50 days to complete documentation, processing, and sale. However, some lower volume and special investor delivery loan programs may remain in warehouse longer. Turn rates continue to decline due to changes in technology.

The warehouse can also provide net interest income on the spread between the loans' interest rates and the cost of funding the warehouse when long-term rates exceed short-term interest rates. The warehouse often contains large quantities of fixed rate, long-term loans, while the funding mix is normally short term. When the yield curve is steep, this positive carry can materially enhance profitability. However, this profitability benefit shrinks when incurring additional hedging costs for loans maintained in the warehouse for extended periods.

Loans that remain in the warehouse for an extended time may reflect documentation or other salability problems, such as underwriting deficiencies, delinquency issues, and submarket interest rates. Savings associations should monitor and maintain warehouse-aging reports that detail loans maintained in warehouse for extended periods. These reports should identify the specific loans, the time spent in warehouse, and the reasons for retention. You should review warehouse-aging reports and determine whether the company proactively manages stale-dated warehouse loans.

Savings associations should periodically transfer stale-dated warehouse loans to a specially identified balance sheet account. "Scratch and dent" is a common term for a loan portfolio composed of former warehouse loans with documentation deficiencies, delinquency, or failure to qualify for investor programs. These transfers should be at the lower of cost or market value that includes discounts for any loan defects or reduced liquidity. As discussed in the Accounting section, any transfers from the warehouse to a permanent loan portfolio must comply with generally accepted accounting principles (GAAP). Savings associations should also reconcile warehouse loans at least monthly to the general ledger.

Other Risks

In addition to interest rate risk and fallout risk there are many other mortgage banking risks. Savings associations should be aware of and monitor these risks if they engage in mortgage banking. These risks include reverse price, product, investor credit, and basis risk.

Reverse price risk can occur when a savings association commits to sell mortgage loans to an investor at a set yield prior to closing. If mortgage rates decrease, prospective borrowers may demand the new lower mortgage interest rate, or they may seek financing elsewhere. To accommodate these prospective borrowers, the savings association may agree to grant them a lower mortgage rate. Therefore, the association must deliver the lower interest rate mortgage loans at a discount, reducing the originally expected sale price to provide the investor with the required yield.

Product risk represents a type of price risk, and reflects the chance that a particular unsold or unhedged loan product may decline in value even if market interest rates remain stable. With the proliferation of new loan products, investor preferences and interest rate spread relationships can change from the time a borrower locks the loan's interest rate until that loan is sold to an investor. If market demand decreases for a particular higher risk loan product, such as hybrid subprime, stated income, or high LTV second mortgages, investors may require a higher yield, thus requiring a discounted loan price for the less favored loan product.

Investor credit risk reflects the potential that an investor fails to perform on a commitment to purchase loans. It represents the investor's ability and willingness to perform as agreed. The primary source of investor credit risk occurs when the investor encounters financial difficulties. To mitigate this risk, savings associations should conduct extensive investor analysis and due diligence that includes an assessment of the counterparty's financial capacity, establishing counterparty risk limits and monitoring compliance with such limits. Such analyses should be performed to assess counterparty risk related to derivative instruments as well.

Basis risk reflects the potential that prices or interest rates between two offsetting instruments in a hedging strategy will not closely correlate with each other. The variance in price or rate of the instruments can lead to gains or losses for the savings association. For example, using Treasury or London Interbank Offered Rate (LIBOR) denominated options to hedge mortgages.

Risk Estimates

Mortgage banking companies should identify, manage, monitor, and control pipeline, warehouse, and other risk exposure. The board of directors or designated committee should establish appropriate risk exposure limits relative to capital and earnings. Management should provide periodic reports on risk exposure to the board of directors or designated committee. The board or designated committee should routinely monitor such reports and risk exposure as indicated in their minutes.

Savings associations must assess pipeline and warehouse risk routinely. They should use models consistent with the size and complexity of their activities and regularly backtest estimated results against actual experience. Management should be able to explain and address any discrepancies between the model results and actual results. Savings associations should specifically maintain internal or vendor-developed prepayment models that provide reliable estimates for their loan products. They should also segment the pipeline and warehouse by meaningful characteristics such as loan product type, interest rate, origination channel, and maturity to accurately estimate the risk for each category. Large companies with many loan product offerings must also estimate the embedded options in their products under various interest rates, volatility, and rate spread environments.

Loan Sales

Savings associations involved in mortgage banking activities utilize many different methods to minimize risk and maximize profitability. However, the most prevalent method involves a direct sale of loans to a GSE or other investor. When selling loans, associations can use different techniques including an

assignment of trade (AOT) or a loan for MBS swap. In an AOT, the seller assigns the loans with the matched commitment to sell MBS.

Most investors require a company to become an approved lender with that investor before they will purchase loans from that company. FNMA and FHLMC refer to approved lenders as Approved Seller/Servicers. Normally, FNMA and FHLMC must approve a mortgage lender to be both a seller and servicer of loans, but lenders can sell loans to a GSE and arrange to transfer the servicing to another approved servicer. To become an Approved Seller/Servicer with FNMA or FHLMC, an association must apply for approval from the GSE. This involves specifying the types, characteristics, and underwriting standards of the loans. Most savings associations use the GSE's or investors' proprietary Automated Underwriting System (AUS) and will comply with all loan underwriting, documentation, and other loan program requirements.

Once approved to sell loans with a GSE or another investor, an association may enter into commitments to sell these loans. Generally, a commitment creates a legally binding agreement to purchase or sell loans. Most mortgage lenders that sell to a GSE or private investor negotiate a master commitment with these entities. A master commitment often specifies the loan programs, representations and warranties, product availability, volume, underwriting standards, documentation, pricing, delivery, and mortgage servicing requirements. You should review any master sales commitments in their assessment of an association's mortgage banking operation, including a review of any recourse provisions.

Loan Sales to GSEs

Savings associations can sell mortgage loans directly to FNMA, FHLMC, FHLBs, financial institutions, and other investors. GNMA does not directly purchase mortgage loans but does guarantee MBS backed by FHA and VA mortgage loans. GNMA II MBS pool loans from several lenders into a single issue MBS and are generally larger in dollar amount than GNMA I MBS.

FNMA, FHLMC, and the FHLBs offer standard and negotiated loan programs. FNMA and FHLMC offer multiple standard loan programs including conforming loans (30-year, 15-year, and balloon fixed-rate mortgage loans) as well as standard and hybrid ARM loan programs. Most savings associations must enter the standard program and accept the GSEs' terms, servicing fees, or requirements on sale at posted yields. However, FNMA and FHLMC will negotiate prices and terms for large purchases. They may also offer some of these loan programs for Alt-A or other hybrid ARM loans on a negotiated basis.

Commitment Types

Selling loans normally involves entering into a sales commitment. There are multiple forms of sales commitments, the most prevalent of which include mandatory delivery, best efforts, and standby commitments.

A mandatory delivery commitment requires a lender to sell a specified dollar amount of loans to an investor at agreed upon prices within a specific period. In a best efforts commitment, a mortgage lender agrees to sell loans at a specific price with delivery required for only those loans that close. Best efforts

commitments benefit the lender since there is no penalty fee if the loans do not close, whereas a mandatory delivery commitment usually requires compensation to the counterparty for failure to perform.

A standby commitment obligates the issuer of the commitment to purchase mortgage loans at a certain yield for a certain period. This commitment does not obligate the party to whom the commitment was issued, often a loan originator, to deliver any loans. The holder of the standby commitment pays the issuer a fee for this commitment, which is sometimes referred to as a long put option. A standby commitment provides flexibility and serves as a type of insurance for the mortgage originator.

Loans for MBS Swaps

Savings associations can swap loans for the MBSs of FNMA, FHLMC, and GNMA. To execute a loan swap for an MBS with FNMA and FHLMC, an association enters into a Master Commitment with the GSE, pools a group of similar mortgages that meet loan underwriting and documentation requirements, transfers title to the mortgages, and delivers these loans using the GSE's designated system. For a GNMA MBS, an association will seek a commitment from GNMA to guarantee a pool of acceptable FHA, Farmers Home Administration, or VA mortgage loans. The savings association places these mortgages in a custodian account as collateral for the GNMA MBS.

For FNMA and FHLMC loans for MBS swaps, the savings association receives a MBS backed by these loans that the association normally continues to service. In these swaps, savings associations pay the GSE a guarantee fee of 25 basis points or less, and in exchange hold a highly rated, more liquid instrument. Savings associations can also swap loans for MBS, retain the credit risk, and pay no guarantee fee, but these transactions are not customary. Savings associations can readily sell these MBS or use them as collateral for borrowings such as reverse repurchase agreements and FHLB advances.

Guarantee Fees, Buy-ups, Buy-downs, Remittance Cycles, and Float

Mortgage banking companies strive to pay the lowest guarantee fees possible since lower fees will enhance profitability and represent a significant input into best execution models. Normally, institutions can negotiate the amount of guarantee fees with the GSEs and private investors based on loan volume, credit risk, and the timing of cash flows paid to the guarantor. The longer the guarantor holds funds, the more likely this party will accept lower guarantee fees.

FNMA and FHLMC allow an institution to either "buy-up" or "buy-down" the guarantee fees. This allows an institution to achieve the best possible MBS coupon rate and better manage servicing cash flows. A buy-up occurs when an institution pays a higher guarantee fee over the life of the loans and receives more funds up front. A buy-down occurs when the seller receives fewer funds up front in exchange for a lower guarantee fee over the life of the loans. FNMA and FHLMC disclose buy-up and buy-down amounts in periodically adjusted published grids.

The GSEs and private investors offer several different remittance cycle options that will impact loan and securitizations pricing. Remittance cycles refer to when the servicer remits loan payments to the investor. The principal and interest payments belong to the investor after the loan sale. As explained in

the Servicing section, the float earned on principal, interest, taxes, and insurance custodial accounts depends on the investor's remittance cycle. This remittance cycle determines the number of days that the servicer must maintain those funds in the respective custodial accounts.

Federal Home Loan Banks' Mortgage Programs

The FHLBs offer member financial institutions competitive alternatives to holding fixed rate loans in portfolio, or to selling or securitizing fixed rate loans with FNMA and FHLMC. These FHLB mortgage programs permit a participating institution to retain a portion of the credit risk from loans, while transferring the interest rate and prepayment risks to the FHLBs. Many of these programs pay the participating institution a monthly credit enhancement fee, in some instances net of losses, while FNMA and FHLMC require institutions to pay a guarantee fee.

The genesis of these programs was in 1997 when the FHLB of Chicago developed the Mortgage Partnership Finance (MPF) Program. Later, three other FHLBs developed the Mortgage Partnership Program (MPP). The mortgage programs' premise is that annual losses from high quality, fixed rate mortgage loans will be considerably less than the guarantee fees paid to FNMA and FHLMC. Although the MPF Program and MPP details vary, both programs provide member institutions an alternative to secondary market transactions with FNMA and FHLMC. The FHLBs' regulator, the Federal Housing Finance Board, periodically reviews these mortgage programs.

The FHLBs' mortgage programs provide a greater benefit to small- to mid-sized financial institutions. Large financial institutions can negotiate lower guarantee fees with the GSEs based on their significant loan volume, and possess more options through their broad access to the capital markets. In addition to conventional loans, the FHLBs purchase fixed rate loans insured or guaranteed by the FHA, VA, or other federal agencies. The servicing of such government-backed loans generally mirrors the servicing of loans required for GNMA securities.

Under the FHLB mortgage programs, institutions can sell closed loans on a "flow" basis as originated. For flow loan product, the institution acts as an originating agent for the FHLB, for which it may receive agent fees in addition to loan origination fees. The loan closes in the participating institution's name, but the FHLB funds and legally owns the loan at inception. The institution does not record the loan on its balance sheet. For closed loans, the institution originates and closes the loan in its name, then sells the loan to the FHLB in a manner similar to a secondary sale to FNMA or FHLMC. For both flow and closed loans, the institutions receive a servicing fee similar to those received under FNMA and FHLMC programs.

The institution enters into a Master Commitment agreement that provides for optional delivery with the FHLB. The agreement specifies the dollar amount of deliverable loans, the amount of the credit enhancement (in most instances), and other terms and conditions. The institution underwrites, services, and manages the credit risk associated with the loans, while the FHLB assumes the interest rate and prepayment risk, as well as liquidity or funding risk in the case of flow product. The loans must meet similar standards to those loans sold or securitized under most FNMA and FHLMC 15- and 30-year fixed rate loan programs.

Management of Credit Risk

The FHLB structures credit risk into several layers, sharing the credit risk with the participating institution. As with most FNMA and FHLMC fixed rate loan programs, the mortgage programs require that borrowers obtain private mortgage insurance for loans with LTVs greater than 80 percent. The FHLBs assume responsibility for any losses incurred from a private mortgage insurance (PMI) company's failure to reimburse for losses covered by these policies. This assumption of loss eliminates any recourse to participating institutions on the loss position covered by PMI.

The next layer of protection is a first loss account (FLA) that absorbs the initial layer of losses after any PMI coverage is exhausted. The MPPs use a Lender Reserve Account (LRA) instead of an FLA. For the MPP LRA, if the institution accrues income and records a related asset, that asset requires a specific capital treatment, a dollar-for-dollar risk-based capital amount.

If losses exceed the FLA or LRA account, a credit enhancement provided by the institution serves as the next layer of protection. The FHLB maintains the final loss position, absorbing any further losses if the FLA or LRA and institution's credit enhancements deplete. Generally, the institution's credit enhancement amount represents the difference between the FLA amount and the size of the overall amount of credit enhancement needed to achieve the equivalent of an "AA" rating from a rating agency on the FHLB's third loss position. The FHLB uses a credit risk model to determine the amount of the participating institution's credit enhancement.

Each FHLB Mortgage Program contains many individual product offerings that may have accounting and capital ramifications. The appropriate accounting for and measurement of second-loss credit enhancements depend upon the program features, and may vary between flow and closed loan arrangements. Each institution must determine the proper accounting and regulatory reporting for the product offerings used.

You should ensure that savings association's risk management systems adequately address the credit risk exposure resulting from the second loss credit enhancement, and from any performance-based credit enhancement fees receivable from the FHLB mortgage programs. As with any activity, the association must have effective management and board oversight. This includes acceptable policies and procedures, appropriate limits, adequate reporting and internal controls, and appropriate internal audit and consumer compliance reviews. You should confer with your Regional Accountant, since accounting and regulatory capital issues associated with these programs can differ and are often complex.

The FHLB Mortgage Programs, although not securitizations per se, contain many features encountered when reviewing securitizations. Accordingly, you should apply the Interagency Guidance on Asset Securitization Activities, particularly as it relates to loss layering, the second-loss credit enhancement guarantee, and the fees received.

Recourse and Loss Indemnification Risks

Recourse occurs when a savings association retains credit risk for loans sold beyond normally required representations and warranties. Savings associations strive to sell loans without recourse, since recourse

can significantly reduce the capital benefit of the sale. Selling loans with recourse may provide a higher sales price, but the risk-based capital requirements generally negate this advantage. An association that sells with full recourse cannot treat this transaction as a sale for capital purposes, since the savings association must maintain risk-based capital for the entire amount of the loans sold. An association that sells a loan with partial recourse can get FASB 140 sales treatment and some regulatory capital relief as long as the appropriate liability account is booked. FNMA, FHLMC, and other investor sale/servicing guides and sales agreements may contain provisions that detail a seller's representations and warranties. Representations and warranties typically cover the following:

- The loans are underwritten in accordance with investor requirements.
- The loans are accurately documented, that appraisals were performed in accord with investor requirements.
- There is no fraud involved.
- The loans do not experience early payment default.

The first three are considered errors and omissions and are typically within the savings association's ability to control. If the purchaser finds any violation of these representations and warranties, it may require the association to repurchase the loans, or indemnify it from loss. The risk-based capital regulations may treat some of these provisions as recourse or credit enhancements. GAAP, related interpretations, and guidance also cover recourse and loss indemnification as explained in the Accounting section.

Early Payment Default

Early Payment Default (EPD) is a provision in most sales agreements that requires a seller to repurchase or indemnify an investor from losses under certain conditions such as delinquency or default during the first few months after the sale. EPD of 120 days or less is considered among normal representations and warranties and is generally not subject to recourse treatment under the capital regulations. However, when loans become delinquent after the 120-day EPD period, the purchaser will often "audit" the loan files to determine if any other representations or warranties have been violated.

Thus, the time frame under which loans can be put back to the seller based on EPD must be 120 days or fewer to be considered a sale without recourse. A savings association can repurchase delinquent loans within 120 days of the sale date without recourse ramifications if it meets those other standards mentioned. Some sale agreements contain notice clauses that permit the purchaser a period up to 180 days after the default event to require the seller to repurchase the loans. This is recourse. Also, when an association has standard reps and warranties and buys back loans that become delinquent after 120 days or for other reasons, implicit recourse could exist. You should be alert for notice clauses that could result in the savings association repurchasing loans and exceeding the 120-day recourse safe harbor.

Mitigating Repurchase Risk

Mortgage bankers encounter recourse and loss indemnification risks in the normal course of business. The magnitude of these risks correlates with the level of activity and can stem from extensive loan and securitization sales. Savings associations can mitigate recourse and indemnification risks by:

- Following prudent underwriting and documentation standards.
- Conducting comprehensive reviews at each stage of the loan processing, underwriting, and closing.
- Implementing a well-designed and effective quality control program.
- Maintaining policies and procedures for the review of all agreements related to loan sales, securitizations and servicing.
- Maintaining a system to track, monitor and validate all requests for repurchases or to grant indemnifications. Such a system should include documentation that notes the reason for the repurchase and the clause under the sales contract which the repurchase is made under.

Other Recourse Risks

A financial institution that sells or securitizes mortgages can encounter other forms of recourse risk. For example, recourse occurs when an institution sells or securitizes mortgages and retains a first dollar loss position such as a residual interest or credit-enhancing interest-only strip in a securitization. Recourse can also result if the institution agrees to reimburse an investor for credit-related losses for mortgages sold to that investor. Implicit recourse exists when an institution provides a credit enhancement beyond the provisions contained in the sale agreement. The Thrift Financial Report instructions provide directions for reporting residual interests, credit-enhancing interest-only strips, and the methods to appropriately risk-weight assets sold with recourse for capital purposes.

You should assess a savings association's systems and controls for managing recourse and loss indemnification risks. This includes reviewing the Preliminary Examination Response Kit (PERK) Mortgage Banking Questionnaire for management's disclosures of recourse, loss indemnifications, and repurchases. You should also review loan sale, servicing, securitization, and investor agreements and the sale/servicing guides for any indication that these documents may contain recourse provisions beyond the standard representations and warranties.

High levels of loan repurchases or loss indemnifications raise regulatory concerns. Management should closely monitor, track, document, and proactively manage all loan repurchases and loss indemnifications. You should specifically review the amount of loans repurchased and determine if these loans are resold or transferred to portfolio. A significant quantity of loan repurchases or increasing trends in repurchases may portend loan quality deterioration or underwriting deficiencies. Tracking loan repurchases as a percent of loans sold by year originated provides insight into loan

quality during particular periods. Identifying the actual losses from these repurchases yields valuable data for establishing necessary accounting reserves.

For savings associations with high levels of loan activity, including significant wholesale volume, management monitoring and tracking is essential. During especially heavy loan volume periods, loan documentation quality may deteriorate under the strain from unusual loan volumes. This creates potential liability under the sales contracts' standard representations and warranties provisions. As loans become delinquent, the GSEs and investors conduct thorough reevaluations of the delinquent loan files to uncover exceptions to the representations and warranties. The GSEs and investors will require that the seller repurchase or provide loss indemnification for loans with exceptions.

Vintage analysis provides a useful method for assessing potential loss exposure. As explained in the Accounting section, GAAP covers this issue in FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" (FIN 45). Savings associations should establish warranty reserves for loans sold that may be repurchased under the standard representations and warranties. Many publicly traded mortgage banking companies disclose this information in their regulatory filings. Common explanations for repurchases and indemnifications include delinquency problems, documentation issues, and fraud. The capital regulations exempt fraudulent transactions from the recourse provisions.

You should review, assess, and discuss with management the savings association's systems, controls, and recordkeeping for recourse, loss indemnifications, and repurchases. You should also determine that all loss indemnifications and repurchases are timely reported to the appropriate level of management or the board of directors and dealt with in an acceptable manner.

Loan Shipping and Delivery

Shipping and delivery requirements vary between the GSEs and private investors and depend upon whether or not a securitization is involved. The GSEs have standardized shipping and delivery requirements, and provide software for this process through the Internet. These software systems normally integrate with the AUS systems, further reducing the burden on the shipping and delivery department. Whole loan servicing released sales to private investors require considerably more effort since these investors may want every original document shipped to them.

To fulfill its delivery responsibilities, the savings association must obtain all mortgage documents for its investors. The shipper generally matches loan terms with the commitment specifications and reviews loan files for any missing documents, including resolution of missing items. The shipper also inputs data into the software systems, ensures loans are registered with the Mortgage Electronic Registration System, obtains recorded mortgages, obtains pool certification, procures mortgage insurance on closed FHA loans, and ships loans to custodians and investors.

Savings associations that securitize FHA/VA loans into GNMA MBS must obtain a third-party certification that all loan documents are on file. A subsidiary or affiliate can provide this certification. However, GNMA requires that the association have a separate trust department. The file custodian

issues the final pool certification after verification that all documentation is complete, with no exceptions permitted.

GNMA has established tolerance levels for the final certification, transfer, and recertification of mortgage pools. Refer to the most current Ginnie Mae MBS Guide for GNMA pool certification requirements at Ginnie Mae's web site. If the seller exceeds the established limit, GNMA can require the seller to post a letter of credit to protect GNMA against potential loss. FNMA and FHLMC require appropriate document collection process, but do not require a performance bond.

Private investors also require complete document delivery. Sales contracts typically require the seller to repurchase defective mortgages and indemnify purchases from losses resulting from incomplete loan documentation. Purchasers may hold back sales proceeds for contract performance failures.

Savings associations should maintain a tracking system to monitor document collection that lists missing documents and the time since the loan closed. Savings associations should link documentation exceptions to the source of origination to identify any underwriter performance issues. Failure to obtain mortgage documents in a timely manner can result in financial and legal risk exposure. The post-closing unit may obtain trailing documents such as title policies and mortgage assignments that may arrive up to 120 days after closing.

In recent years, savings associations have progressed towards more electronic documents, including E-notes with digitized signatures. Although this trend towards full electronic documentation continues, many investors still require hard-copy files.

HEDGING

Hedging Objective

Through mortgage banking activities, savings associations assume market risk by issuing interest rate lock commitments and aggregating closed mortgage loans held for sale. Left unhedged, losses associated with these risks can be significant. In mortgage banking organizations, secondary marketing responsibilities include executing and managing the day-to-day risks associated with their mortgage pipeline and warehouse positions.

The objective of hedging is to mitigate market risk and protect the value of such mortgages and commitments from the initial commitment date until the loan is funded and sold. The primary objective of hedging mortgage banking activities is to offset changes in the fair value of the mortgage pipeline and warehouse positions in the most cost effective and efficient manner. Without hedging, changes in fair value of the pipeline and warehouse may lead to volatility in earnings or erosion of gain-on-sale margins. An effective risk management program can help level the peaks and troughs of normal market movements to produce a consistent and predictable revenue flow.

Hedging Process

Savings associations that engage in mortgage banking should have formal policies and procedures for hedging pipeline and warehouse risks (as described in the Secondary Marketing subsection) that are consistent with the overall risk management process of the association. This process should include:

- Procedures for identifying and segmenting risks in the pipeline and warehouse.
- Measures to identify the types of risks inherent in the operations.
- Board-approved risk exposure limits indicating acceptable risk tolerances.
- Systems to measure and monitor risk exposure.
- Procedures to track and evaluate price movements.
- Limits for officers authorized to open and manage hedging positions.
- Management reporting systems that periodically disclose the mortgage pipeline and warehouse risk position.
- Management expertise to design, execute, and maintain an appropriate secondary marketing hedge program.
- Appropriate monitoring and internal control systems to ensure that internal policies are followed.

Risk Metrics

Savings associations engaged in mortgage banking should develop risk metrics for measuring, monitoring, and estimating the effects of different events on mortgage banking activities. One of the most common risk metrics is based on a parallel rate shock scenario. This scenario analysis estimates the change in value of the pipeline and warehouse holdings and hedge instruments for a specific basis point change in interest rates, such as plus or minus 1, 25, 50, 100 basis points, etc.). Although this analysis is useful and captures much of the duration risk, companies with significant and complex mortgage banking activities should establish a broader array of more sophisticated risk metrics. These metrics could include duration/convexity, nonparallel yield curve shifts, prepayment shocks, volatility, and mortgage basis spreads.

Some companies use metrics that assess multiple risk factors concurrently, such as parallel and nonparallel yield curve, volatility, basis, and option adjusted spread. Value at risk (VaR) can be used to estimate the maximum loss that could be incurred on the pipeline or warehouse over a certain time period, such as one day, ten days, one quarter, etc., at a given confidence level such as 95, 98, or 99 percent. This means that the maximum estimated VaR loss would only be expected to be exceeded one to five percent of the time for a given holding period, depending on the confidence level established by management. Earnings at risk (EaR) measures the maximum shortfall in earnings relative to a specified target that could be experienced due to the impact of market risk on a specified set of exposures for a specified reporting period and confidence level.

Best Execution

Savings associations are able to achieve better selling execution by aggregating funded loans rather than individual loans. Best execution means getting the best price for a loan sale or a loan securitization delivery. Best execution is achieved in conjunction with hedging loan pricing risks. Hedge selection is driven by the association's plan for achieving best execution. For example, loan sale executions are based on current mortgage security prices, buy-down and buy-up grids or factors, agency cash program prices and yields, guaranty fees, and the prospects of retaining or releasing servicing rights.

Secondary marketing managers should continually analyze sale execution variables to maximize the delivery options for optimum results. Large or active mortgage bankers use sophisticated models to clarify tactics associated with placing forward hedge coverage by quantifying the value of alternative executions, thus enabling more profitable decisions.

Loan securitization is another form of loan delivery used by large mortgage bankers who retain mortgage servicing. Loans are bundled into a security that is sold to secondary market investors. Conforming loan securitizations require the Federal National Mortgage Association (FNMA or Fannie Mae) or Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac) approval. The mortgage servicing rights created are either sold separately (servicing released premium) or retained in portfolio (servicing retained).

Hedge Optimization

Hedge optimization blends best execution (primarily secondary market driven) with savings association preferences. These preferences may include approved hedging instruments, level of risk tolerance, hedge coverage, including cross product hedging between loan programs, and desired use of option coverage, including option premium cost, or minimum transaction size.

Hedge optimization pulls together all existing hedge positions, current best execution for each loan, potential forward sale and option instruments for every coupon, expiration and strike price, and bid-ask spreads for all potential trades and preferences for hedging. The optimal set of daily hedge positions should be based on management's criteria and specific risk tolerances. To minimize hedge cost, the hedger should have a good understanding of the relative cost or value of different instruments before making any trading decisions.

Loan Pool Optimization

Loan pool optimization combines best execution and hedge optimization with preferences for investor delivery. The objective is to create loan pools for delivery into existing trades, create loan pools for delivery into new trades, or to aid in deciding whether or not to pair off existing trades. Factors management should consider in creating optimal loan pools include delivery tolerances, investor-specific restrictions and requirements, and management preferences relative to the retention of servicing rights.

Risk Identification and Segmentation

In the Secondary Marketing section, primary pipeline and warehouse risks are discussed, including interest rate or price risk, fallout risk, reverse price risk, basis risk, product risk, credit risk, and prepayment risk. In addition to those risks, other hedging related risks such as measurement risk, timing risk, and liquidity risk must be identified, monitored, and controlled. Measurement risk is the risk that the hedger will execute either too much or too little coverage. Timing risk is the risk of putting on or taking off the hedge at the wrong time. Liquidity risk is the inability to close a position promptly without incurring significant loss. The use of thinly traded hedging instruments or hedge positions with large size concentrations relative to market breadth/float heighten liquidity risk.

Before entering into any hedging strategy, management and the board of directors should have thorough knowledge of the risks and rewards of the hedging programs under consideration. Important areas of focus include:

- Adequate management technical expertise.
- The benefits hedging will bring to the association.
- The advantages and disadvantages of various hedging strategies and hedging instruments.
- Hedging techniques the association plans to use.

- Risks associated with hedging strategies/methods.
- Sensitivity of hedge instruments to changes in market price.
- Costs of hedging.
- Potential difficulties in hedge administration.

Hedge Coverage

Hedge coverage refers to the portion of the rate-sensitive mortgage pipeline and warehouse that a hedging instrument covers. It is usually expressed as a percentage of the pipeline and warehouse positions. In practice, most secondary marketing managers hedge 100 percent of the rate-sensitive warehouse position. Once these loans are closed and funded, they are exposed to interest rate risk but are no longer at risk for fallout. Coverage will then be focused on the mortgage pipeline position and can be expressed as a percentage of the mortgage pipeline.

The primary risks associated with hedging a mortgage pipeline are interest rate risk and fallout risk. When a potential borrower receives a rate lock, the association has in effect provided a "put" option to the borrower to sell the loan to the lender at a specified price. The association is incurring a risk without directly receiving compensation. If rates rise, the borrower will likely execute the loan transaction. If rates fall, the borrower is less likely to execute. This risk is referred to as fallout risk. Hedging strategies should consider both interest rate and fallout risks.

Secondary marketing managers typically determine the amount of hedge coverage based on historical performance. These managers should periodically perform historical fallout analysis under varying market environments, in order to gauge the level of fallout and identify the reasons why changes in the level occurred.

In a declining interest rate environment, the association suffers losses on unfunded loans in the rate locked pipeline that do not close because existing mandatory forward sale commitments cannot be filled. As such, the hedger will need to "pair off" or compensate the investor for the failed delivery. This situation illustrates an over-hedged pipeline position and reinforces the importance of understanding the fallout potential of the association's locked mortgage pipeline.

Conversely, in a rising interest rate environment, fallout declines and pull-through increases because the borrower's rate lock is "in the money," which results in a higher likelihood of loan closure. In this situation, mortgage bankers will suffer losses if too little hedge coverage exists, forcing the sale of uncovered loans into the market at a loss.

An effective hedge program maintains a balanced hedge position to neutralize both primary risks inherent in the mortgage pipeline and warehouse. A common hedge program is as follows:

- Initiating coverage for a given percentage of the rate-locked mortgage pipeline to cover pull-through of loans in the pipeline between rate lock and funding, based on historical fallout analysis.

- Covering 100.0 percent of the rate-sensitive warehouse loans.

- Adjusting hedge coverage on a daily basis to account for changes in the pipeline/warehouse and to maintain proper hedge coverage ratios.

The secondary marketing manager accomplishes hedging using a variety of hedge instruments. The most commonly used include:

- Optional best efforts forward sale commitments.

- Mandatory forward sale commitments.

- Options on forward sales of mortgage backed securities (MBS).

- U.S. Treasury/Eurodollar financial futures.

Hedging Activity and Effectiveness

The secondary marketing or mortgage pipeline and warehouse policy should specify the savings association's risk tolerance. The level of risk tolerance will determine the extent to which the association hedges pipeline and warehouse risk exposure. The level of risk tolerance can be specified relative to a specific hedge coverage ratio or dollar loss in economic value.

Hedge ratios are a necessary part of the risk management process since it is not practical or even possible to offset every rate lock and closed loan in the pipeline and warehouse with an identical hedge instrument. This approach provides the basis for determining more precise cross product and cross coupon hedge ratios (delta hedging). This risk measure is effective only to the extent that all mortgage banking positions inclusive of hedge positions are on a duration (delta) equivalent basis. You should scrutinize the association's hedge instrument activity very closely in conjunction with the risk profile of its mortgage banking activity. Inappropriate use of hedging instruments or combinations of instruments may not result in material risk reduction, and may even exacerbate risk. The exposure report may, however, erroneously show these positions as providing full hedge protection. Management reports that indicate only the current notional amount of hedge protection relative to the pipeline and warehouse 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 account for the relative value of all positions (i.e., loan pipeline, warehouse loans, and hedge instruments). A market value or "market value at risk" approach provides the basis for measuring risk embedded in the association's pipeline and warehouse positions, ensuring comparisons on an instrument-to-instrument basis are valid.

Scenario analysis measures the price/value sensitivity of the pipeline and warehouse portfolios, including all hedge positions, to changes in interest rates or changes in price of a benchmark MBS. The most common scenarios are yield curve shock scenarios based on instantaneous and parallel shifts in the Treasury yield curve or London Interbank Offered Rate (LIBOR)/Swap yield curve. This type of analysis shows the risk profile of the entire mortgage banking position, which helps assess the effectiveness of the hedge position relative to the association's risk tolerances.

The scenarios are usually determined by selecting a variety of yield curve shifts. Yield curve shifts or interest rate shocks may be more focused on short-term market moves such as smaller shifts or benchmark security price changes that are more probable, or longer-term market moves such as larger shifts or benchmark security price changes. Many associations will look at both long- and short-term scenarios. The time span from loan commitment until sale is an important factor in assessing and managing interest rate and price risk.

The OTS Net Portfolio Value (NPV) model is an example of a risk measurement approach that incorporates the market value methodology described above. However, the OTS NPV model is not granular enough to address mortgage banking activities and, therefore, the results are better utilized to assess the overall interest rate risk of the association. There are a number of vendor-supplied mortgage banking models that are capable of providing information that specifically quantifies the risk profile of the mortgage banking position.

In addition to the valuation and sensitivity of the mortgage loan pipeline and warehouse positions, management should consider the economic value of the related mortgage servicing. This framework also provides a rigorous basis for valuing mortgage servicing rights. The value of the mortgage servicing is often a key factor in the profitability of a mortgage banking operation. Mortgage bankers do not want to risk the value of the mortgage servicing when evaluating the level of tolerance to risk of the entire mortgage banking operation. The overall performance or effectiveness of hedging can usually be gauged by analyzing the profitability of the secondary marketing department over time. Significant income or gain on sale margin volatility may indicate pipeline management issues that stem from hedging activities.

Pipeline and Warehouse Hedging Techniques

Delta (Dynamic) Hedging

Delta hedging is a relatively simple strategy to employ as it is only concerned with hedging only small changes in interest rates. Delta hedging focuses on a risk measure referred to as DV01, or the dollar value of a one basis point change in interest rates. DV01 is calculated based on the effective duration of a one basis point parallel shift in the yield curve. Thus, this measure does not capture the convexity effect of mortgage-based products that is generated by larger yield curve shifts. The objective of delta hedgers is to reduce or eliminate losses relative to small changes in rates. Typical delta hedging employ a "delta neutral" approach that attempts to immunize mortgage pipeline and warehouse positions in the aggregate against small changes in interest rates.

Delta hedging has limitations. It does not provide adequate hedge coverage for larger changes in rates. Further, risk exposure to convexity, basis, and volatility are left unhedged. For mortgage assets with embedded prepayment options, a delta hedger will need to rebalance its hedges frequently as rates move since convexity causes the mortgage pipeline and warehouse deltas to change with rate shifts. This frequent rebalancing is referred to as dynamic hedging. Fast moving markets can be problematic for a delta hedge as they require the association's models to quickly re-estimate the association's mortgage banking risk positions. Options are generally not used in delta hedges.

Delta/Gamma (Global) Hedging

Global hedging strategy anticipates changes in the pipeline and warehouse relationships due to market changes. Global hedging also constitutes a more comprehensive approach to delta hedging, as it captures the impact of convexity and volatility risks in the pipeline and warehouse portfolios. Under this strategy, options are utilized to minimize the impact of convexity and volatility risks in addition to the pipeline and warehouse delta.

Using options typically provide more relief from the frequent rebalancing required under the delta hedging strategy and improves the mortgage banking risk profile under larger rate moves. Disadvantages of using options are the higher cost and reduced liquidity relative to alternative hedge instruments such as exchange traded futures and swaps. Option hedging requires more sophisticated modeling to measure and monitor a variety of market risks.

Hedging Instruments

An association uses various instruments to hedge market risk in the secondary market. The board or delegated board committee should identify approved hedging instruments and the mortgage banking operation should have the expertise to manage such instruments. In addition to explicit board approval, the association's policies should describe the authorized instruments in detail and the particular purposes for applying each instrument.

The most commonly used hedges are best efforts and mandatory forward sales agreements, and options on MBS.

An *Optional (Best Efforts) Forward Sales Agreement* is a hedge that removes fallout risk from the mortgage pipeline. The association may find that it cannot produce loans in sufficient quantity to securitize or service them. In this situation, the secondary marketing manager may elect an optional forward sale to sell particular loan production. Many small mortgage-banking operations use this hedging strategy for its relatively simplistic interest rate risk mitigation. It also offers the advantages of minimal price or product risk, low cost, and little required monitoring.

A *Mandatory (Firm) Forward Sales Agreement* is the most common type of forward sale commitment. If the association chooses not to use forward whole loan sales, it can substitute the sale of something similar that is not owned for future delivery. This can be accomplished with forward sales of similar mortgages, MBSs, or other debt instruments, such as U. S. Treasuries.

Forward sales of mortgage loans 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 mortgage loans were a certainty, a forward sales agreement would represent a perfect hedge; that is, it would provide complete interest rate protection and introduce no additional risks. However, there is always the possibility of fallout during the origination process, especially if interest rates decrease substantially.

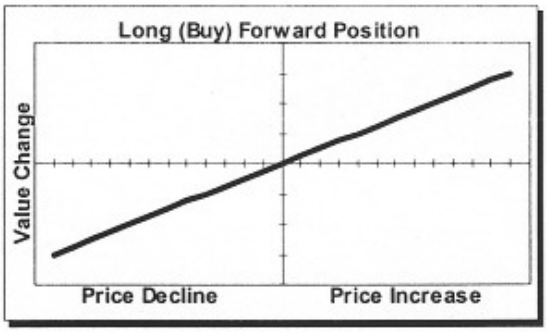
In the event that a seller is unable to close and deliver mortgages at required yields, it may be liable for the pair-off costs that involve buying back the position. This entails repurchasing mandatory delivery commitments. Alternatively, the association may choose to go back into the wholesale market and buy enough loans to meet the obligation, obtain securities by buying a comparable security, pairing off, or rolling forward the position. Pairing off the hedge position or purchasing loans will usually result in a loss. The following are examples of this type of coverage:

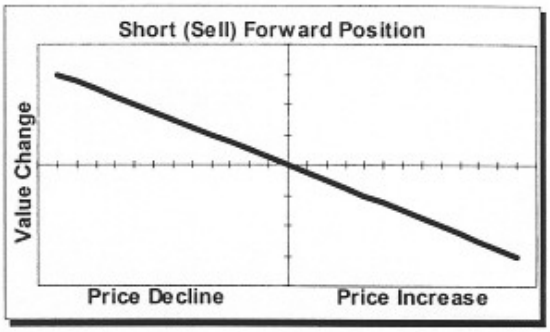
Example: The association has $100.0 million of loans in the pipeline at 6.50 percent and two points (price of 98.00 percent). The association's hedger sells a 6.00 percent MBS for a price of 98.25 percent. If all of the loans close as expected, the association will realize a gain equal to 0.25 percent plus the value of the servicing in excess of the minimum required servicing spread (for example, 0.25 percent). If all of the loans do not close as expected (i.e., fallout occurs), and other loans with substantially equivalent yields are not immediately available for substitution, one of two simplified scenarios will occur.

Scenario 1: Interest rates have risen since the original hedge trade causing loan fallout to decline or loan pull-throughs to increase. Before settlement day, the hedger determines that the association will have a higher percentage of loans closing in the pipeline than originally estimated. Because rates have risen since the initial trade, the pipeline loans attributable to the increase in the pull-through rate (i.e., unhedged pipeline loans) will be sold at the current market price (e.g., 96.00 percent). Therefore, the association will incur a loss on those loans that were not initially hedged of 2.00 percent equal to the 96.00 percent sold less 98.00 percent price at the original hedge trade.

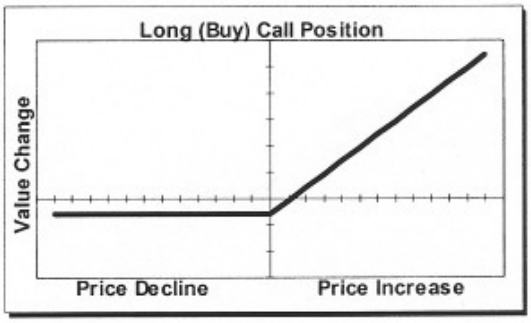
Scenario 2: Interest rates have declined since the original hedge trade. Before settlement day, the hedger determines that the association will be unable to pool enough funded loans to meet the forward sale requirements. Because rates have declined since the initial trade, the hedger must purchase a comparable security in an amount equal to the shortfall at current market at a higher price (e.g., 100.00 percent). Therefore, the association will incur a pair-off loss of 1.75 percent equal to the 98.25 percent sold less 100.00 percent bought. If the unclosed loans actually close at the initial lock-in terms, a gain may be realized to partially offset the pair-off losses.

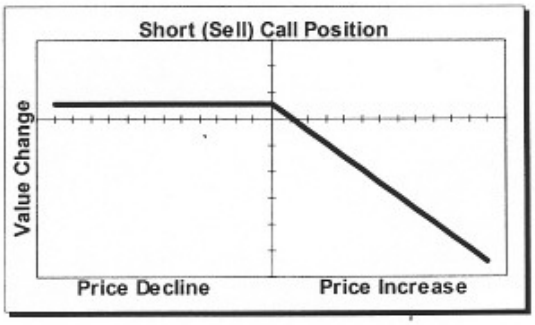
The following diagrams illustrate the value profile of mandatory forward sale positions:

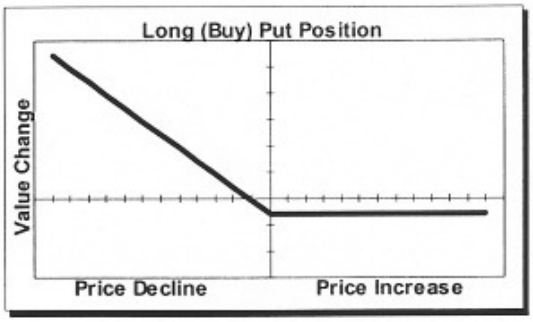


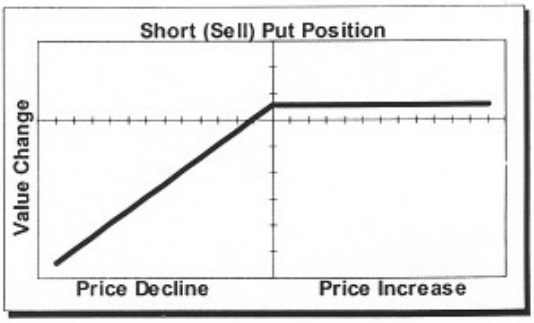


Options on Mortgage-Backed Securities and Futures give the holder the contractual right, but not the obligation, to buy (call option) or sell (put option) an underlying MBS or financial futures at a specified price on the option expiration date. The following diagrams illustrate the cost/payoff profile of the available option positions as of the option exercise date:









One method of reducing pair-off costs arising from the failure to deliver mortgage loans under a mandatory forward sales agreement is to purchase mortgage loan options. For example, an originator may purchase an option to sell a FHLMC Participation Certificate (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. Basis risk is neutralized assuming that the MBS is identical to the mortgage loans in the pipeline and warehouse.

Savings associations may use either over-the-counter (OTC) mortgage options or exchange traded options for hedging purposes. OTC mortgage options are traded in the dealer market. These options are less liquid and have higher premiums than exchange traded options on U.S. Treasury futures.

Treasury/Eurodollar financial futures contracts closely track the price performance of the underlying "cheapest to deliver" U.S. Treasury security/LIBOR based deposit rates (with terms up to 30 years). Futures positions are marked-to-market daily. A mortgage option, however, has significantly less risk than an option on Treasury futures because it does not introduce basis risk and can be customized with respect to strike price and maturity.

A synthetic put is another alternative that offers the same benefit. It consists of the simultaneous sale of a mandatory forward and purchase of a call in like instruments (agency, coupon, settlement month). Option cost or premium is a function of the specified strike price, current underlying security price, time to expiration, implied volatility, and the risk-free interest rate corresponding to the time to expiration of the option. Options can be an effective hedge vehicle, especially during periods of high interest rate volatility.

Put options may be used in a hybrid strategy with forward contracts to hedge pipeline risk when borrower fallout is uncertain. 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 purchasing automobile insurance with a high deductible.

The value of *U.S. Treasury Securities and Treasury/Eurodollar Futures* contracts directly links to the value of a comparable maturity noncallable Treasury securities or LIBOR based deposit rate. Using these contracts to hedge the value of a mortgage security captures duration risk, but exposes the hedger to convexity and basis risk. To address the nonlinear profile of mortgages, options may be used in combination with the financial futures.

Interest Rate Swaps are over-the-counter contracts where one party receives or pays a fixed rate of interest and another party pays or receives a floating rate of interest, usually 3-month LIBOR, over a specified period. Similar to Eurodollar futures, interest rate swaps can provide an effective hedge against duration risk, but introduce basis risk and convexity risk. As such, options may be used in combination to offset the convexity risk.

Interest Rate Swaptions are options to enter into a specified interest rate swap transaction at a predetermined future date. These instruments are similar to options on MBS, but the underlying financial instrument is an interest rate swap. These instruments address the convexity risk normally attributed to using swaps to hedge mortgages but still introduce basis risk.

Hedge Position Management

Pipeline and warehouse positions are normally classified into categories by program type and risk level. Hybrid adjustable rate mortgage (ARM) products along with traditional fixed rate loan products are exposed to interest rate risk. While ARMs are not usually hedged due to their lower exposure to interest rate and price risk, hybrid ARMs are usually hedged due to the interest rate risk in their initial fixed rate term. Common categories for pipeline and warehouse positions are:

- Agency conforming, 30-year fixed rate
- Agency conforming, 15-year fixed rate
- Nonconforming, 30-year fixed rate
- Nonconforming, 15-year fixed rate
- Government (e.g., VA, FHA)
- Subprime
- Hybrid ARMs
- ARMs.

In addition to the listed categories, associations segregate by salability parameters including loan size, product code, purpose code, investor code, and property type. The basic components of establishing the desired hedge position are security type, delivery month, and coupon along with a decision related to mandatory versus optional sales.

Pipeline and Warehouse Risk Exposure Reports

To operate the mortgage banking operation in a safe and sound manner, management must have current information detailing the mortgages in the pipeline and warehouse and project how those positions can change in the short term. Position reports that show the pipeline (gross and net of fallout), warehouse, and hedge portfolios are key to effective management and monitoring. Risk exposure reports that include an appropriate range of stressed interest rate shock scenarios are essential in providing adequate oversight.

Management market risk exposure reports should include, but not be limited to an executive summary report, position reports detailing coverage and exposure, mark-to-market reports, activity registers, and profitability reports. The executive summary report should include pipeline and warehouse aggregate positions along with aggregate hedge or hedge coverage showing net exposure. This report should also include market value changes versus a benchmark MBS price change and interest rate (Treasury/LIBOR) yield curve shifts, similar to TB 13a rate shock scenarios. The executive summary should show current positions and risk levels to promote effective oversight of pipeline and warehouse management.

Pipeline and Warehouse Hedging Policy

Board-approved, written policies should govern the use of pipeline and warehouse hedges. Policies should define:

- Ranges of hedge coverage.

- Loss tolerance thresholds.
- Risk limit violation approval with oversight escalation procedures.
- Management reporting requirements.
- Acceptable hedging instruments.
- The internal controls to properly approve hedging instruments.

CONCLUSION

For many associations, mortgage banking is a means of augmenting spread income and generating fee income in addition to traditional thrift operations. The primary purposes of secondary marketing are to maximize profits on servicing released sales or to sell mortgages with servicing retained on the best terms available while minimizing or managing market risk. Because mortgage prices can fluctuate significantly over a short period, the secondary marketing manager must maintain strict risk discipline and stay within predetermined risk thresholds. A strong hedging policy with specific loss parameters is essential to define operational boundaries. The secondary marketing manager should execute trades to mitigate risk rather than speculate on the direction of interest rates.

Most hedging instruments are derivatives. Savings associations may not invest in derivative products for speculative purposes as they are not an authorized investment under the Home Owner's Loan Act and such practice violates 12 CFR 560.172.

Hedging – Mortgage Servicing Rights

Background

From a regulatory standpoint, supervisory attention is heightened when capitalized MSR represent a large concentration of an association's capital. However, while concentration thresholds are often useful in focusing supervisory attention, the evaluation of the MSR risk exposure and how it is managed and controlled plays a more important role.

SFAS No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities*, requires the capitalization of MSR at fair value. A number of financial institutions have recognized substantial amounts of MSR, with some retaining levels representing significant concentrations relative to capital. With the issuance of SFAS No. 156, *Accounting for Servicing of Financial Assets*, associations are required to initially measure and recognize servicing assets and servicing liabilities at fair value. An association shall subsequently measure each class of servicing assets and servicing liabilities using one of two methods: 1) amortization method, or 2) fair value measurement method. Savings associations electing to use the amortization method are generally not likely to actively hedge the fair value of the MSR portfolio. This section will address the hedging of MSR presuming the election of fair value accounting.

Once considered a rare practice within the thrift industry, the hedging of MSR portfolios is now common practice among the large institutions with significant MSR holdings. MSR hedges are financial instruments that are executed to protect against declines in economic value and earnings. The value of a servicing hedge should rise when interest rates fall, offsetting the decline or impairment in the value of the MSR portfolio that occurs due to an increase in prepayments and the inability of the production of new loans to keep pace with the runoff of the MSR. Conversely, the value of the hedges generally declines in rising rate environments, which is normally offset by a corresponding increase in MSR value as prepayments slow.

A number of mortgage servicers recognize the "natural" or "macro" hedge provided in a declining rate environment by new servicing created from increased originations. Some institutions model and project economic values of the origination operation by estimating gains from servicing valuations based on historical loan production and gain on sale. While it is understood that loan production volume will offset runoff of the servicing portfolio, it is not certain that a natural hedge will cover the entire change in MSR value.

There are several issues to consider with this type of hedge. First, you should consider how long it takes before an immediate MSR write-down or impairment to earnings can be offset by realized income from new loan originations. The second consideration is the difficulty of predicting the origination volume for the production hedge. You need to understand both issues before you render an assessment of a natural hedge as part of the overall MSR hedge program.

Fair values of MSR generally rise as rates increase and fall as rates decline, but the change in value is not linear. Rather, the risk profile of MSR is asymmetrical and generally exhibits negative convexity. This means the MSR value increases less rapidly as rates rise than it declines when rates fall. An effective hedge for this profile is the purchase of financial instruments that exhibit positive convexity, that is, instruments that increase in value as rates decline faster than they decrease in value as rates rise. However, purchasing positive convexity in financial markets has an associated cost because the instruments often contain long embedded options.

Hedging the MSR portfolio is a dynamic process. The servicing asset has historically been one of the most volatile assets on an institution's balance sheet. It is subject to a high degree of market risk due to fair value changes and the resulting impact to earnings as rates change. Although MSR typically exhibit a negatively convex risk profile, the degree to which this is true can vary with changes in interest rate environments. Consequently, MSR hedgers must have a thorough understanding of the risks involved and regularly assess the risk profile of the asset as rates change. The overall objective of hedging is to preserve the value of the MSR against adverse changes in market conditions by minimizing total risk exposure.

Types of Hedgable Risks

Before constructing a hedge strategy, an association should identify the MSR risk profile, which is determined by the valuation of the asset and its sensitivity to changes in market conditions. The accuracy of the risk profile will impact the effectiveness of the hedge and its performance

The primary risk to a MSR portfolio is the risk of prepayment that results from changes in interest rates. These changes are the main driver of prepayments due to the borrowers' options to refinance their loans. MSR portfolios typically decline in value when interest rates decline because prepayments increase, thereby shortening the cash flow life of the MSR.

The MSR asset is exposed to other risk factors including:

- *Interest rate risk* is the potential change in the value of the MSR and hedge portfolios due to a parallel shift in the yield curve.
  - Duration (delta) risk *refers to the portfolios sensitivity to a +/- 1 basis point change in the level of rates.*
  - Convexity (gamma) risk *is the degree of change in duration that occurs with larger interest rate movements.*
- *Yield curve risk* is the potential change in the value of the MSR and hedge portfolios due to nonparallel shifts in interest rates.
- *Basis risk* is the potential change in the value of the MSR and hedge portfolios due to changes in spread between mortgages and nonmortgage hedge instruments such as swaps and treasuries.
- *Volatility risk* is the potential change in the value of the MSR and hedge portfolios due to changes in implied volatility (vega) used in pricing interest rate options.

Some risks are unhedgable. Modeling risk cannot be hedged. Changes made to valuation, prepayment and other models or assumptions alter the MSR risk profile and can lead to unhedgable events.

Another unhedgable event is related to "servicing retention" programs. Some large mortgage servicers employ a servicing retention program in an effort to maintain their servicing portfolio size. While a successful program will re-generate the MSR portfolio, the increase of prepayment activity will result in altering the risk profile of the existing MSR portfolio. It is often difficult to determine the precise impact of retention programs on subsequent prepayment activity. Nonetheless, the hedging strategy needs to account for this activity when constructing the desired hedge coverage.

Delta (Dynamic) Hedging

Delta hedging for MSR is conceptually similar to the strategy described in the mortgage pipeline and warehouse hedging section. In summary, delta hedging is only concerned with hedging small changes in the level of interest rates. Therefore, as rates move, delta hedgers will need to rebalance their hedges frequently since convexity causes the MSR portfolio deltas to change. Some associations have used U.S. Treasury securities as a delta hedge against their MSR portfolios as a means of reducing risk exposure to falling rates. While this strategy can provide an economic offset to MSR risk, it requires constant rebalancing in order to ensure adequate delta coverage.

This strategy does not address other sources of MSR risk such as basis risk, convexity risk, yield curve changes, and changes in volatility. In many cases, it is not a complete solution for hedging the MSR. Additionally, volatile markets can be problematic for delta hedgers, because they require robust systems and models to promptly re-estimate the MSR and related hedge positions.

Delta/Gamma Hedging

Because there are no individual financial instruments that exactly offset the risk profile of the MSR asset, hedgers use a combination of instruments to hedge the duration (delta) and convexity (gamma). An example of this type of hedging strategy is the use of a combination of receiver swaps and To-Be-Announced (TBA) securities. This strategy accounts for the asset's exposure to mortgage/swap basis risk. The receiver swap plus TBA hedge strategy can be further combined with long options to offset some of the negative convexity of the MSR and mortgages.[1]

Using options typically provides more relief from the frequent rebalancing required under the delta hedging strategy and improves the MSR risk profile under larger rate moves. Disadvantages of using options are the relative cost (premiums paid) and the lack of interest income (known as "positive carry") that is normally afforded by other instruments such as TBAs, Treasuries, and receiver swaps. Option hedging also requires more sophisticated modeling to measure and monitor market risks.

Hedging Instruments

The goal of hedging the economic value of the MSR portfolio is to stabilize value and decrease the negative convexity of the servicing asset. MSR hedgers frequently use an array of hedge instruments (on- and off-balance-sheet) to manage market risk. Below is a description of commonly used hedge instruments, the rationale for their use, and their advantages and disadvantages.

Principal-Only Mortgage Strips (PO). POs backed by collateral similar to a servicing portfolio can provide an effective hedge for potential spikes in prepayments. PO hedges not only serve as duration and convexity hedges, they also cushion against income variability. PO hedges can have limited liquidity depending on market conditions. It is also sometimes difficult to find a PO strip security with the desired coupon and weighted average maturity.

Receiver Interest Rate Swaps. Receiver interest rate swaps are over-the-counter contracts in which the mortgage servicer/hedger receives the fixed rate payments and pays the floating rate side of the interest rate swap over a specified period. The servicer benefits when interest rates fall, as the market value of the receiver swap appreciates. The swap market is deep with good liquidity. Swaps have low costs and no convexity, but have exposure to basis risk.

Interest Rate Swaptions. Swaptions are options to enter into a specified interest rate swap transaction at a predetermined future date. These instruments are similar to options on MBS, with the underlying

[1] Typically, MSR exhibit negative convexity, however, in the low interest rate environments experienced between 2003 and 2005, they exhibited positive convexity.

financial instrument being an interest rate swap. Swaptions address the convexity issues associated with receiver swaps, but still exhibit exposure to basis risk.

Interest Rate Floors. Interest rate floors tied to the LIBOR, 10-year Treasury, or constant maturity swaps provide a hedge against duration and convexity. Interest rate floors provide both market value protection as well as income protection if they go into the money. While this type of hedge exhibits strong positive convexity characteristics, it does not offer a closely matched offset to cash flow variability and also exposes the portfolio to basis risk between prepayment and interest rate changes. The interest rate floor benefits a servicer as rates decline below a specified level and has an offsetting effect to the runoff of MSR. Interest rate floors have positive convexity but suffer from basis risk and can be costly to purchase.

Mortgage-Backed Securities and TBAs. These instruments serve as a duration hedge. They have little basis risk and normally have positive interest income carry. The disadvantage of using a MBS or TBA hedge is their negative convexity. MBS require funding considerations whereas TBAs are off-balance-sheet.

U.S. Treasury Securities. These securities are used to hedge duration of the MSR. High liquidity and positive convexity are benefits of using Treasury securities. However, disadvantages include increased basis risk and funding considerations.

Call Options on U.S. Treasuries. These call options can provide a hedge for both duration (by taking a long position) and the negative convexity (through the call option) embedded in the MSR risk profile. They are liquid but lack mortgage basis coverage. The main advantages of Treasuries and Treasury call options are that they are liquid, have potentially lower cost compared to other instruments, and can be rebalanced easily. Drawbacks include basis risk and funding as well as leverage considerations when using large, on-balance-sheet hedging positions.

Constant Maturity Mortgage (CMM) Swaps. CMM swaps are hedging instruments that offset delta risk of the MSR. Because the CMM rate represents the yield on a par priced mortgage, use of these instruments does not introduce basis risk. The CMM swap is traded in the form of a Forward Rate Agreement (FRA). In a FRA, one party agrees to pay/receive a fixed rate versus receiving/paying the CMM rate at some future date. The movement of the CMM relative to the fixed rate determines gains and losses. CMM products are useful for hedging the exposure to changes in the current coupon mortgage rate. There is only limited dealer involvement in this market, which results in lower liquidity.

Prepayment Caps. To reduce monthly exposure to prepayment errors and improve hedging efficiency, mortgage servicers may consider using prepayment cap derivatives. A prepayment cap is based on a hypothetical amortization of a notional balance at a specified prepayment speed, which is expressed as a multiple of the constant prepayment rate. The higher the multiple, the higher prepayments are expected to be. These derivatives offer protection against prepayments being faster than forecasted and reduce exposure to adverse fluctuations in servicing values and income. These instruments are relatively new and, as a result, lack market depth and liquidity. While these instruments minimize prepayment risk, they can also introduce counterparty credit risk.

MSR Risk Exposure Reporting

MSR risk exposure reporting is essential for a savings association to manage and monitor its MSR risk profile. You should review an association's exposure reports to determine their accuracy and sufficiency for monitoring risk. Examples of risk exposure reports include:

- Executive summary report.
- Position reports detailing the MSR risk exposure and hedge coverage that shows the net exposure to a variety of risk measures.
- Mark-to-market reports.
- Compliance with risk limits.
- Hedge performance/effectiveness analysis.
- Profitability reports.

The executive summary discloses vital information relating to the current level of all applicable market risks and potential exposures. This report should promote effective oversight of the MSR portfolio. An effective executive summary report would include information showing the MSR's risk profile net of the hedge coverage. This report should include all risk measures required pursuant to the MSR hedge policy. Examples of risk measures are:

- Duration and convexity risks – parallel shifts of the Treasury or LIBOR/swap yield curve.
- Yield curve risk – nonparallel shifts of the Treasury or LIBOR/swap yield curve.
- Basis risk – widening and tightening of mortgage spreads.
- Volatility risk – value changes due to increasing or decreasing implied volatility.

Large and more sophisticated savings associations incorporate more sophisticated and comprehensive risk analytics such as Value-at-Risk and Earnings-at-Risk approaches in measuring market risk exposure. In those risk summary reports, the MSR risk exposure is rolled up and combined with other risk activities or business lines to show the total aggregated exposure to market risk.

MSR Hedging Policy

Poorly conceived or poorly managed hedges can result in substantial risk of loss. Therefore, it is vital that associations who engage in hedging their MSR portfolio risks are governed by prudent, board-approved policies that define:

- Hedging objectives and risk management strategies.

- Risk measures and exposure limits.
- Processes for handling limit violations with oversight escalation procedures.
- Management reporting requirements.
- Management and committee responsibilities.
- Approved hedging instruments.
- The internal controls needed to properly control use of approved hedge instruments.

SERVICING

Introduction and Overview

All institutions that originate mortgages are involved, to some degree, in loan servicing. As discussed in the Introduction, many institutions sell mortgages into the secondary market and to private sector issuers and investors for a variety of reasons but mainly to generate income and to manage interest rate, liquidity, and credit risks inherent in their operations. When selling mortgages, institutions often retain the right to service the loans, which results in a stream of cash flows throughout the life of the loan. Institutions can acquire mortgage servicing rights (MSR) through separate purchase of servicing (e.g., bulk acquisitions) or retention of servicing rights (involving a loan sale or securitization accounted for as a sale).

This MSR is capitalized and recognized as a mortgage servicing asset or liability depending on the value of the cash flows the activity generates. MSR becomes a distinct asset or liability when contractually separate from the underlying assets by sale or securitization with servicing retained, or by separate purchase or assumption of the servicing. These cash flows are highly sensitive to changes in interest rates. Generally, if interest rates fall, borrowers are likely to refinance or prepay their mortgages, which will reduce the value of servicing this pool of mortgage loans. Once a loan is paid off, the cash flow from servicing the loan is eliminated.

For institutions that service loans, such reductions in the value can lead to earnings volatility and erosion of capital. Some institutions elect to hedge the MSR, hoping to reduce this volatility (see the Hedging Section). As a result, institutions must maintain adequate systems to monitor and manage the risks.

The servicing of mortgages for others can also be an important component of a mortgage banking operation profitability. Servicing a loan portfolio involves a series of administrative functions performed consistent with an institution's internal policies and procedures, investor requirements, and applicable regulatory, accounting, and reporting standards.

Servicing is an operations-intensive process. As such, the operation must have comprehensive internal controls and effective risk management to ensure profitability. As discussed in the Introduction, a key challenge for mortgage bankers is to maximize efficiencies and economies of scale to remain competitive given the cyclical nature of the business and consolidation among servicers. To this end, servicers are concerned with the following:

- *Maintaining servicing volume and asset quality.* This involves effective management of the acquisition, disposition, and transfer of servicing rights and managing reputation risk.

- *Controlling costs.* There is a direct correlation between controlling costs and a servicer's ability to remain competitive and profitable.

- *Valuing and managing MSRs.* Institutions are responsible for the measurement of the MSR's fair value and the proper reporting of MSR on the financial reports.

- *Servicing/loan administrative functions.* A mortgage banker's profitability depends on the quality of its servicing and the ability to operate efficiently and manage associated risk.

- *Managing third party arrangements.* Institutions should perform appropriate due diligence of third parties and should not abdicate their responsibility for ensuring safe and sound practices.

- *Implementing effective internal controls.* These controls include management information systems, which require periodic updates to reflect revised business strategies or investor requirements.

The board of directors should ensure that the institution's servicing strategy is well documented and supported by a comprehensive analysis of key assumptions and financial projections for achieving long-term profitability. The plan should address all aspects of the servicing operation and identify the types and volume of mortgage loans required from each investor to earn an adequate profit. Given the need to effectively manage servicing costs, projections should also identify the costs to service each major loan type. Management's acquisition and sales strategy for MSR should also be documented, if applicable. Without an effective strategy and sufficient planning, a mortgage servicing operation could negatively affect an institution's operating performance and risk profile.

Valuation of Mortgage Servicing Rights

SFAS 156 requires companies to initially record all MSR at fair value. SFAS 156 permits a company to choose either the amortization method (lower of cost or market (LOCOM) or the fair value method to subsequently measure each class of MSR. Regardless, all companies must value MSR to comply with SFAS 156. This section only addresses the valuation of MSR, not the accounting for MSR (see Accounting section). Institutions must value MSR at fair value but there is no liquid market for the MSR. Management must estimate the fair value and that process is one of the most complex and difficult tasks for management.

In February 2003, an Interagency Advisory on Mortgage Banking (see Reference section) was issued highlighting concerns and providing guidance on the valuation of MSR.

There are several methods that institutions can use to estimate the MSR value. The most common methods for valuing MSR are external (third party) and internal valuations. Institutions with a concentration in MSR should use several methods in conjunction with the external or internal valuation, and compare the strengths and weaknesses of those methods. Management must also document its rationale for selecting the final value. The method used for the initial capitalization of fair value should be the same method used for the ongoing or periodic valuations. Management should review the process at least quarterly and ensure it reflects current market conditions. The methods include:

- Sales of Comparable Portfolios

- Third Party Valuations

- Internal Valuations (Static and Stochastic)

- Surveys
- IO Transactions
- Flow Purchases.

A. Sales of Servicing Portfolios

Traded servicing pools along with the pool characteristics provide valuable insights into the market for various types of servicing rights. As no two servicing pools are the same, it is difficult to match all or most characteristics. If loan level information is available, a lender can use internal valuation assumptions to estimate the value of a portfolio for sale. After the pool is traded, the servicer can make comparisons of their estimate with the pool's actual selling price to better understand current market conditions and factors that affect market pricing.

B. Third Party MSR Valuations

The servicer may obtain appraisals or valuations from brokers or consultants. Most third party appraisers derive the fair value using a "static" or discounted cash flow methodology although some also possess "stochastic" or option-adjusted spread capabilities. The servicing broker or consultant will rely on the information supplied by the servicer to estimate the MSR portfolio's fair value. The valuation is based on specific loan characteristics provided by the servicer as well as market-based assumptions. The assumptions are generally based on observed market transactions. Details contained in these appraisals should identify the loan characteristics and assumptions used to value each stratum.

Subjective factors are also considered in the MSR valuation, including the levels of supply and demand for servicing, interest rate trends, and perception of risk not incorporated into prepayment assumptions. These subjective factors are reflected in the range of values (e.g., typically 1.0 percent of estimated value) that are indicated in most servicing appraisals.

Some institutions obtain two valuations each quarter to calibrate their internal valuation and support the fair value analysis. Others may obtain one per quarter or one per year. The frequency and number depend on the size and complexity of the operation as well as the level of concentration and market volatility.

If management performs an internal valuation, management should reconcile its internal valuation to the independent values on a "super loan" strata basis to determine the reason(s) for any material differences.

Appraisers performing the valuation should be independent and comply with the American Society of Appraiser's Principles of Appraisal Practice and Code of Ethics. Among other things, these principles preclude appraisers from basing appraisal fees on the amount of the appraisal value of related business, such as brokerage services performed for the institution. Free appraisals or substantially reduced price appraisals offered by firms because the firms perform other services for the institution are also not acceptable.

Separate valuation divisions and affiliated corporations of servicing rights brokers generally are considered independent if there is a clear separation and independence from the servicing brokerage area. Consultants who are not brokers and brokers acting only as appraisers generally are considered independent as long as they did not advise or assist the institution in the purchase of more than 25 percent of the current dollar amount of MSR being appraised. OTS does not consider past appraisals of MSR to disqualify brokers from future brokerage service with the institution, as long as the brokerage business was not planned at the time of appraisals.

Internal Valuation Models

Most institutions use an internal model (either run internally or outsourced) to determine the value of the MSR. Models are highly dependent on accurate information and the use of reasonable, supportable assumptions. Their use requires substantial judgment and expertise to ensure reliable output. For internally modeled MSR value, institutions should establish validation procedures over the information and assumptions entered into the models, the logic and processing of the information within the models, and the accuracy of reports generated. Model validation procedures should include independent review of the model logic, comparison against other models, and comparison of model results against actual results. The primary MSR valuation model methodologies used by industry participants are: static discounted cash flow (Static) and stochastic option-adjusted spread (OAS) model approaches.

1. Static Valuation Model (Discounted Cash Flow)

This type of model methodology used to estimate value is often referred to as a "static cash flow" model that follows the traditional "best estimate" or "estimated cash flow" technique of present value measurement and uses a single discount rate. This valuation method has the advantage of relative simplicity and requires little model calibration based on actual asset performance or changing market conditions. However, the technique relies heavily on a steady volume of market transactions in which the underlying collateral is generally homogenous and in which price discovery is readily attainable.

Stochastic Valuation Model (Monte Carlo OAS)

The OAS method is often used in conjunction with Monte Carlo simulation. OAS is a valuation methodology that can be used to compare debt securities with widely differing cash flow patterns. It uses discount rates derived from the term structure of interest rates and does not assume that interest rates remain at current levels. That is, the methodology evaluates the MSR based on the full range of interest rate environments that could occur over the life or term structure of the MSR.

The OAS represents an incremental return or a risk premium over the risk-free rate (i.e., over the on-the-run Treasury rate). A security's OAS represents the spread required to return to an observed market price given a series of projected cash flows across a range of interest rate scenarios. Using an automated trial and error method, an institution will substitute OAS values (the same across all scenarios for each iteration or trial of the process), until solving for the value of the OAS that results in the model price converging to the observed market price. The computed OAS is dependent upon the interest rate term structure model and associated prepayment model employed to produce the cash flow scenarios.

Application of an OAS methodology where market prices cannot be readily observed can be problematic.

Specific Requirements (Static & OAS valuations)

Portfolio Segregation/Stratification (Strata)

SFAS No. 140 requires MSR to be stratified by one or more of the predominant risk characteristics. However, for valuation purposes, valuation at a GAAP stratum level would not be appropriate since these stratums are too broad and aggregated. For valuation purposes, valuation must be at a much more granular level which results in "super loan" strata," with each stratum comprising loans representative of the characteristics for that strata. Stratification characteristics may include the following:

- Mortgage type (conventional agency, nonagency, government guaranteed such as Federal Housing Association (FHA)/Veterans Association (VA), etc.).
- Product type (30-year fixed, 15-year fixed, conforming, nonconforming, Adjustable Rate Mortgages (ARMs), Hybrid loans, prepayment penalty, etc.).
- Recourse and nonrecourse.
- First mortgages, second mortgages, and home equity loans.
- Seasoning (year of origination).
- Credit (prime, subprime, Alt A, high loan-to-value (LTV) mortgages).
- Remittance styles (Fannie Mae MBS/Express/Rapid Payment Method (RPM), Freddie Mac Gold/5 day Accelerated Remittance Cycle (ARC)/3 day ARC, and Ginnie Mae, and numerous whole loan remittances.
- Geographic location (baseline prepayment speed adjusted at the state level).

Generally, fixed-rate loans should be stratified by an interest-rate range (i.e., coupon band) of no more than 50 basis points increments. ARMs should be stratified by characteristics such as market indices (e.g., Monthly Treasury Average, Cost of Funds Index, Constant Maturity Treasury (CMT), London Interbank Offered Rate (LIBOR), etc.) and by adjustment period (e.g., monthly, semi-annually, annually).

Key Model Inputs/Settings

A static valuation model requires several key inputs. Key inputs are prepayment speed estimates, discount rates, and income and expense assumptions. Stochastic valuation models require several critical inputs or user settings in order to generate the alternate interest rate paths, path-dependent

prepayment speeds, term structure, volatility, and income and expense assumptions. These inputs and settings are illustrated below:

Prepayment Speed Estimates (Static & OAS valuations)

Most mortgage loans are repaid well before contractual maturity, as homeowners move, refinance, or simply pay the loan ahead of schedule. To estimate the income it will receive from servicing the loans, an institution must project the level of servicing fees it can expect from the loan pool as individual loans prepay over time. The prepayment speed is a key component in a valuation model and represents the annual rate at which borrowers are forecast to prepay their mortgage loan principal. Common prepayment speed measures used by the industry include Public Securities Association (PSA), conditional prepayment rate (CPR), and single monthly mortality (SMM).[2]

The use of the average life method or any measure other than CPR, PSA, or SMM is not acceptable.

Market-based prepayment speeds should be used in the valuation of MSRs. Some institutions use third party vendor prepayment models such as Andrew Davidson Company (ADCO) or Applied Financial Technology (AFT), dealer prepayment estimates (DPE) such as Bloomberg, Telerate, and Knight Ridder, or a proprietary prepayment model.

If no prepayment model is used, there needs to be a comparison of actual prepayment performance relative to the CPR/PSA chosen. When a prepayment model is used, then model validation should be the focus. If a vendor prepayment model is used, there should be backtesting of actual performance relative to estimates and comparison of the chosen model output with that of a competing model.

If a proprietary prepayment model is used, in addition to performing the items noted above for a vendor model, there should be a review of developmental evidence and source code data. Prepayment models are necessary for an OAS model, while they are not necessary for a stochastic model. However, prepayment assumptions are necessary to value MSR, regardless of whether the OAS or stochastic valuation methodology is used.

If the actual prepayment rates of the servicing portfolio differ from the DPE, vendor or proprietary prepayments used, then ideally an institution should adjust its prepayment speed assumptions. An institution should track actual prepayments against prepayment assumptions at a disaggregated level. It should also perform the tracking of actual prepayments against prepayment assumptions for those factors that significantly influence or predict prepayments. For example, institutions typically track the following factors:

- Loan type
- Loan purpose (purchase vs. refinance)
- Prepayment penalty status

[2] To convert from CPR to PSA for purposes of comparison, divide the CPR by 0.06.

- Year of origination or vintage
- Coupon
- Loan size
- State of origination
- Original and current LTV
- Borrower credit score.

Prepayment assumptions should reflect future prepayment estimates rather than historical prepayment speeds. An institution may use historical rates of prepayment as a basis to modify prepayment estimates or as the basis to estimate future prepayments if any of the following occurs:

- Prepayment estimates are not available for a particular type of mortgage.
- The portfolio being valued is highly concentrated in certain geographical areas.
- The institution can demonstrate that historical rates better indicate future prepayments for that portfolio than national prepayment estimates or DPEs.

The institution can use historical prepayments to estimate future prepayments, as long as the estimates account for current market conditions and trends in borrower behavior. In all cases, the institution is responsible for supporting and documenting prepayment estimates.

Discount Rates (Static valuation)

The discount rates used to value each segment of a portfolio should correspond to the pretax rates currently demanded by investors for similar types of servicing MSR. In selecting comparable discount rates for valuation purposes, the discount rates for various types of mortgage loans vary and should be shown by "super loan" strata. The discount rates used by the institution when the servicing assets were purchased or servicing liabilities were assumed, and the interest rate of the underlying mortgage loans, should not be used to estimate current fair market value unless they correspond to the marketplace.

Term Structure (OAS valuation)

Yield curves must be selected to generate alternative interest rate paths and for discounting estimated cash flows. Treasury or LIBOR/Swap curves can be used to perform a current valuation. Changes in mortgage rates may correspond better to swap rate movements than to Treasuries. There are several term structure models to select along with the number of interest rate path iterations required if running a Monte Carlo simulation.

Volatility (OAS valuation)

Volatility is a measure of the dispersion or spread of observations around a baseline scale. It is a statistical measure of the variability of interest rates around the trend. Volatility defines the range of the interest rate paths generated through the Monte Carlo simulation. The use of implied volatility or the expected realized volatility implied from the prices at which options are trading represents a forward looking measure that reflects the option market's perception of the volatility of the underlying mortgages.

Income Assumptions (Static & OAS valuation)

Servicing Fees

The servicing fees used in the fair valuation should equal the contractual amounts stipulated in the loan servicing agreements for each type of mortgage. This is the portion of each borrower payment retained by the servicer as compensation for servicing the underlying mortgage loan or retained as excess servicing in the whole loan sales process.

Ancillary Income

Ancillary income is derived from items such as late charges, insurance premiums, assumption and payoff fees, wire transfer and automated clearing house (ACH) fees, and other miscellaneous fees. The annual ancillary income per mortgage loan should be shown separately in the valuation report and should be based on the actual performance of the specific servicing portfolio, without an allowance for inflation, but reduced by the anticipated runoff as a result of sale and transfer. For servicing portfolios less than 12 months old, industry averages of ancillary income should be used. Fees related to refinances and other nonservicing asset related activities should not be included in the fair valuation.

Principal and Interest Float Earnings

Principal and interest (P&I) float earnings are reinvestment income accruing on monthly borrower payments held in escrow accounts between the date received from the borrower and date remitted to the investor. Key determinants include remittance date, average payment receipt date, and earnings rate. Remittance dates are contractually determined at the time of loan sale and vary among investors.

Although borrower payments are due on the first of the month, they are not considered late until the 15th. Actual average payment dates are determined by investor type and combined with contractual remittance dates, used as input assumptions for the average monthly reinvestment period; earnings on the average balances are computed using an index such as one-month LIBOR.

Prepayment Float Earnings

Prepayment float earnings is the reinvestment income accruing on full borrower prepayments held in escrow accounts between dates received from the borrower and date remitted to the investor. Key determinants include prepayment remittance date, average payment receipt, and earnings rate. Remittance dates are contractually determined at the time of loan sale and vary among investors. Actual

average payment dates are determined by investor type and, combined with contractual remittance dates, used as input assumptions for the average monthly reinvestment period. Earnings on the average balances are computed using an index such as one-month LIBOR.

Escrow Earnings

Escrow earnings is the reinvestment income accruing on monthly borrower tax and insurance payments held in escrow accounts between date received from the borrower and date remitted to the taxing authority or insurance carrier. Key determinants include earnings rate, monthly escrow payment, annual escrow inflation rate, and the average number of monthly payments held in escrow accounts during the year. Earnings on the average balances are computed using an index such as the one-month LIBOR rate. An inflation rate is also factored which represents both an economic assumption and the reality that escrow payments as a percent of borrower's outstanding balance will rise over time due to rising property taxes, property appreciation, schedule amortization and curtailments. Monthly escrow payments are obtained from the servicing system while the number of monthly payments held in escrow is based on industry norms.

Prepayment Penalty Fees

Prepayment penalty fees are estimated prepayment penalty revenues attributable to prepay protected mortgage loans that payoff within the prepayment penalty period. Total model predicted runoff is separated into "soft" (discretionary-based penalty enforcement) versus "hard" (always enforced as in loans that have been securitized) prepayment penalty charges. Only the prepayment fee cash flows that the servicer owns, not those that come off the serviced loans should be included in the MSR value (e.g., when prepayment penalties are certificated in securitizations and do not flow to the servicer).

Expense Assumptions (Static & OAS valuations)

Servicing Cost

The annual cost to service is one of the major factors governing the value of the servicing rights. General servicing costs include expenses for data processing, personnel, occupancy, foreclosure and Real Estate Owned (REO) servicing, escrow expenses for the payment of taxes and insurance, and any interest expenses. Long-term servicing cost projections used in valuations should be comparable to those currently used by most market participants to value similar types of servicing assets or servicing liabilities. Neither the institution's actual servicing costs of owning the MSR nor are the marginal cost estimates appropriate for determining the fair value. The costs of servicing for various types of mortgage loans vary and should be shown by "super loan" strata.

Escrow Interest Expense

Interest paid on escrow balances is required by approximately one-quarter of the states to be paid to borrowers based on average escrow balances. Key determinants are escrow balances and interest (pay) rates. Any interest expense (pay rates) on escrows should conform to state law and be included in the calculation of fair value as a separate item.

Escrow Advances and Delinquent Principal and Interest Advances

Servicers are generally required to remit on a monthly remittance date, the scheduled principal and interest payment and escrow payment irrespective of whether the payment was received from the borrower. While these advances may be recoverable either from subsequent borrower payments or from liquidation proceeds, there is a financing cost (interest rate paid by the servicer for funds advanced) associated with such advances.

Delinquency and Foreclosure Rates

Projected delinquency and foreclosure rates should be based on the actual experience of the servicing portfolio. 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) or Mortgage Information Corporation (MIC) for similar mortgage loans. Mortgages loans in excess of 60 days delinquent, in bankruptcy, or in foreclosure must be excluded from the valuation. Delinquency rates will vary depending on the type of mortgage loan.

Foreclosure Costs

Foreclosure costs should be shown separately in the fair valuation report. These costs should be based on historical experience, be shown by stratum, and reflect the differences in cost among the types of mortgage loans including, if material, the state where the loan was originated. Different states have different foreclosure laws and, consequently, foreclosure costs may vary.

Yield Maintenance/Prepay Interest Shortfall

Many remittance styles require servicers to remit the full month's interest on the outstanding principal balance as of the prior month. To the extent the borrowers prepay their loans prior to month-end, the servicer is left to cover the difference between a full month's interest and the interest paid by the borrower. Key determinants include average payment receipt date and the yield maintenance rate.

Growth Rate for Escrow Accounts and Inflation Rate for Servicing Costs

The rates used to estimate the growth of escrow accounts and the growth rate for servicing costs should be based on realistic long-term projections. The rates of growth should be shown in the valuation and supported by market practice and historical trends. The growth rate of escrow accounts affects both income (e.g., escrow earnings) and expense (e.g., escrow interest expense and escrow advances).

Excluded Cash Flows

There are other cash flows related that would not be transferred to a purchaser of MSR and they should not be included in any fair value calculation. See *Interagency Advisory on Mortgage Banking* dated February 25, 2003, in the References section.

These items include:

- Retention benefits – the value attributed to the servicer's ability to refinance a portion of the serviced portfolio, thereby earning origination profits.

- Deferred tax benefits – arising from the fact that servicing rights retained in the securitization of mortgage loans are assigned no tax basis resulting in book/tax income recognition timing differences.

- Mortgage insurance premiums – that are ceded back to the originator/servicer under captive reinsurance arrangements with one or more mortgage insurance companies.

- Cross-selling income – related to the servicer's ability to solicit the borrower for other financial products such as deposit accounts, other credit-related products, investment products, insurance products, etc.

Other Valuation Issues

Transfer Costs

Transfer costs are the buyer's expenses of conducting due diligence on the servicing portfolio 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 value even if no sale of the servicing is ever intended. The costs used should reflect the current market estimates as reported by brokers. Sales expenses, including broker's commissions, should not be included in transfer costs or in the fair valuation because these are not included in marketplace prices.

Debt Leveraging

Borrowing to finance the purchase of servicing, or debt leveraging, increases the internal rate of return for buyers by lowering the investment needed to produce the same servicing earnings. Debt leveraging, however, is not relevant to the calculation of the fair value of MSR and, therefore, should not be included in the fair value determination.

Market Value of Insurance

The Federal National Mortgage Association (FNMA or Fannie Mae) and Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac) recourse servicing that includes recourse loss insurance or prepayment insurance for the mortgage loans in the servicing portfolio may be included in the determination of fair value. The OTS permits the value of such policies (i.e., conversion of recourse servicing to nonrecourse) to be included in the fair value, provided the cost of the insurance policy is deducted from servicing income or added to the per mortgage servicing cost of the servicing portfolio. The OTS may determine that this type of insurance should be disregarded if concerns exist about the insurance firm's ability to meet its financial obligations.

Split Servicing

Servicing ownership shared by two or more parties in violation of servicing contracts should not be included in the fair value of servicing of either the buyer or the seller. (FNMA and FHLMC servicing contracts contain prohibitions against splitting the ownership of servicing.) Servicing owned by two or more affiliated companies should have formal servicing agreements in place that specifically allow the split ownership of servicing.

Sub-Servicing

If an institution has contracted with an outside third party to do the servicing (i.e., the institution owns the servicing rights but the outside third party is servicing the loans for the institution under a sub-servicing contract with the institution), the sub-servicing arrangement should be ignored with regard to deriving fair market value since this is only pertinent for "economic value" purposes and these loans should be included in the fair value.

If an institution performs sub-servicing for another entity but does not own the servicing rights, these loans should not be included in the fair value.

Credit Enhancement Fees

Under certain Federal Home Loan Bank mortgage partnership finance programs, the institution earns a credit enhancement fee. This credit enhancement fee should not be capitalized as part of the carrying value of MSR and should not be included in the fair value of MSR. It should be treated as an interest-only strip. See the Accounting section.

D. MSR Market Data

Institutions may use broker surveys and peer group surveys (PricewaterhouseCoopers quarterly survey, Interagency Regulatory quarterly survey, Mortgage Industry Advisory Corporation (MIAC), etc.) to gauge (a) individual assumptions used in the fair value and (b) multiples for comparative purposes. However, survey data is not a substitute for fair value. Further, multiples[3] cannot be used as a substitute for fair value since they are not reflective of individual servicing portfolio characteristics. Multiples are only a general indicator of price.

OTS participates in interagency MSR surveys and subscribes to various servicing sites (e.g., MIAC, etc.) that provide pricing on both generic servicing assets and newly originated MSR. These sources are general in nature, but can be consulted in the examiner's review of MSR valuations. Contact National Mortgage Banking Specialists or Regional Capital Markets Examiners for access to these surveys. When using any kind of market survey, the user must be careful to ascertain whether data and values are for seasoned MSR or newly created MSR since there can be material differences.

[3] The multiple represents the ratio between: (a) Fair value of MSR as a percentage of the unpaid principal balance of the loans serviced for others and (b) servicing fee received by the servicer. For example, an institution services $100,000 loans and the fair value of the servicing asset is $1500 or 1.5 percent of loans serviced for others. If the servicing fee is 0.25 percent, the multiple is 6.0= (1.50/.25).

E. IO Trust transactions

The cash flow stream for a trust IO is similar to the MSR income. Some institutions use these values and changes in value as additional support (i.e., benchmarks) for the assumptions used in their internal models.

F. Flow Sales/Purchases

Servicers review the prices required for flow purchases/sales as an indication of value for newly created MSR. It is important to note, however, this method is applicable only to new MSR production values and can be limited to a specific servicer operation.

Transfers of MSR

An institution can retain the right to service mortgages it has originated and sold, acquire servicing in bulk acquisitions, or acquire servicing from third-party production flow. Co-issue is also another means of acquiring servicing. The number of servicing sales and the dollar volume of servicing purchased and sold constitute a significant part of the mortgage banking business. The factors driving servicing transfers include an institution's:

- Need to achieve economies of scale.
- Need to produce an immediate increase in current earnings through servicing sales.
- Need to realize accounting profits through servicing swaps.
- Inability or lack of interest to service loans or a particular mortgage product.

Sales of Servicing Rights

Management should periodically assess its strategic decisions to retain or sell servicing. Institutions normally sell servicing in a bulk sale or released servicing as individual loans or pools of loans. Bulk sales generally occur in the secondary market and involve aged servicing. Loans sold servicing released are often sold on a flow basis. Flow refers to an institution selling loans under a master commitment as loans are produced or pools are formed. Any sales of servicing involving Freddie Mac and Fannie Mae require prior approval from these agencies. Another loan flow arrangement is an assignment of trade (AOT) wherein the seller of the servicing assigns a forward sale commitment of MBS to the buyer of the servicing. Another flow arrangement is through use of correspondents. The seller delivers the loan to the buyer, who is then responsible for delivering the MBS to the broker/dealer. Such arrangements carry the risk that the seller cannot meet the commitment.

Bulk Purchases of Servicing Rights

Bulk mortgage loan servicing purchases are an investment opportunity for institutions that maintain adequate capacity and are efficient in their existing servicing operation. An institution needs to evaluate such MSR acquisitions for the risks and earnings potential along with comparison to alternative

investments. Management should document the evaluation, which should include an analysis of the economic value of the servicing rights, including key assumptions, judgments, and estimates.

Documentation allows for proper management communication, review, and approval of key assumptions and judgments. Internal procedures should establish an effective due diligence process for institutions to evaluate a portfolio for possible acquisition. The institution should also perform a due diligence review on site. Initially, a due diligence review should corroborate the portfolio characteristics placed in the bid offering. An institution's review should address:

- Interest rates on the loans in the portfolio.
- Overall servicing income and ancillary income.
- Credit quality of the servicing portfolio and the ability of the institution to bear any additional risks.
- Type and complexity of loans in the servicing portfolio.
- Operational costs incurred in servicing the portfolio.
- Seller's conformity with investor requirements.

Because most investors require the buyer of the servicing to maintain all origination and servicing warranties, it is important to ensure that the seller has serviced the loans according to those guidelines. An institution should address any issues arising from the due diligence during the purchase contract negotiations.

When pursuing a bulk acquisition, an institution should determine the fair value of servicing assets to assist in the bidding process. It is beneficial for the institution to calculate the return on investment (ROI) and return on equity (ROE). The economic value or ROE is unique to each servicer because of the inherent differences in each servicer's ability to optimize servicing revenues and costs. The ROE is calculated by using the fully allocated costs of servicing and includes both income taxes and any debt used to finance the acquisition. The ROI is calculated using a required pretax rate of return or discount rate without debt leveraging. ROI is appropriate for determining the fair value of servicing and thus the resulting price to be paid or received for bulk purchases and sales of servicing. ROE is appropriate for internal analysis and planning purposes for bulk purchases and sales since it provides an effective measure of the potential impact to the bottom line.

An institution's documentation of a bulk acquisition should include original expectations for the life of the net revenue stream and the valuation assumptions used to determine the purchase price of the MSR. These records should support the initial carrying amount of each bulk acquisition. Management should continuously monitor prepayment speeds and other assumptions and document their effect upon each portfolio.

Servicing Operations

Consistent with our risk-focused approach, you should assess the risks created by an institution's mortgage servicing activities and whether the institution properly manages these risks. An institution is responsible for managing the servicing process consistent with investor requirements and internal policies and procedures.

The profitability of servicing activities depends on management's ability to implement sound risk management processes and internal controls. Refer to the Earnings section for assessing servicing profitability. Risk management takes on greater significance as new technologies, product innovation, and the size and speed of mortgage transactions evolve. Such innovations contribute to asset growth and can present challenges within risk management processes. As a result, internal controls must be expanded to identify, monitor and measure the effects of such innovations on servicing activities and associated risk.

This section describes:

- The characteristics of a sound servicing function and prudent risk management practices.
- Supervisory considerations for assessing the asset quality of and risk associated with the servicing portfolio.
- Common third party arrangements and related supervisory expectations for institutions.

The Servicing Process

The servicing of a mortgage loan contains a number of basic functions, including:

- Loan set-up
- Customer service
- Cash management
- Investor accounting and reporting
- Escrow administration and escrow analysis
- Collections and loss mitigation
- Bankruptcy and foreclosure
- REO
- Payoff/Lien release

- Records management and custodial obligation.

Below we provide background on all of these functions.

Loan Setup

Loan setup consists of inputting information into the servicing system. The loan setup unit inputs information regarding the borrower, the type of loan and repayment terms, and the investor. Appropriate servicing of the loan requires the setup unit to input data accurately and in a timely manner (usually within 15 days of loan closing, or longer for acquired loans). The setup unit typically sends the borrower a letter that introduces the company's services and includes the first payment coupon. This "welcome letter" helps to establish positive customer relations and to reduce the volume of loans with "first payment default" (which may cause an investor to put back a loan). Given the large volume of inputs, loan setup is an expensive process for many servicers. Often, the cost of loan setup exceeds the first year's servicing revenue. The costs (and set-up errors) in this area can be reduced if the loan information is electronically fed from the loan closing system.

Customer Service

Customer service creates and maintains a positive relationship with borrowers. Customer service commonly tracks customer complaints and ensures that they are satisfactorily addressed. This function involves call center operations, voice response unit (VRU) usage, call volume, average speed to reply rates, average handling times, and call abandonment rates.

Customer service efforts are especially important before and after servicing portfolio purchases or sales, or during periods of high refinancing activity. The customer service unit can facilitate an effective customer retention program. This unit identifies existing loan customers who are likely to refinance their loans and contacts them with offers to refinance. Typically, servicers have a formalized program/function entitled "servicing retention." This practice can help preserve servicing volumes in times of increased refinancing activity.

Cash Management

Cash management involves the collection of customer payments, the deposit of those funds into custodial accounts at a financial institution that meets investor requirements, and remitting payments to investors. This deposit of funds into custodial accounts entails bank/custodial account reconciliation. The cash management process must conform to investor requirements as detailed in the servicing agreement.

The servicer segregates the P&I portion of payment from the escrow portion of the payment and remits the P&I payment to the investor according to the remittance schedule set forth in the servicing agreement. Investors generally require the servicer to make remittances electronically through systems such as Freddie Mac's MIDANET® or Fannie Mae's MORNET®.

The servicer places the escrow portion of the payment into a separate account for payment of property taxes or insurance. Servicers must have systems to ensure the timely payment of taxes and insurance premiums.

A servicer usually remits principal curtailments and payoffs to the investor on an expedited basis.

Payment processing involves:

- Providing billing statements/coupons
- Automatic debits
- Lockbox capture rates/rejection processing
- Payment processing and controls
- Payment application and prepayments.

Investor reporting

The servicing agreement usually specifies the types of reports required by investors and remitting payments. It is the servicer's responsibility to address the investor's loan servicing practices and cash remittance requirements. In addition, the investor outlines all reporting requirements, which generally include: loan trial balance, reports of collections, property inspections, foreclosures, delinquencies, and REO. Most investors receive payment once a month.

Government-sponsored enterprises (GSEs) usually require servicers to advance mortgage loan payments for mortgage backed securities on certain dates, whether or not the borrower has made the payments. This requires the servicer to have strategies, approval levels and controls for advancing (i.e., servicer advances).

Escrow Administration and Analysis

Escrow account administration and analysis includes:

- Collecting and maintaining escrow funds in an account that meets investor requirements.
- Remitting timely payment of city, county, state, and other property taxes.
- Maintaining sufficient property insurance and obtaining temporary coverage when necessary.
- Ensuring loss payable clauses of insurance are in favor of the servicer, which means holding the original property insurance policies and paying the renewal premiums on those policies.

- Analyzing the escrow account balance annually in relation to anticipated expenses and adjusting escrow payments, if necessary.

- Reporting escrow account activity to the borrower on an annual basis.

The servicer should ensure compliance with applicable limits or requirements for escrow accounts. (Refer to the Reference section's summary of the Real Estate Settlement Procedures Act (RESPA) and the Homeowner's Protection Act, which contain provisions on escrow requirements.) In addition, state laws and the mortgage itself, may also establish limits with respect to escrow accounts, and in some instances require the servicer to pay interest on escrow balances.

Collections

The collection function involves collecting funds from current and delinquent borrowers. One of the major tasks of servicers is collecting overdue payments on mortgage loans. Collection efforts usually include sending late notices, contacting delinquent borrowers, conducting property inspections, and executing foreclosures according to investor's requirements and state law.

Collection personnel should document each step in the collection process including actions taken, the date of each action, actual borrower contacts, and the commitment received from the overdue borrower. The servicer must closely follow investor requirements and consumer regulations on the timing, type, and manner of collection activities.

An effective collection process begins with default management and proceeds as necessary through the loss mitigation stage. A servicer is expected to maintain information on the collectibility of credits to arrive at an optimal workout solution. Through risk assessment and scoring tools (such as predictive behavioral modeling), servicers can prioritize collection efforts by analyzing borrower payment patterns and external credit information. Institutions often use predictive models to assess the risk of default. This assessment can reduce servicing costs, increase fee income, and result in lower loan loss for investors. A servicer may focus its efforts on default prevention and loss mitigation for higher-risk loans.

Collection activities must also comply with the following:

- *Fair Debt Collection Practices Act (15 USC 1692).* Among other provisions, this law defines from whom a debt collector may gather information on a consumer, the type of information that it may collect, and the acceptable forms of communication with the consumer and other parties.

- *State laws that pertain to collection and foreclosure actions.* In some states, an institution must wait longer to foreclose on a defaulted borrower than it does in others. Borrowers in some states have more power than they do in others to redeem their property. In some states, foreclosing or obtaining a deficiency judgment requires a judicial proceeding and in others it does not.

- *Bankruptcy law.* Collection activity is affected by any bankruptcy plan into which a debtor has entered. For instance, the filing of a bankruptcy petition acts as an automatic stay on any

collection activities in process at the time. After such filings, collection efforts usually process through the bankruptcy court.

Collection activities involve:

- Call and notice cycles (by product type).
- Call routing and monitoring.
- Call abandonment rates.
- Collection tools (auto/predictive dialers, behavioral and credit scoring, etc.).
- Assigned collectors per delinquency bucket (30, 60, 90 days delinquent buckets).
- Assessment of collector caseload, productivity, and compensation/incentive programs.
- Initiation/coordination with loss mitigation.

Loss Mitigation

If a servicer cannot implement an acceptable payment solution, the loan passes into the loss mitigation phase. Loss mitigation involves:

- Borrower contact/solicitation.
- Borrower financial analysis.
- Property analysis (broker price opinions and appraisals).
- Workout strategies (e.g., modifications, partial payments, etc.) and approval levels.
- Reinstatement or recovery record (outside foreclosure).
- Fraud detection procedures.
- Automated decision making.
- Tracking performance statistics for loss mitigation success rates.

Software packages are available to assist loss mitigation personnel in updating estimates of property values and evaluating foreclosure alternatives. As part of the loss mitigation process, outside contractors often inspect the property.

In some cases, a collection unit may enter into a short-term forbearance arrangement with a delinquent borrower before beginning a foreclosure action. For example, a servicer may permit the borrower to defer payments, follow an alternative repayment plan, or execute a deed in lieu of foreclosure (which grants the borrower full forgiveness of the debt). The use of some loss mitigation techniques, such as waiving a due-on-sale clause to allow an assumption, may require an institution to repurchase the loan out of its MBS pool. Management should have information systems adequate to analyze forbearance activities. The unit also should evaluate and thoroughly document the reason for each forbearance arrangement and obtain investor approval, if necessary.

Bankruptcy

Often servicers will track, monitor, and resolve loans to borrowers that have filed for bankruptcy. Effective management of this aspect of servicing involves:

- Tracking bankruptcy volumes by chapter and performing versus nonperforming.
- Tracking and monitoring bankruptcy status and repayment plans.
- Ensuring timeliness of claims filing and motions for relief.
- Developing an attorney network approval process and management system.

Foreclosure

Servicing contracts also specify conditions upon which servicers must institute foreclosure proceedings. Effective management of foreclosures involves:

- Monitoring volume reports with delinquency statistics.
- Tracking and reporting timeline management by state.
- Developing property preservation procedures and authority levels.
- Instituting timely foreclosure referral procedures.
- Tracking foreclosure sale timeliness (time from foreclosure referral to foreclosure sale), tracking timeliness of time from foreclosure sale to REO acquisition, and tracking timeliness of first legal (first action that attorney or trust takes to start foreclosure).
- Developing bidding instructions.
- Ensuring compliance to investor/regulatory guidelines and timelines.
- Managing system tracking and queuing of tasks.

- Developing procedures for transfers to and from loss mitigation, bankruptcy, and REO areas.

When a servicer determines that foreclosure is the best option, management should confirm that any issues over disputed payments have been resolved and that all investor requirements have been met, before proceeding. Management should determine whether pursuing a deficiency judgment is legal and economically feasible. The servicer might contact any junior lien holders to determine whether they are willing to buy out the senior mortgage. Once a property is foreclosed, the servicer must decide whether to sell the property "as is" or to improve it before sale and whether to list it or offer it at auction. The servicer will normally also file any claims due from private mortgage insurance within the required timeframes and with all necessary documentation.

A servicer may advance funds and incur costs on behalf of investors during the collection process and during the time foreclosed property is administered as other real estate owned. The servicer will normally establish accounts receivable for these investor advances. The investor subsequently reimburses the servicer for much of the funds advanced and costs incurred. The servicer will likely absorb some of the costs associated with collecting a delinquent loan, even for mortgages serviced without contractual recourse. Servicer advances should be reviewed to determine collectibility and whether appropriate reserves are established.

For example, such cost absorption occurs in a VA "no-bid" action. If the expected loss to be recognized by the VA following a foreclosure is greater than the amount of the VA guarantee, the VA may elect to pay the full amount of its guarantee to the servicer and transfer title to the property to the servicer. The servicer must then administer and dispose of the property, often at a substantial loss. Other noteworthy collection costs include nonreimbursed interest advances on FHA loans.

An institution's policies should address the use of a "foreclosure reserve" to provide for uncollectible investor advances.

In determining an appropriate reserve to adequately cover expected losses, a servicer should consider, among other information, historical collection and disposal costs for each major product type. Servicers should recognize charge offs, recoveries, and provision expenses through the foreclosure reserve. Processes should recognize uncollectible advances in a timely manner and charge off rejected claims within reasonable periods. Further, the servicer should maintain an adequate system and related reports for tracking investor claims. This system should ensure compliance with investor timelines and other requirements for filing claims in order for the servicer to be reimbursed by investors.

Real Estate Owned

Based on the servicing agreement, an investor may require the servicer to take title to foreclosed property as REO. In some cases, the servicer must also perform property inspections, make essential repairs, or market and sell REO on behalf of investors. In other cases, the servicer may act as an agent of the investor and have administrative responsibilities only or may be bypassed entirely. Managing REO as a servicer involves:

- Monitoring volume reports with aging of inventory.

- Developing eviction procedures.
- Determination of market value.
- Implementation of marketing strategies.
- Ensuring property preservation (securing, winterizing, and repairing).
- Monitoring of expenses to budget and approval levels for variances.
- Tracking recovery/loss experience to book value and current value.
- Processing claims and penalties.
- Enacting a deficiency/judgment policy.

Payoff/Lien Release

The payoff unit is responsible for processing loan payoffs, which includes recording the mortgage satisfaction and returning the original note to the borrower. Failure to process the mortgage satisfaction in accordance with state laws may result in monetary fines.

The lien release unit is responsible for executing the release, reconveyance, or satisfaction of mortgages for paid in full home loans, as well as providing research for previous or in-process releases.

If a loan pays in full during the month, some investors require the servicer to remit a full month's interest even though the borrower only paid interest through the payoff date. This interest expense can significantly increase servicing costs in periods of high payoffs. You should assess the institution's efforts to minimize this interest expense.

Records Management and Custodial Obligations

The servicer may perform document custodian responsibilities, which involve safeguarding the mortgage loan documents that are not retained by investors or a third party. Many investors retain the original note and mortgage assignment or use third-party custodians. A servicer must ensure that any retained documents are accessible and stored in an area that is secure, protected, and fireproof. Controls should exist for removal or relocation of files. Servicers increasingly work with scanned copies of loan documents in digital media format rather than original loan documents.

The records management department is responsible for new loan document imaging and image retrieval systems, storage, and retrieval of base file records, and the management of custodial vendors.

Examining Servicing Operations

Various special reports are available from industry observers, which contain valuable information on servicing topics and can serve as timely references/resources for areas/issues to review with regard to servicing functions. Contact your Regional Office mortgage banking specialist to obtain this information.

Generally, the Preliminary Examination Response Kit (PERK) will contain a section on servicing operations. However, the regional office may have to supplement this with on-site reviews to servicing centers to interview personnel in charge of key operations. You may have to add information requests tailored to the specific servicing operations under review. You should ask the individual servicing functions and the head of the servicing unit for reports that senior management uses with regard to measuring performance against key performance indicators/goals, and any reports regarding performance against peer comparison data.

The Safety and Soundness examiner(s) should coordinate with the Compliance examiner(s) and Information Technology examiner(s) to ascertain whether the compliance review of servicing or the information technology review of servicing has resulted in any issues.

In addition to the items noted above, you should review the following:

Audits by the External Auditor. Servicing contracts used by many investors contain requirements that an independent external auditor attest that the servicer's operations are of satisfactory quality. Often, investors mandate the annual performance of an opinion-level attestation engagement that conforms to the AICPA's Statement on Standards for Attestation Engagements No. 3, Compliance Attestation. An independent public accountant must document this review by a letter representing that the loans were serviced in accordance with the Uniform Single Attestation Program (USAP) for Mortgage Bankers. If the independent external auditor determines that a servicer has successfully met the minimum servicing criteria prescribed by the USAP, then those findings may be used in the servicer's audited financial statements and accepted by outside investors.

The external auditors also issue reports on compliance with requirements that are applicable to the institution as a Ginnie Mae (GNMA) issuer of mortgage backed securities, and compliance with servicing requirements as master servicer (if applicable).

In addition, SEC Regulation AB establishes requirements for the registration, disclosure and reporting for all publicly registered asset-backed securities including mortgage-backed securities. The rule includes, among other things, requirements for periodic reports and standards for assessment of servicing compliance and related accountant's attestation.

Internal Audits. The internal audit unit should review the major servicing functions according to a schedule dependent on a risk assessment of each area.

Investor Audits. In some instances, investors (including FNMA, FHLMC, Department of Housing and Urban Development (HUD), private investors, etc.) may conduct their own onsite or

offsite reviews of servicing activities. The reports are typically called "seller/servicer reports" and can be obtained from the institution.

Rating Agency Servicer Reviews. Another indicator of the quality of servicing operations is the servicer ratings assigned by the rating agencies such as Standard & Poor's, Moody's, and Fitch. Such ratings are assigned for (a) residential servicers and (b) commercial mortgage servicers. Within each of these two types, there are separate ratings for (i) primary servicer; (ii) master servicer; and (iii) special servicer. Primary servicer is responsible for the basic servicing functions explained in the Servicing Narrative. Master servicer is responsible for protecting the interest of residential MBS certificate holders and other investors through oversight of primary servicers with respect to cash management, loan servicing, portfolio management, investor reporting, and accurate and timely remittance of funds. The master servicer must be ready to step into the role of primary servicer if the primary servicer is placed in default. The master servicer must have the financial strength and stability to make advances, as required, and the ability to effectively aggregate, report, and remit funds to the trustee or other investors. The special servicer is responsible for maximizing recoveries predominately on subprime, home equity, nonperforming and other loans that require intensive default-related activities, as well as liquidating REO.

Additionally, within the primary residential servicer category, there are separate ratings (as applicable) for loan products: (i) prime; (ii) Alt-A; (iii) subprime; (iv) high LTV; and (v) home equity/home equity line of credit.

These are generally available only on mid-to-large servicing operations. You can obtain the rating agency reports from the institution or your Regional Office mortgage banking specialist.

Agency Ratings. Various agencies issue separate ratings to servicers for: (a) default management (HUD, FHLMC) and (b) investor accounting/reporting/remitting (FNMA, FHLMC). Further, FNMA provides various peer comparison metrics for the institution for default servicing.

Significant Litigation. You should review the institution's significant litigation report to ascertain whether there are any items of concern with regard to servicing policies and practices.

Customer Complaint Process and Reports. The institution should have a process for capturing, reporting, and trending customer complaints related to servicing from various sources (calls, e-mail, written correspondence, fax, etc.). These complaints may go to executives, regulatory agencies, consumer advocacy groups, call centers, etc. These should be segregated by type (practice versus policy, etc.) and servicing function (escrow operations, foreclosure, etc.). A common trending metric is complaints per 100,000 loans for mid-to-large size servicers.

MBA Statistics. The MBA provides statistics on delinquencies (including bankruptcies), foreclosures, etc. for primary servicers of prime loans. Typically, an institution will have internal trend reports on the servicing portfolio versus comparisons with the MBA statistics.

Third Party Arrangements

A. Vendors That Are Not Servicers

A servicer may employ outside vendors to perform various tasks. These tasks may include processing tax and insurance payments, providing lock-box services, conducting property inspections, performing legal work on foreclosures, or acting as custodian for loan documents. When delegating authority of business functions to third parties, an institution remains responsible for the consequences of their actions. Among other considerations, an institution must ensure that third parties comply with applicable regulations (including those pertaining to safety and soundness, privacy, and consumer protection).

While an institution may use a third party, including vendors, to assist or control costs, these arrangements involve an added level of risk. An institution's arrangements with third parties should comply with internal standards, as well as OTS guidance. See Thrift Bulletin 82a, Third Party Arrangements, in the References section. An institution's policies and procedures should address the management and oversight of these arrangements and should cover:

- An initial selection and due diligence process.
- Negotiation of acceptable contract provisions.
- Off-shoring of functions.
- Oversight and monitoring of vendors including scorecards/reports measuring performance against key performance indicators, annual certification/approval process for vendors, and on-site visits. Periodic assessment of performance and resolution of deficiencies.
- Monitoring of financial strength of vendors.

B. Third Party Servicers

An institution can incur significant loss exposure if it does not properly manage its arrangements with third party servicers or sub-servicers. The practices of your third party become the institution's responsibility. This risk can be greater if a third party does not have a proven record. Problems arising from a third party arrangement can result from negligence, incompetent servicing staff, or simply poor servicing practices. Occasionally, losses result from fraudulent activities such as diversion of loan payoffs, escrow funds, or principal and interest payments. The following are examples of servicer activities and red flags that institutions should detect and eliminate to prevent losses:

- Excessive delay in the servicer's remittance of mortgage loan payments or prepayments so the servicer can earn additional float income.
- Diversion of escrow payments intended for payment of taxes or insurance to the servicer's use.

- Retention of funds on full prepayments while representing to the institution that the borrower continues to make monthly payments.
- Missing, lost, damaged, or out-of-date records.
- Sending nonsufficient funds checks to the institution.
- Canceling insurance or bond coverage to save money.
- Misrepresenting the level of delinquencies and foreclosures.
- Poor management of delinquencies, tax and insurance payments, private mortgage insurance (PMI) claims, or ARM adjustments.

Institutions should be aware that some state laws view the servicer as an agent of the owner of the mortgage loans and, thereby, hold the owner liable for the actions of the servicer. While some states regulate servicers, the regulations usually focus on consumer protection rather than safety and soundness. An institution should perform due diligence and ongoing monitoring with any new third party servicer to minimize the risk of problems and losses. These third party arrangements should comply with Thrift Bulletin 82a, Third Party Arrangements (see Reference section).

Initial Due Diligence of Servicers and Sub-servicers

Before entering into a contractual arrangement with a third party servicer or sub-servicer an institution should review the following on these third parties:

- Obtain financial and historical background information (such as Dun and Bradstreet reports, audited financial statements and SAS 112 reports, attestations on servicing from external auditors (e.g., Reg AB and/or USAP reports), and servicer ratings from ratings agencies).
- Confirm the servicer's approval and check for any recent adverse audit findings or suspensions by HUD, FNMA, FHLMC, GNMA, and all PMI companies. Obtain ratings from these entities for the servicer's default and investor reporting/remitting functions.
- Obtain investor (including private investor) "seller/servicer" reports, as well as the servicer's internal audit reports and quality control reports on servicing functions.
- Perform an on-site due diligence visit and determine the adequacy of the servicer's internal audit function.
- Check the adequacy of the servicer's errors and omissions (E&O) insurance, and surety bond coverage.

- Review established quantifiable criteria such as the number of loan repurchases; the number of times reports or cash remittances are late; and delinquency, bankruptcy, foreclosure, and REO rates.

If, after performing these reviews, the servicer is acceptable to the institution, it should enter into a written servicing agreement with the third party. The servicing agreement should:

- Clearly specify the servicing policies and procedures the servicer is to use for all common or anticipated servicing situations.

- Permit on-site audits of the servicer at any normal business time by the institution, its agents, or OTS.

- Require the use of separate deposit accounts at approved financial institutions for both P&I and for escrows payments. The deposit account statement should be transmitted directly to the institution.

- Request that companies providing the PMI make all claim checks payable to the institution or notify the institution of payments to the servicer.

- Allow the institution to have direct access to the management information systems (MIS) service bureau or servicer's MIS department for audit purposes.

- Specify the dates and frequencies for remittance of P&I and payoff funds to the institution.

- State the servicing fees and the manner of payment to the servicer, including identifying the recipient of ancillary income and float revenue.

- Permit termination of the servicing agreement for cause and outline the transfer of the mortgage servicing files, records, insurance policies, computer records, and other related documents to the designee of the institution. The definition of "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 careless servicing after the institution has sent a formal written warning to the servicer.

- Permit the transfer of the same servicing records at any time without cause by payment of a stipulated termination fee to the servicer.

- Require direct notification to the institution for cancellation or nonrenewal of E&O insurance, and surety bond.

Ongoing Monitoring of Servicer Performance and Audit

An institution should implement the following monitoring and audit procedures to minimize the risk of loss from a servicer. If applicable, an institution may also use these procedures, as appropriate, for its oversight responsibility over primary servicers in its role as master servicer.

- Review monthly remittance reports and other computer reports from the servicers to detect discrepancies and errors.
- Review and reconcile bank statements monthly against borrowers' payments/remittances from the servicer and escrows held by the servicer.
- Perform annual desk reviews and on-site reviews of the servicer, and have tracking reports on the status of corrective actions related to these reviews.
- Perform quarterly comparisons of the servicer's delinquency, foreclosure, REO, and prepayment rates to the national averages from the MBA delinquency survey and perform any other trend/peer analysis.
- Verify, on an annual basis, mortgage loans, property owners, and loan balances by direct mail.
- Conduct annual reviews of the servicer's (a) external audit reports and attestations and (b) financial reports.
- Review, on an annual basis, the servicer's internal audit and quality control reports on servicing.
- Check the servicer's E&O insurance, and surety bond coverage annually.
- Verify, through annual reviews, continued approval of the servicer by PMI companies, HUD, FNMA, FHLMC, and GNMA. Obtain ratings by these entities on the servicer's default management and investor reporting/remitting functions.
- Obtain, on an annual basis, investor "seller/servicer" reports.
- Perform annual review of servicer ratings from rating agencies.

When an institution uncovers problems, it should take immediate action. If the institution detects fraud or diversion of funds, it should move immediately to transfer servicing payments and bank accounts to its name or that of another servicer. For less serious problems, an institution should determine the best solution to correct deficiencies. Institutions, however, should not be hesitant to transfer servicing for cause if the servicer does not follow any of the provisions of the servicing agreement or does not promptly correct problems after notice.

Risk Management

To mitigate the risks associated with a servicing operation, servicers must implement an effective risk management structure. The complexity of the risk management structure will depend on the overall complexity of the operation as well as the level of risk exposure. An institution's internal controls should provide for adequate segregation of duties between valuation, hedging, and accounting. The valuation and hedging risk management function should be separate from accounting and finance. Each organization is unique and may approach segregation in a manner suitable to its size and complexity.

As in all areas of mortgage banking, servicing operations should be subject to review by a risk committee composed of individuals representing various disciplines such as accounting, finance, legal, compliance, servicing, secondary marketing, etc. Responsibilities of the risk committee should include:

- Approving the selection of valuation models and changes to the models.
- Approving valuation assumptions and changes to them.
- Approving monthly MSR valuation results.
- Ensuring that there is adequate documentation and independent testing of valuations.
- Reviewing critical accounting policies and estimates.
- Reviewing economic performance of the servicing business.
- Reviewing pricing and acquisition strategies.

Servicing Quality Control Function

A key risk management element is to have an independent servicing quality control operation. The quality control of the mortgage loan servicing area is equally as important as in the loan production areas, although risk of third-party fraud in loan servicing is significantly lower.

Institutions should have a servicing quality control function that independently reviews the work performed by each servicing function. The quality control unit should test a representative sample of transactions, report its findings to appropriate levels of management, require responses for significant findings, and track corrective actions.

Investors and insurers typically require that a servicer establish a quality control function for its servicing operations. The servicer should develop policies and procedures that define goals, identify the areas of review, and specify how to achieve the goals. For instance, potential goals of any given servicer involve achieving higher efficiency, minimizing risk of liability (administrative, civil, or criminal), and safeguarding the company's reputation with investors. The quality control policies and procedures should also address the organization and staffing needs of the department, areas and scope for review, and reporting. Additionally, the policies should establish how management is to report significant findings to senior management and investors.

The servicing quality control unit is responsible for the following:

- Monitoring compliance with investor, insurer, and regulatory servicing guidelines.
- Establishing objective, unbiased processes that allow management to rely on information presented.
- Enabling the development of corrective action plans by loan servicing management.
- Evaluating quality and adequacy of servicing processes.
- Ensuring adherence to bank policies, procedures, and servicing practices.
- Analyzing data across appropriate characteristics to identify adverse trends.
- Ensuring loan servicing employees are accountable for work performed.

The institution's internal audit scope and servicing monitoring should adjust to reflect findings identified through the quality control process. The quality control process should include procedures for resolving any weaknesses and should minimize an institution's liability through the timely identification and resolution of unsafe of unsound practices.

Remediation

Timeliness is important when dealing with an institution's failure to comply with consumer regulations and laws as well as individual state requirements (such as, maintenance of escrow accounts, timely posting of mortgage payments). For instance, under the Truth-in-Lending Act if a lender acts to correct certain problems within 60 days, it may avoid administrative and civil liability. Similar statutory provisions exist in other consumer protection statutes. If an institution fails to service loans properly, an investor may terminate the servicing agreement. Such actions increase an institution's reputation risk.

An institution should address its strategy for this area in the business plan and internal reports used to identify, measure, and monitor risk.

Other Servicing Related Topics

Recourse Servicing

Generally, an institution is subject to recourse when the agreement governing the servicing of mortgages requires the institution to be responsible for losses, even though it has no interest in the mortgage loans. The institution is also subject to recourse when mortgage-servicing assets are transferred to another servicer if the bank guarantees to absorb any credit-related losses on the transferred servicing assets. Further, an institution may be subject to recourse if the servicer is not entitled to full reimbursement for servicer cash advances. See Accounting and Capital subsections within this Mortgage Banking handbook section for further guidance.

Predatory Practices

An institution should avoid predatory servicing practices. Such actions could subject the servicer to legal liability under federal statutes such as the Federal Trade Commission Act, the Fair Debt Collection Practices Act, the Fair Credit Reporting Act, and RESPA. Examples of predatory servicing practices can include:

- Failure to properly credit mortgage payments that are made on time, as a pretext for imposing unjustified late fees, and knowingly reporting borrowers to credit bureaus for the resulting false delinquencies.

- Force-placing high-cost insurance coverage on borrowers despite documentary evidence that satisfactory insurance is in effect (when escrow accounts are insufficient to make these higher insurance premiums, monthly mortgage payments are increased, in turn leading to further delinquencies and late fees).

- Charging fees for services not specifically sanctioned in loan documents.

- Threatening borrowers with unjustified foreclosures (such as, those caused solely by the servicer's own predatory servicing practices).

- Failure to respond to customer inquiries and complaints about these practices in an adequate or timely manner.

Transfer or Loss of Servicing Rights

The transfer of servicing is a complex procedure. A buyer must:

- Obtain the seller's computer records and reports to service the new loans.

- Notify all customers.

- See that the funds are transferred.

- Match the investor cycle so that data continue to flow smoothly.

- Ensure that the loans can be loaded on the buyer's system in time to make the transition dates.

- Carry enough staff to answer questions from the borrowers.

The buyer should keep detailed schedules and checklists to obtain information and evaluate the portfolio continually until its transfer. As a safeguard, the buyer should maintain communication with the seller from the date of bidding until long after the transfer to work out any confusion regarding characteristics of the previous servicing and originations. The buyer should understand that its relationship with the new customers is set upon transfer.

A failure to properly service mortgages can expose an institution to significant risk. Servicing deficiencies generally result in an investor transferring servicing to another entity. Therefore, institutions should initiate immediate steps to address servicing transfers, such as enhancing oversight and rectifying weaknesses that contributed to the loss of business. Loss of mortgage servicing for cause can occur under most servicing agreements if the servicer:

- Diverts loan payments or commits other type of fraud or illegal action.
- Fails to service loans in accordance with the servicing agreement.
- Fails to adhere to the other requirements of the servicing agreement.

When servicing is taken from a servicer for cause, the servicer receives no compensation even though a valuable asset has been taken. Because of the financial loss and the negative publicity involved, most servicers do their best 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 period. 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 loss of escrow funds can be damaging if those funds are a large percentage of the institution's total deposits.

Generally, the GSEs will work with servicers to correct deficiencies. These agencies generally treat institutions 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 officer's liability insurance are not major problems. Moreover, in most situations agencies leave the servicing with an institution even after FDIC places it into a conservatorship. The critical issue for these agencies is usually whether any mortgage loan related money is at risk.

Currently, GSEs require, for both escrow and P&I custodial accounts, an insured depository with an IDC Financial Publishing (IDC) rating or a Thompson Bank Watch (TBW) rating that is acceptable. These required ratings are usually stated in their seller/servicer or issuer guides. GSEs consider the loss of adequate financial strength rating for institutions that hold escrow custody accounts as a serious violation.

The Cranston-Gonzalez National Affordable Housing Act of 1990, among other things, amends RESPA to protect mortgagors during transfers of mortgage servicing. The abusive practices of some servicers triggered this amendment; however, the Act's requirements are basic to good mortgage loan servicing. Under the Act, servicers must give borrowers adequate notice of transfers, the name of the new servicer, and a toll-free telephone number to call to ask questions or report problems. The new servicer must be generally responsive to problems caused by the transfer and servicers must waive any resulting late charges.

GNMA Mortgage Buyback Options

GNMA programs allow issuers to buy back certain delinquent loans from securitized pools for which the institution provides servicing. To maintain the government agency guarantee or insurance, however, the issuer must continue to follow the agency's servicing guidelines. At the issuer's option and without GNMA prior authorization, the issuer may repurchase certain delinquent pooled loans (such as, those with delinquency of 90 days or greater) for an amount equal to 100 percent of the remaining principal balance of the loans.

To reduce the cost of advancing delinquent payments on bankruptcy, foreclosure, and other extended delinquencies, many servicers buy seriously delinquent mortgage loans from the servicing pools. This is done 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 MBS. The use of this technique should be carefully monitored to prevent inappropriate use and abuse. The repurchase of each seriously delinquent mortgage loan should be supported by written policies, a detailed cost/benefit analysis, and be approved by the appropriate officer. Management should use a repurchase monitoring report to continuously monitor the total amount of repurchases, the mortgages involved, and the causes for the repurchases.

Early pool buyout decisions should be supported by internal analyses evidencing the economic benefit to the institution. Typically, such buyout activity is supported by the guaranteed yield on the loan, the estimated remaining time to foreclosure, and the likelihood of reinstatement of the loan to performing status. The analysis of individual loans should consider the collateral, the status of guarantees, and liquidity ramifications to the bank. Monitoring processes should ensure timely liquidation and disposition of these loans at no loss to the institution. Management should gauge the impact should these short-term liquidation assets reinstate to performing status and become long-term assets that may not fit with an institution's portfolio objectives.

The institution should establish controls to prevent the purchase or removal of a loan from the pool before allowed by investor-established time frames. Premature purchase or removal of a loan harms investors by inappropriately reducing the outstanding balance of their portfolio.

Multifamily Servicing

The servicing of multifamily mortgage loans under the GSE 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.

- Occasionally REO management, renovation, and sale (see the multifamily servicing sections of the individual GSE Guides).

Because of these requirements, the cost of servicing multifamily mortgage loans is high and therefore, servicing assets associated with multifamily mortgage loans has a lower value than that of one- to four-family servicing. The failure of the multifamily servicer to follow the investors servicing requirements can leave the servicer liable for damages. It is usually not profitable for institutions or other servicers to have small portfolios of this type of servicing.

Commercial Servicing

Generally these loans require more intensive monitoring than one- to four-family or multifamily mortgage loans. The servicer should carefully follow the servicing instructions of the investors since servicing requirements vary greatly. Generally, collection efforts should begin early in the delinquency phase and be more intensive. Finding and curing the cause of delinquency for commercial mortgage loans is of primary importance. Also, the liabilities for errors or failure to follow investor instructions can potentially be a major liability for smaller thrift servicers. The efficiency achieved through volume and the ability to afford the experts needed to handle these mortgages is critical to profitability.

Data Processing

Since servicers are so dependent on data processing services, adequate loan servicing systems are vital to meet marketing and investor needs, management controls, audit coverage, and to control costs. Data systems for institutions and private investors servicing their own portfolios are often not capable of producing the reports and cash management services required by GSEs 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 the development and maintenance costs are spread over a large number of clients.

EARNINGS

Mortgage banking is a cyclical business and earnings can be volatile. Without proper management, a profitable mortgage banking operation can quickly generate substantial losses. Consistent profitability in mortgage banking requires a significant level of board and senior management oversight and careful management of all mortgage banking activities. This section provides guidance for reviewing the earnings of a mortgage banking operation.

The first part provides an overview of the components of mortgage banking profitability and how they relate to the value of mortgage servicing rights (MSRs). The second part provides charts detailing the major income and expense components, and the standard metrics and primary risks for each major segment. Finally, part three addresses common mortgage banking business models, and details some of the more important areas for examiners to review in each of these scenarios.

Overview of Mortgage Banking Earnings

Mortgage banking earnings can be volatile and management must closely monitor the operation's performance. Unlike many banks and savings associations, mortgage banking revenue consists primarily of gain-on-sale and mortgage servicing-related revenue. A mortgage banking operation's income and expense components can change at significantly different rates and directions over time, which can result in substantial shifts in profitability. Each segment of a mortgage banking operation (originations, sales, and servicing) contributes to the operation's net earnings.

The potential for rapid changes in interest rates and mortgage volume create a need for flexible, cost-efficient funding arrangements. The financing structure is largely dependent on the nature of the mortgage banking operation, typically balancing the need for flexibility with protection against interest rate changes. A company can pay off short-term funding as origination volumes decline, but remains highly susceptible to interest rate changes. Conversely, longer-term funding arrangements offer a fixed interest rate, but create costs if volumes decline.

A savings association's interest income and interest expense generally move in the same direction as rates change over time, depending on the repricing characteristics of the association's assets and liabilities. By contrast, a mortgage banker's noninterest income and expense components, however, can change at significantly different rates and directions over time. As a result, substantial shifts in profitability can occur very quickly.

The success of a mortgage banker's operations often depends on how effective it is at creating or acquiring the MSR and how the company disposes of it (through sale or the operation of a servicing department). If the MSR is sold, the value is reflected in the gain-on-sale. If retained, the benefit to the company is the value of the MSR relative to their cost to service it. The value of the MSR depends on the size and timing of the various costs and income streams associated with the entire servicing operation. To create the MSRs, a mortgage banker engages in the following:

- Originate/purchase a volume of loans at the smallest net cost possible, keeping production expenses in line with fee income received. Mortgage bankers are willing to produce the loans at a net loss to create the MSR value.

- Elect to sell the loans servicing released or retained. If the loans are sold servicing released, the MSR value is reflected in the servicing release premium (SRP) and in the increased gain on sale. If sold servicing retained, the MSR is recorded at fair value and impacts the gain on sale.

- Elect to acquire MSR directly from third parties. Some operations purchase bulk servicing pools or servicing through flow operations.

- Develop a servicing operation that can economically execute the servicing operation.

Scalable Cost Structure

A mortgage banker generates small net gains or losses on numerous origination, sales, and servicing transactions. A mortgage banker's income fluctuates with production volume and that volume generally changes with interest rates. Management should structure a mortgage banking operation so that expenses scale with volume. The scalable cost structure should work in both directions. To generate larger earnings when volumes surge, management must efficiently increase personnel, systems, funding, and facilities. Inefficient expansion of these cost centers will reduce the profitability of the added volume. Conversely, management must be able to quickly reduce personnel, systems, funding, and facilities in response to declining volumes. In a declining volume environment, an inflexible mortgage banking operation can quickly shift from generating profits to producing losses.

Production Costs

Many mortgage bankers use wholesale production channels to expand their volume and keep their production costs scalable. By outsourcing some or all production, a substantial portion of the production costs per loan shifts from a fixed expense to a variable expense. While many of the costs are embedded in the prices paid for the loans, these costs are not incurred until the loans are purchased.

While this wholesale production strategy enables scalability for many of the production costs, there are several areas of production that are infrequently outsourced and less scalable. A core group of high quality underwriting, closing, quality control, compliance, and other back office personnel are essential to the viability of a mortgage banking operation. Management often retains these key production-based personnel, making their costs nearly fixed in nature. Outside of the core group, there is some scalability, though not as much as with the origination staff or in the servicing operation. A growing trend is the use of contract underwriters to respond to increased volumes and to manage expenses.

Many retail operations have large fixed costs in their branches, loan production offices (LPO), and management information systems. When volumes decline, many of these costs remain the same. Excessive fixed costs, as volume slows, result in an increase in the cost per loan as production volumes decline. This can lead to significant declines in profitability or in some cases operating losses. Without scalability and careful management, retail mortgage banking production expenses can easily cause the

entire mortgage banking operation to incur losses. Such a structure can put pressure on an institution to lower its underwriting standards as a way of maintaining volume.

Secondary Marketing

Secondary marketing expenses fall into two categories: 1) general and administrative (G&A) operating expenses and 2) hedging/secondary marketing gains and losses. Most secondary marketing G&A costs are not scalable, but they can vary with the type of mortgage banking operation. Generally, larger operations carry higher fixed costs, due to expenses associated with the highly skilled personnel, advanced technology infrastructure (i.e., models), and professional service fees, such as legal and accounting. Conversely, smaller operations often use multi-functioned secondary marketing staff, whose fixed G&A cost spreads over several areas. Some mortgage bankers also categorize these G&A expenses with production costs, thereby leaving the other secondary marketing expenses free of personnel- and overhead-related cost distortions.

Another key secondary marketing expense is the hedging impact on the gain- or loss-on-sale. With today's technology, approximately breakeven secondary marketing sales are common. Larger secondary marketing losses are usually the result of poor policies or practices, speculation, inadequate management information systems (MIS), or weak internal controls. Significant gains can also be indicative of interest rate speculation, which may lead to comparable losses if rates move unfavorably. Refer to the Hedging section for more information.

Mortgage Loan Servicing

The direct expenses associated with the MSR asset or liability on the balance sheet are minimal, but the operational function of servicing loans owned by other investors is perhaps the most scalable, management intensive expense in mortgage banking. Because the volume of loans in a servicing portfolio can be large, the resulting staff, servicing facilities, and MIS required to process the loans serviced for others (LSFO) can be substantial.

The LSFO operation is one area where mortgage bankers leverage fixed cost structures to achieve economies of scale and greater efficiencies. Smaller servicing operations, however, can often achieve efficiencies similar to larger operations because of geographic advantages that allow them to incur lower personnel and facilities costs. An institution may also outsource servicing to another entity with a subservicing arrangement. The major drawbacks to this are that the MSR owner remains liable for the terms of the servicing contract but they do not have direct control over the operation and company looses direct contact with the customer.

Business-Line Profitability Reporting

As indicated above, a mortgage banker strives to generate small returns on a very large number of loan transactions. Each transaction takes several steps to complete. The amounts of fee income and other noninterest income received in the different segments of a mortgage banking operation are predominately set by the marketplace and competition; so profitable operations depend on controlling expenses.

In order to effectively monitor and manage the profitability of a mortgage banking operation, management should develop a cost center reporting system that aggregates the individual components of the mortgage banking operation. A mortgage banker's income and expense change at different rates over time and through volume fluctuations. Because of this variation, the only way to accurately identify if costs are in line with production is by implementing a cost accounting reporting system.

An effective system will break out information for key income and expense metrics in a particular segment of a mortgage banking operation, while also maintaining a perspective on the whole operation. A common name for this type of cost center reporting is business-line profitability reporting. Though the specifics will vary, each cost center or segment report should include line items for all major income sources, funding costs, personnel, G&A, facilities and MIS expenses, plus any provisions for reserves.

A business-line profitability reporting system can separate the mortgage banking operation's results from those of the rest of the institution to facilitate transparency. The institution may already be divided along other key business lines (e.g., retail banking, commercial lending, or wholesale investment and funding). In addition to reporting the financial results of the entire mortgage banking operation as a whole, these types of reporting systems will provide management with:

- The income and expense components for each operating segment.
- Key income and expense amounts on a per loan or per full time equivalent basis, not just on a total dollar basis per line item.
- Comparisons of the institution's results to industry metrics appropriate for each segment.

In the past, standard operating segment breakouts in a business-line profitability reporting system only included production, secondary marketing, and servicing. However, given the complexity and competitiveness of mortgage banking, a more detailed stratification of the segment subcomponents has become common. Production can be stratified by source into retail, wholesale (broker and/or correspondent), Internet, or other categories.

Likewise, stratification by subcomponents within secondary marketing is useful. Management may separate such areas as derivative recognition, the impact of hedging, the impact of recourse and indemnification, and different timings of gain- and loss-on-sale recognition. For servicing, any MSR valuation changes and any associated hedging activities should be reported separately. The servicing operation can be stratified into the major portfolio types. While there are any number of cost center reporting system formats, expense sharing reports between the parent company, subsidiary, or holding company affiliate are a different monitoring tool and should not be confused with a business-line profitability reporting system. Similarly, quarterly MSR valuation reports are not a business-line profitability reporting system either.

Major Income and Expense Components

Because each operation is unique, management must develop reasonable metrics for their operation. Each segment of the operation that an institution is involved in contributes income and expense

components. The following tables outline some of the income and expense items for each area. Following each table are several commonly used metrics and primary risks for the area.

MORTGAGE BANKING OPERATION	INCOME COMPONENTS	EXPENSE COMPONENTS
Loan Production	• Retail origination fees • Other retail origination income • Correspondent/ broker fee income • Other operating income	Personnel • Retail loan officers • Other retail origination employees • Purchased production employees • Warehousing & marketing employees • Employee benefits • Education & training • Other personnel expense Occupancy expense MIS/EDP Communications expense Other direct expense • Loan origination processing expense • Correspondent / broker loan acquisition expense • Non-MIS/EDP expense • Other operating expense
Generating Applications, In-house	• Loan application fee • Loan origination points (not rate buy down points)	• Advertising expense • Loan origination staff • MIS/EDP
Underwriting the Borrowers' Credit	• Application fee • Credit report fee	• Skilled staff • Credit scoring technology
Processing the Application into a Loan	• Document preparation fees	• Skilled staff • Attorneys
Production Employee Compensation		• Should be linked to mortgage banking profitability, not just tied to production volumes • Should also be linked to minimizing (interest rate risk) IRR and quality control standards
Loan Brokers		• Shared origination fee/commission expense • Mortgage banking operation incurs normal underwriting and processing expenses • Skilled staff to oversee wholesale production agents and verify quality of production
Correspondent Originators		• Servicing release fee expense • Shared origination fee/commission expense • Reduced, or eliminated, underwriting and processing expenses • Skilled staff to oversee wholesale production agents and verify quality of production

Standard Industry Metrics – Loan Production

Total Production

- Number of loans originated
- Dollar amount of loans originated

Loan Production Income

- Percentage of dollar volume of total originations

Loan Production Expense

- Percentage of dollar volume of total originations

Net Loan Production Income

- Percentage of dollar volume of total originations

Retail Production

- Number of retail loans originated
- Dollar amount of retail loans originated
- Average retail loan balance
- Ratio of loans to retail origination employee
- Ratio of loans to retail origination loan officer

Wholesale Production

- Number of wholesale loans
- Number of loans from correspondents
- Number of loans from brokers
- Dollar amount of wholesale loans
- Dollar amount of loans from correspondents

- Dollar amount of loans from brokers
- Average wholesale production loan balance
- Wholesale production as a percentage of total production

Production Personnel

- Number of retail origination employees
- Number of retail origination loan officers
- Ratio of loans originated to retail origination employees
- Ratio of loans originated to retail origination loan officer
- Ratio of the dollar amount of compensation to retail loans originated
- Compensation as percentage of dollar volume originated
- Total personnel expense per loan originated
- Total personnel expense as percentage of dollar volume originated

Primary Risks – Loan Production

- Pricing at or below market rates (loss leader products) to increase production volumes could result in production costs that adversely impact the mortgage banking operation's overall earnings.
- Inflexible production cost structures could lead to net losses for a mortgage banking operation when production volumes decline.

MORTGAGE BANKING OPERATION	INCOME COMPONENTS	EXPENSE COMPONENTS
Hedging Pipeline & Warehouse	• Mark to market gain or loss • Hedging gains or losses • MSR recognition and related GOS income	• Skilled staff • Professional fees • Specialized MIS technology
Warehouse Spread Interest Income	• Interest income at rate of closed mortgage loans in warehouse	• Cost of borrowed monies to fund closed loans
Flow Basis/ Best Efforts	• No gain on sale income • SRP income	• No loss on sale • No hedging costs
Correspondent/Broker (Mortgage banking institution as agent originator for others)	• Gain on sale and or servicing released premium	• No hedging costs
GSE/Agency Sales	• Market price of loan for forward delivery • Retained MSR value	• Skilled staff • Decline in forward price from current value • Hedging costs if change of commitment
MBS Shelf	• Better market price execution	• SEC registration • Attorney's fees • Skilled staff
FHLB Sales	• Higher gain on sale due to no guaranty fees	• Capital for recourse • Tracking and monitoring credit exposure
Early Payment Default/ Early Payoff/ Servicing Premium Refund Representations and Warranties		• Undefined future expense • Potential material regulatory risk based capital implications • Depending on materiality, GAAP's FIN 45 expected loss estimation systems • Faster than expected (desired) write down of newly recognized MSR

Standard Industry Metrics, Warehousing

General Warehousing

- Average number of days in inventory

Warehousing Income

- Gross warehousing income as percentage of dollar amount of loans in warehouse
- Warehousing expense as percentage of dollar amount of loans in warehouse

- Net warehousing income as percentage of dollar amount of loans in warehouse
- Net marketing income as percentage of dollar amount of loans in warehouse

Loan Sales

- Total number of loans originated
- Number sold to agencies
- Number sold to private conduits
- Number sold to others
- Total dollar loans originated
- Dollar sold to agencies
- Dollar sold to private conduits
- Dollar sold to others

Primary Risks, Warehousing

- Choosing later-dated positions or extending forward sale dates to prolong spread interest income.
- Delivering higher rate loans into lower MBS coupon commitment may appear to generate a higher gain on sale. (This is not as efficient as delivering to the closest permissible coupon, and generally results in lower earnings and higher net production costs.)
- Speculating on interest rate changes (not prudently hedging production) can result in significantly lower earnings.

Standard Metrics, Pipeline Hedging

- Applications or loans in process "fallout" or "pull-through" ratio
- Hedge coverage to rate-locked loans
- Hedge coverage to closed loans
- Hedge coverage long or short

- Net pipeline exposure
- Net warehouse exposure

Primary Risks, Pipeline Hedging

The strategy of using hedging activity to compensate for production losses is inappropriate and can create substantial losses. Speculating on interest rate movements versus focusing on using hedge instruments to efficiently sell current production to secondary market investors could create substantial losses to both the overall mortgage banking operation as well as the institution's overall earnings. Improper accounting procedures could result in adverse income and expense timing recognition.

(Continued on next page)

MORTGAGE BANKING OPERATION	INCOME COMPONENTS	EXPENSE COMPONENTS
Loan Servicing and Administration	Servicing fees • First mortgage loans • Other mortgage loans • Subservicing fees Ancillary Income • Late fees • P&I float Interest Income MSR Sales Proceeds Foreclosed / REO property sales proceeds	Personnel • Loan administration employees • Employee benefits • Education and training • Other personnel expense Occupancy expense MIS/EDP Loan administration processing Communications expense Other expense • Non-MIS/EDP expense • Other operating expense • Subservicing fees paid Interest expense Loss provision expense Foreclosure and REO losses
Escrow Deposits	• Low cost funding source	• Interest paid to mortgage borrower, depending on state
P&I	• Interest float between borrower receipt and investor disbursement	• Skilled staff
Loan Payment Receipts	• Late fees	• Skilled staff • Professional fees • Specialized MIS technology
Insurance Escrows	• Interest float	• Skilled staff • Professional fees • Specialized MIS technology
Delinquent Loans	• Late fees • Property sale proceeds	• Many loan programs require that servicer submit payments to investor even if not yet received • Skilled staff • Professional fees • Specialized MIS technology • Foreclosure expenses/losses

Standard Metrics, Loan Servicing and Administration

General Servicing

- Servicing fee as percentage of dollar amount of loans serviced
- Expenses as percentage of dollar amount of loans serviced
- Number of loans serviced
- Number of loans serviced per servicing employee
- Average loan balance
- Dollar amount of loans serviced for others (LSFO)
- Subserviced by others as percentage of dollar amount of LSFO

Loans Serviced For Others, Specific

- Conventional fixed-rate loans as percentage of dollar amount of LSFO
- Conventional fixed-rate loans as percentage of number of LSFO
- FHA/VA loans as percentage of dollar amount of LSFO
- FHA/VA loans as percentage of number of LSFO
- Conventional ARM loans as percentage of dollar amount of LSFO
- Conventional ARM loans as percentage of number of LSFO

Loan Servicing Personnel Data

- Number servicing employees
- Number loans serviced per servicing employees
- Average salary loan administration personnel
- Personnel expense per loan serviced
- Personnel expense as percentage of dollar amount of LSFO
- Personnel expense as percentage of servicing expense

Primary Risks, Loan Servicing, and Administration

Cost structures not ideally scaled to servicing volumes can result in lower earnings or net losses in this area. Expansion of LSFO beyond the capacity of the available labor pool (in the geographic area of the servicing operation's facilities) can result in higher training expense, higher inefficiencies, lower earnings, higher error rates, and increased servicer liability risks.

MORTGAGE BANKING OPERATION	INCOME COMPONENTS	EXPENSE COMPONENTS
Valuation of MSR		• Skilled staff • Professional fees • Specialized MIS technology
Period to Period Fair Value Estimation Required by GAAP	• Period to period increase in fair value of MSR • Mortgage banking operations not adopting mark to market accounting for MSR (e.g. SFAS 156) are limited in recognizing mark to market gains up to amortized LOCOM	• Decline in fair value of MSR recognized either through valuation allowance or mark to market to income statement
MSR Hedging	• Mark to market gains of hedge instruments	• Mark to market losses of hedge instruments

Standard Metrics, MSR Valuation, and Hedging

- Fair value based on market assumptions, not institution-specific characteristics
- Fair value may be summarized in different formats, i.e., basis points (bps) per dollar LSFO, or as a multiple of servicing fee
- Delta 1 BP (change of one basis point in interest rates) on MSR hedge
- Hedge effectiveness

Primary Risks, MSR Valuation and Hedging

Improperly constructed hedge programs may not achieve desired value stability and may lead to adverse earnings impact. Speculating on interest rate movements to offset MSR losses could create substantial losses. Improper accounting procedures could result in adverse income and expense timing recognition.

COMMON MORTGAGE BANKING STRUCTURES

While a mortgage banking operation is rather simple in theory, the combination of different types of operations and the various levels of risks makes the review of each operation unique. Management can structure their institution to participate in one, or several, parts of the process. This section addresses

some common mortgage banking structures and the operational issues associated with them. You should expect management to have appropriately evaluated the institution's operation and risk profile to determine the relevant measurement criteria for its income and expenses.

Institutions with similar operational profiles may have different goals. In all cases, management and the board should outline the strategies and goals of their operation. At the onset of the review, you should determine the type of mortgage banking operation, and acquire management's reports for monitoring mortgage banking activities.

Management's strategic planning process and business plan should address the activity, risk, and goals of its institution's operation. Management and the board should set reasonable limits, guidelines, and measurement standards for the institution's operation. This planning should also address strategies to deal with changes as the mortgage banking operation goes through business cycles.

The mortgage banking industry continues to consolidate. The large resulting operations have reached sizes where it can be difficult for small and medium sized operations to compete directly with them. The largest producers are able to negotiate reduced guarantee fees with GSE's and often securitize loans into MBS themselves. Integrated computer systems help reduce the cost to produce and service loans. This allows these more efficient competitors to offer lower rates to borrowers that smaller operations may not be able to match. The economies of scale of these large mortgage bankers also affect many other aspects of the mortgage banking industry. The size of their hedging positions can sometimes affect the market prices or availability of certain products (e.g., a few large producers may fill all of the available commitments from an FHLB MPF program).

The following examples illustrate some typical mortgage banking operations and risks. The issues listed for each succeeding type are intended to build on the prior types. This section will help you understand some of the prominent risks in mortgage banking, but you should not use it as a template for the examination.

Small, community-based institution that sells all of one category of loan production

Management of a small, community-based institution originates certain loans that they do not intend to keep in portfolio. Management may structure the operation to act as a loan broker that receives fee income on these sold loans. Alternatively, they may structure the operation to act as a correspondent producer for a larger mortgage banking operation, whereby they might underwrite loans to this investor's standards and sell them on a best efforts or flow basis. In this case, the institution may also receive a Servicing Release Premium (SRP). Management incurs no hedging costs and the investors that purchase the loans set the interest rates.

When reviewing these types of operations, a key first question is determining: At what point do loan sales constitute a mortgage banking operation? Management at some institutions will sell all long-term, fixed-rate loans to limit interest rate risk (IRR) exposure, or may sell certain ARMs because they lack the expertise or system capabilities to service them properly. If this activity represents only periodic sales to the same investors, there is minimal risk or supervisory concern. As sales volume increases, the

activity may expose the institution to greater risk, and warrant further review. While there are no set guidelines, you should consider the ratio of sales to production and the impact that this sales activity has on earnings and capital. Generally, an institution where management sells ten percent or less of total loan originations is not an active mortgage banking operation. Nevertheless, activity below this threshold could still have a significant impact on earnings and capital levels.

This type of operation generally relies on permanent staff to handle the production volume. A common strategy is to try to better utilize current staff to generate additional fee income by producing extra loans. Note that if management elects to add staff during high volume times, it should be temporary rather than permanent.

In this type of operation, the institution (or some designated part of its staff) may act as a loan broker, a correspondent, or an agent for an investor. Each role has different associated risks, income, and expenses. An agent for an investor, the simplest of these three roles, acts on a particular investor's behalf and is generally paid a set fee for each loan generated.

If the institution acts as a broker, it may deal with a number of investors and receive commissions. The fees earned on each loan may escalate with increasing volume or for consistent loan quality. The fee arrangement may compensate the broker for extra fees, points, and higher rates the broker can negotiate with the borrower over the investor's quoted rate. One advantage of acting as a loan broker is that operating costs are limited, because the investor underwrites the loans. For the same reason, loan brokers have little or no recourse risk.

An institution acting as a correspondent operation closes the loan in the name of the institution, and then sells the loan to the investor. In this type of operation, the institution's production staff underwrites the loan to the investor's standards. Correspondents often sell loans on a flow basis, whereby a commitment from an investor to buy the loan is obtained at the same time a binding loan commitment is issued to the borrower. If the loan does not close, the correspondent does not have to deliver a loan and does not pay a fee (contrary to if there was a forward sale agreement). If the loan closes, the correspondent is expected to deliver the appropriately documented loan to the investor within a set period. The correspondent may receive some of the loan fees, but the main source of income is from the SRP. If a loan with more profitable terms can be delivered, the correspondent can enjoy most of the additional gains. A correspondent is subject to repurchase and kickback risk from the investors (discussed in the Secondary Marketing section).

Even small producers acting as correspondents will have an underwriting department capable of handling a range of production volumes, and thus higher general and administrative expenses when compared with institutions without this activity. To improve efficiencies, many larger correspondent operations begin using automated underwriting systems (AUS) that will approve or deny prospective borrowers based on set standards. Depending on the user's systems and process integration, this higher end technology may contribute to higher operating costs, or it may lead to overall cost reduction. While AUS's often reduce the underwriting burden, approval is contingent upon the delivery of certain documentation. There are often cases where the investor may ultimately reject the loan after closing because delivered documentation did not meet the investor's standards. While these rejections typically come within a few months of origination, in peak periods the investor may reject the loan well into the loan term. (See related discussion in the Production and Secondary Marketing sections.)

Even with the limited nature of this type of mortgage banking activity, management should:

- Understand the total costs to produce loans – Management should estimate the breakeven level of production and be able to determine when loan sales are made at net gains or losses. Even a small institution should not have difficulty calculating a reasonable estimate of the costs associated with producing each loan. Regardless of the sophistication of these estimates, they should be re-visited as production volumes vary. Estimates should include computer time and MIS systems, additional staff time needed, and other costs incurred with the production and delivery of the loan.

- Monitor Early Payment Default (EPD) and Early Pay-Off (EPO) exposure – Sales agreements between institutions and investors may contain credit enhancement clauses. These clauses can increase capital requirements even if loans have not been repurchased, and can possibly limit the institution's ability to fund more production. If any loans have been repurchased, or indemnifications granted, the costs associated with this activity will reduce profitability via actual losses taken and or provisioning for potential losses. (See the Accounting section for additional details).

Community-based institution with several LPOs

Management of a community-based institution with several LPOs may produce and sell high loan volumes. These operations typically sell production on a best efforts or flow basis. Investors' rate quotes are used to set loan prices and there are little or no hedging costs. Achieving higher levels of production generally requires the operation to compete more intensely with similar and larger-sized mortgage bankers. Competition may drive down fee income, so SRP tends to be the primary source for the operation's earnings. Management teams with this style of operations should separate income and expenses between their portfolio-lending and for-sale production activities. At this level, management should capture and report this information at a loan level basis. This operation requires a more complex monitoring system than the type of operation discussed previously.

Typically with multiple LPOs, management has purposely built a structure to generate higher levels of fee income via increased loan production volumes and sales. The LPOs and a growing network of agents, brokers, and correspondents facilitate this strategy. These additional production sources add other layers of risks and costs. As these wholesale production vehicles become more prevalent, many operations are trying to increase the amount of variable cost components in their earnings stream. If management expands production levels through use of more fixed cost operations, you should carefully evaluate the appropriateness of this expense profile and the resulting effect on the institution's overall risk level.

A best practice standard for this type of operation is for management to separate income and expenses for each of the different production methods. In many cases, one production method will have lower net costs and management should be aware of the differences. Only by separation and stratification will management be able to gather information such as production level and costs, timeliness of loan delivery, and general loan quality data. As production falls or profitability drops, this information will allow management to make informed decisions about how to reduce costs.

Most institutions operating within this scenario function as a correspondent. They may sell loans to other banks or institutions, national mortgage banking firms, or GSEs. Most sales are on best efforts or flow basis to the investors (e.g., conventional conforming fixed rate loans), but they also may periodically sell more unique products loan-by-loan (e.g., government insured loans or unique ARMs). The GSE's and major investors, as well as some individual institutions, have developed automated underwriting systems (AUS) to speed up the loan underwriting and approval process and to help ensure consistent loan quality. Each GSE has an AUS product available for its regular customers to use. Other larger investors may have propriety systems for use, but this requires a relatively firm relationship between the loan producer and investor. In most cases, the investor supplying the AUS will guarantee that it will purchase all loans underwritten and approved by the system. These automated systems are becoming more widespread in the mortgage banking industry.

With this style of operation, it is common for management to offer rates slightly less than the investor's quoted rates in order to generate additional volume. For instance, the investor may quote 6.00 percent and 1.0 point, but the production staff may make the loan at 6.00 percent and zero points. In this case, management is forgoing some of the fee income they would have received at the investor's quoted rate in order to generate the SRP. Frequently, management's goal is that the increased volume will reduce production costs to a point where the SRP alone generates an acceptable return. Management may also do this in the short term to maintain a certain level of production so they do not have to cut staff.

As the nature of the operation gets more complex, the depth of the review should expand. Additional issues to consider in a review of a small institution with several LPOs include:

- Are there adequate information systems in place? – Does management monitor EPD or EPO and adjust staff and systems as production levels dictate?

- Are loans priced to generate volumes regardless of costs? – Some operations have higher fixed costs, so they try to maintain a certain volume to cover these costs. As market rates rise and overall production falls, this operation will have to offer lower loan prices to maintain higher production volumes. This strategy will only work if management closely monitors the marginal cost of added volume and is able to maintain profitability.

- Is management treating the employees of LPOs or other wholesale production vehicles like permanent branch staff? – Some managers are not willing to cut staff in these areas when production falls. The small margins in this area make the need to control costs very important. If management does not reduce costs and staff during production downturns, earnings will decline or the institution may experience losses.

- Do originators meet AUS documentation requirements? – The AUS may base approvals on specific criteria, such as an acceptable appraisal or income verification. If management does not retain the required documentation, the loan may be subject to a repurchase request.

- Does the institution have access to sufficient funding for the operation's needs? – Management must ensure that the institution maintains the capital base and borrowing ability to handle its funding needs. In many cases, loan production volumes can exceed fund availability from the existing deposit base. Management must rely on borrowed funds to meet these additional requirements. Management's liquidity plan should address how to deal with changing funding requirements. If there is inadequate liquidity planning, profitability can suffer. In extreme cases, funding shortfalls can be detrimental to an institution's reputation, as it may not be possible to fulfill its outstanding loan commitments. Alternatively, if longer-term funding arrangements are utilized, the operation could end up with costly, unused funds when production volumes and warehouse portfolios decline.

Community-based institution with a small, full line mortgage banking operation

An institution with a small, full line mortgage banking operation must be knowledgeable about loan production, hedged secondary market sales, loan servicing, and MSR valuation requirements. Typically, these institutions have annual new loan production of about 100 to 500 percent of total assets. Many operations retain the servicing rights on conventional, conforming fixed-rate loans, but sell other products on a servicing-released basis. Managers for this operation may select desirable loans from the mortgage banking operation's loan production to retain for the institution's portfolio. An institution will sell most conventional production to the GSEs or other secondary market investors using forward sales, while selling ARMs, jumbos, and other small volume loan types on a best efforts or flow basis to a different pool of investors. A growing number of small mortgage bankers sell almost 100 percent of their production to a single, non-GSE investor.

Management should report and monitor the mortgage banking operation separately from the rest of the institution's operations, using some form of business-line profitability reporting system. The mortgage banking operation may be a service corporation, an operating subsidiary, or a department of the institution. Regardless of the structure, reporting systems should generate separate operating statements and performance metrics for the mortgage banking operation and its component operations. The measurement system should report on a rate/volume basis, as well as on an income and expense per loan basis. Management and the board should compare their internal performance measurements to appropriate industry standards.

This type of operation will have more risk exposure and consequently should generate higher returns. This risk / reward tradeoff is sometimes referred to as moving up the pricing ladder. This institution will typically have a full-time secondary marketing employee or department, and will set loan prices internally, rather than from other investors' quotes. This mortgage banking operation has more IRR exposure in its pipeline and warehouse than an operation that sells production on a flow basis. The institution must prudently and cost effectively hedge this risk.

A full-line mortgage banking operation has loan production volumes that require management to know the full costs of the different production methods. Retail production can be relatively costly, but management has better control over the quality of loans produced. Wholesale loan production sources provide a desirable variable cost structure, but they also require systems to monitor loan quality. Loan

brokers cost less than correspondents, but necessitate additional internal underwriting capacity. Brokers are frequently less reliable in delivering loans than other wholesale sources, and thus create a higher fallout component, which raises hedging costs. Correspondents are more expensive than brokers because they generally receive an SRP that is a substantial portion of the MSR's value.

While this operation will typically hedge with forward sales agreements, management has numerous options for loan delivery. Management can deliver the loans into the forward sale agreement. Alternatively, they may sell the loans into the agencies' cash programs and pair off the hedge. They also may deliver the loans and the forward sale agreement to an investor using an assignment of trade (AOT). Note that these activities can increase the holding time of warehoused loans significantly more than other types of operations. The secondary marketing department should be delivering the loans to the investor as quickly as possible in order to protect the value generated by the origination department.

While awaiting delivery in the closed loan warehouse, the institution still owns the loans and earns the spread interest income they generate. When fixed-rate loans are funded with short-term, wholesale monies, the net interest spread may be higher than that earned in the institution's loan portfolio. While this higher spread may be tempting to management, it increases IRR exposure. The secondary marketing operation's goal should be to deliver the loans as quickly and efficiently as possible to the appropriate investor.

As management engages in complex activities, they may elect to rely on external expertise. Any contracts with third parties for products or services should comply with Thrift Bulletin 82a. Some of the types of services external companies provide the industry include quality control and compliance reviews, secondary marketing and hedging, Internet platforms and hosting, and subservicing arrangements. Examiners reviewing this area should evaluate the costs and benefits for each of these services.

Ideally, this institution should have information systems that differentiate costs between internal loan servicing operations and loan servicing for other investors. Given this type of information, management can determine if they would like to keep the servicing function in-house versus hiring a subservicer. It is acceptable for management to keep the servicing in house, even at a higher cost than available via a subservicing agreement. This allows management to maintain quality customer service or develop cross-selling opportunities. Regardless, management and the board should have the information to make an informed decision. Similarly, if management elects to retain the MSR in lieu of receiving the SRP, they should periodically reassess the costs and benefits of that decision.

One factor to consider when retaining MSR is that management will have to have a reasonable system to calculate and record periodic MSR valuations. This process often requires additional systems and staff to track and record the values properly. MSR value must be recorded as required by GAAP.

Increasing complexity of the mortgage banking operation warrants more detailed review. The issues you should consider in this area are:

- Does management price loans to meet the demands of the secondary market? – The secondary marketing department should set the loan pricing and product selection based on market factors. If pricing is set to maximize production without consideration for investor demand, profitability will suffer.

- Does management hold loans to generate extra spread income? – Sometimes management may keep loans in the warehouse longer than necessary to earn additional spread interest income. Other than with best efforts or flow basis delivery commitments, management has latitude to choose which loans are delivered into forward sales commitments. As such, it has the option to shift the delivery of a loan into a later commitment or to roll the entire commitment into a later position, leaving the affected loans in the warehouse longer. The market is generally very efficient so management should support any decision to deviate from the first possible delivery date. Depending on the size of the portfolio of "retained" loans, this decision could create a significant risk warranting corrective action.

- Does management consider the secondary marketing department a profit center? – Significant profits or losses in this area are generally the result of over- or under-hedging the pipeline, the warehouse, or both. If management is risking more than the expected gain on sale from producing the loans, the activity is a supervisory concern. Some secondary marketers may allow some or all of the warehouse loans to be unhedged in order to create higher earnings. Depending on the size of the unhedged warehouse portfolio, this decision can be a prudent economic choice or it can lead to a major risk exposure that is a significant supervisory concern warranting immediate corrective actions.

- Do information systems allow for adequate separation of LSFO from internal loan servicing? – MIS must be able to separate the two types of servicing for proper income and expense allocation. Without separate allocations, management cannot evaluate alternatives between selling loans servicing retained versus servicing released.

- Does the institution have an adequate system to record and value the MSR? – The accounting and reporting systems needed to accurately measure MSR value can carry significant costs. Management must have detailed, loan-level reporting. The institution may group the calculations for reporting purposes. See the Accounting section for additional detail on MSR and its effect on earnings.

Mid-sized regional institution with a full line, nationwide mortgage banking operation

A mid-sized regional institution with a full line, nationwide mortgage banking operation will have production volumes in the top 25 in the nation, typically using a mix of retail and wholesale production. Production levels are large enough that the secondary marketing operation will securitize loans into agency MBS and deliver the loans into forward sale contracts. Management sells all loans servicing retained, but may sell certain MSR pools for different reasons. The operation has reached a size where management may elect to specialize in one part of the mortgage banking business. The institution may

have a large network of brokers and correspondents from which it acquires loans. The operation may be a large servicer of government loans, conventional, or subprime loans, and management may buy and sell servicing pools to facilitate this operation.

This operation has reached a size where management will be able to negotiate a reduced guarantee fee with the GSE's, thus allowing it to better compete on a national scale. The institution should report the mortgage banking operation separately from the rest of the institution's operations, using a business-line profitability reporting system. The reporting system should also be able to separate operations geographically and by operating function.

While quality control is always an important issue, this type of operation has reached a scale where a small deterioration in loan quality can have a large impact on earnings. As such, the higher production levels require a full-time quality control department, whether staffed in-house or outsourced.

Institutions where most assets are related to the mortgage banking operation also fit into this category. The majority of loans on the balance sheet are those held in the warehouse. The MSR value may comprise a significant amount of the institution's capital. The pipeline and warehouse's exposure determines the IRR of the institution in addition to any sensitivity from the unhedged MSR's rate-shocked value fluctuations. Management bases funding requirements and sources on loan originations, purchases, and sales. Fee income and gain-on-sale income are major components of the institution's overall earnings. Noninterest expenses will also be very high, especially as compared with similarly sized traditional thrift operations.

Interest income comes from the longer-term assets while the funding cost is generally short-term. This type of mortgage banking operation takes very little credit risk, so the institution's NIM is based predominately on the shape of the yield curve. If the yield curve is flat, normal, or steep, NIM should be low, reasonable, or high, respectively.

This type of operation may benefit financially from its size. Production volumes may reach a point where management needs to decide if new systems are necessary to add more volume. Production costs generally have started to fall but have likely not yet reached an optimum point. The institution now has sufficient production to allow internal securitizations of loan production, or bulk whole-loan sales. These additional sales avenues offer more options to improve earnings.

A mid-sized savings association with a full line, nationwide mortgage banking operation has several complexities that you must carefully review. The additional issues you should consider in this area are:

- Has the institution experienced large changes in its income? – If most or all operations are related to mortgage banking, the institution may be susceptible to large variations in its income from gain on sale, fees, and net interest margin.

- Have changes in the MSR affected shorter-term profitability or capital levels? – The MSR value will increase or decrease as interest rates fluctuate, and this shift can have substantial impact on earnings. If the institution has a major loan production operation, there will be a timing difference between an MSR write-down (or impairment) and the gain-on-sale income from new production.

Full line, nationwide mortgage banking business operating as separate business line from the institution

A full line, nationwide mortgage banking operation requires the most in depth examiner review. The secondary marketing operation will sell loans through multiple channels, including private label and agency MBS. This type of operation often runs on a functional rather than a legal entity basis. Management's measurement and reporting systems should be based on that functional nature, but should be able to deal with legal entity basis where necessary and appropriate.

When the MSR is large enough relative to capital, changes in its market value can materially affect the institution's capital and earnings. Management may choose from a variety of instruments to hedge the MSR values to stabilize those value fluctuations. The size of this operation should allow for proportionally lower production and servicing costs as compared with smaller and regional operations. The secondary marketing staff takes advantage of all of the hedging and delivery options the capital markets offers it. Management may purchase and/or sell MSR and they may hedge the (anticipatory) MSR value of the loans in the pipeline and or warehouse before the actual accounting recognition of that MSR takes place.

Full line, nationwide mortgage banking operation that runs independent from the financial institution has several unique areas that you should consider in your review:

- Does the information system provide management with all necessary information in a timely manner? – The size and complexity of this operation require detailed, complex reporting-systems. These systems must provide management with critical metrics in a timely manner.

- Is management hedging the MSR? – These should factor into profitability analysis for the MSR and for the mortgage banking operation.

ACCOUNTING CONSIDERATIONS

Introduction

Accounting for mortgage banking activities is complex. The accounting literature is extensive and continues to evolve. You should consult with a Regional Accountant about developments in accounting for mortgage banking activities. The Financial Accounting Standards Board (FASB), the FASB's Emerging Issues Task Force (EITF), and other standard setters have issued accounting guidance in this area.

We often think of a mortgage loan as a simple product, an agreement between a lender and borrower where the lender advances a sum of money and the borrower repays that sum with interest over a future period. However, from the time a commitment to originate a loan to a borrower is issued, the mortgage banker is at risk of losing money on the ultimate loan sale because interest rates, borrower credit quality, and market conditions may change, impacting the value of the loan. Additionally, loans are not always sold as whole loans; loans may be pooled, the pool securitized into various components, and the components sold to investors to meet their needs (risk exposure, credit quality, rate, or maturity). The mortgage banker must account for each component individually as the loans are sold or retained.

Fair Value

The concepts of fair value and the accounting for derivatives are fundamental to understanding this handbook section. In a mortgage banking environment, fair value is critical to accounting for the following:

- Contractual arrangements (commitments) to acquire and sell loans.
- Loans held for sale.
- The sale and securitization of loans, including servicing rights and other retained interests.

From an accounting standpoint, fair value is the price that would be received to sell an asset or paid to transfer a liability (exit price) in an orderly transaction between market participants at the measurement date. The fair value of the asset or liability should be determined based on the assumptions that market participants would use in pricing the asset or liability.

Note that fair value is precisely defined in the accounting literature and is not necessarily synonymous with economic value, present value, or other forms of value for instruments that might be held by mortgage banking entities. For example, economic value may incorporate assumptions unique to the individual mortgage banker, but not applicable to other mortgage bankers in the market. Please see the expanded discussion on fair value under the summary of Statement of Financial Accounting Standards (SFAS) 157, Fair Value Measurements, in "Principal Mortgage Banking Accounting Pronouncements" located near the end of this handbook section.

Derivative Instruments and Hedging Activities

In a mortgage banking environment, contractual arrangements to acquire and sell loans (commitments to originate, buy, or sell loans) represent derivatives. In addition, traditional derivatives, such as swaps, options, forwards, and futures, may be used to hedge mortgage banking activities, including loan commitments (pipeline), loans held for sale (warehouse), servicing rights and other retained interests on loans sold and securitized. These derivatives must be recognized as either assets or liabilities on the balance sheet, at fair value. Further, absent any specialized hedge accounting, periodic changes in the fair value of derivatives must be reflected in current earnings.

Most mortgage bankers use derivative instruments primarily to hedge the risks of losses due to prepayments and fluctuations in interest rates. If certain criteria are met, mortgage bankers are permitted to utilize specialized accounting rules (hedge accounting) to avoid earnings mismatches between accounting periods. Hedge accounting allows mortgage bankers to either adjust the carrying amount of a hedged asset, liability, or firm commitment to reflect changes in its fair value (referred to as a fair value hedge) or to delay recognition of the change in fair value of a hedging derivative until a projected cash flow occurs (referred to as a cash flow hedge).

Under fair value hedge accounting, all or some portion of the derivative's change in fair value that is recorded in earnings is offset by an adjustment to the designated hedged asset, liability, or firm commitment. Under cash flow hedge accounting, all or some portion of the derivative's change in fair value is deferred and recorded as other comprehensive income, and is accumulated in a component of stockholders' equity separate from retained earnings. Subsequently, deferred amounts are reclassified to earnings in periods that correspond to the realization of the hedged cash flows. In order to qualify for specialized hedge accounting an entity must:

- Document in writing at the inception of the hedge:
  - The specific designation of the derivative instrument and the hedged item (asset, liability, firm commitment, or cash flow).
  - Type of risk being hedged (interest rate risk, overall change in fair value, cash flows, and currency risk).
  - Risk management objective/strategy.
  - How hedge effectiveness will be assessed (dollar offset method or regression analysis).
  - How hedge effectiveness will be measured throughout the life of the hedging relationship (change in variable cash flows method, hypothetical derivative method, or change in fair value method)
- Document in writing at inception and during the hedge term that the hedge has been and is expected to continue to be highly effective.

- Measure hedge ineffectiveness whenever financial statements or earnings are reported, and at least quarterly.

SFAS 133 allows groups of similar loans to be aggregated as hedged items. However, the individual loans must share the risk exposure for which they are designated as being hedged. In other words, the change in fair value attributable to the hedged risk for individual loans must be generally proportionate to the overall change in the fair value attributable to the hedged risk of the portfolio of loans (known as the *similar asset test*). To qualify for hedge accounting, the hedging relationship must be expected to be highly effective (80 to 125 percent when using either the dollar value offset method or regression analysis approach) at inception and over the life of the hedge. Specialized hedge accounting is an extremely complex set of rules, which is detailed in the accounting literature.

Accounting Standards (Literature)

The principal mortgage banking accounting pronouncements and standards are described near the end of this handbook section. The remainder of this handbook section describes mortgage banking accounting from the time the mortgage banker commits to originate or purchase a loan, through the loan sales or securitization process, and finally, the loan servicing activity.

Loan Commitments

When a borrower applies for a loan, a lender may extend a commitment to fund a mortgage loan at a specified interest rate (fixed, adjustable, or floating) and may or may not receive a fee from the borrower. The lender's obligation is an interest rate lock commitment (IRLC) and becomes part of the lender's loan origination pipeline (usually closed within a short period, generally 30 to 60 days).

Another component of the mortgage banker's pipeline is commitments to purchase newly originated loans from various correspondent channels (mortgage brokers or other financial institutions). Typically, commitments to purchase mortgage loans intended for resale from third parties are derivatives that are accounted for at fair value.

During the pipeline phase, the lender enters into corresponding agreements to sell in the future its expected loan production (selling forward). To sell forward means that the lender enters into a separate forward sales agreement with an investor to sell a loan (or loans) at a specified pass-through rate and price by or on a particular date. By selling forward, the mortgage banker locks in a profit margin for its expected loan production. Thus, the forward sales agreement acts as a hedge for changes in the value of the loans due to changes in interest rates and market conditions occurring between commitment and sale or securitization dates.

The borrower may decide, generally without penalty, not to exercise his/her option to borrow from the lender even though the lender may have incurred application processing costs that are not fully covered by the application/rate lock fee, if any. The borrower's decision not to exercise the loan commitment results in fallout from the pipeline. Conversely, the ratio of loans that ultimately close compared to all commitments is the pipeline pull-through rate. Further, the lender's expected fallout/pull-through rate changes as interest rates and market conditions change. If interest rates fall, it is more likely that

borrowers will not close their loans at the higher "locked" rate. Conversely, if interest rates rise, it is more likely that borrowers will close at the lower "locked" rate. Therefore, the lender does not sell forward its entire portfolio of loan commitments in the pipeline; it adjusts forward sales to the amount of its expected loan production rate.

By definition, commitments to originate mortgage loans held for resale are derivatives. The lender accounts for derivatives at fair value on its balance sheet and records changes in fair value through earnings. Commitments to originate mortgage loans held for investment are not derivatives.

The lender must evaluate both mandatory delivery and best efforts forward loan purchase and sales agreements to determine if the agreements meet the definition of a derivative under SFAS 133 as amended by SFAS 149. As outlined in CEO Memorandum 220, OTS along with the other banking agencies issued an *Interagency Advisory on Accounting and Reporting for Commitments to Originate and Sell Mortgage Loans* (May 3, 2005). The interagency advisory provides supplemental guidance on the appropriate accounting and reporting of:

- Commitments to originate mortgage loans held for resale.
- Forward mortgage loan sales agreements under both mandatory delivery and best efforts contracts.

Is the Loan Commitment a Derivative?

	For Mortgage Loans		
Form of Commitment	**Held for Sale**	**Held for Investment**	**For All Other Loans**
Origination	Yes	No	No
Purchase	✓	✓	X
Sale	✓	✓	X

Explanations	
Yes	Explicitly included within the scope of SFAS 133 (¶6), as amended by SFAS 149 (¶3, also see ¶A33).
No	Explicitly excluded from the scope of SFAS 133 (¶10i). SFAS 91 applies.
✓	May be included within the scope of SFAS 133, where the criteria in ¶6 are met. Many commitments related to residential mortgage loans will meet the criteria.
X	May be included within the scope of SFAS 133 where the criteria in ¶6 are met. Many commitments related to nonmortgage loans will not meet the criteria.

At the time a lender extends a loan commitment, the fair value of the commitment is generally zero and assumed to be extended at the current market rate. Similarly, at the time a lender enters into a forward sales agreement, the fair value of the agreement is generally zero. As interest rates and market conditions change, the fair value of the commitment and the forward sales agreement either increases or decreases. In the absence of any specialized hedge accounting, the lender records these changes in fair value in earnings. The lender reports both the loan commitments and the forward sales agreements on the balance sheet as either an asset or liability at fair value.

On November 7, 2007, the Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin No. 109, *Written Loan Commitments Recorded at Fair Value Through Earnings* (SAB 109) which revises and rescinds portions of SAB 105 *Application of Accounting Principles to Loan Commitments*. The SEC indicated that the expected net future cash flows related to the associated servicing of the loan should be included in the measurement of all written loan commitments that are accounted for at fair value through earnings. Previous guidance in SAB 105 indicated it would be inappropriate to incorporate servicing cash flows in measuring the value of derivative loan commitments.

SAB 105 also indicated that internally developed intangible assets (such as customer relationship intangible assets) should not be recorded as part of the fair value of a derivative loan commitment. SAB 109 retains that staff view and broadens its application to all written loan commitments that are accounted for at fair value through earnings.

Example of Accounting for Loan Commitments (Interest Rate Lock Commitments) and Forward Sales Agreement

Thrift A issues $10,000,000 in fixed rate, 60-day loan commitments to potential borrowers throughout the quarter. At that time, the savings association notes the appropriate reference price for each underlying loan in its pipeline as of the date the commitment was issued and assigns a fair value of zero to each. If Thrift A assumes interest rates will increase by quarter-end, the fair value of the underlying loans to be originated (and hence the fair value of the derivative loan commitments) will decrease. As a result, before consideration of any forward sales agreements, Thrift A expects to incur a loss on the sale of any of these loans that ultimately close. Based on its experience, Thrift A estimates a pull-through rate of 90 percent on these commitments for which the locked-in rate is below current market rates. Thrift A must estimate the fair value of its derivative loan commitments at the end of the quarter because quoted prices are not available in the market. Thrift A's valuation technique takes into account current secondary market loan pricing information. Thrift A compares the reference price for similar loans at the date of commitment with the reference price for similar loans at the quarter end. It calculates the price difference to be $500,000, or 5 percent, for the outstanding loan commitments of $10,000,000. Next, it calculates the fair value of the derivative loan commitments by multiplying the price difference by the estimated pull-through rate of 90 percent ($500,000 x 0.90 = $450,000).

Without regard to forward sales agreements, Thrift A makes the following journal entry to record the derivative IRLC:

Account	Debit	Credit
Gains & losses on derivatives	$450,000	
Derivative liabilities – interest rate lock commitments		$450,000
To record the unrealized loss on IRLCs for the quarter that remain outstanding.		

A mortgage banker that originates loans to sell in the secondary market often enters into forward loan sales agreements for both IRLCs in the pipeline (commitments) and closed loans in the warehouse in order to reduce the exposure to risk of loss due to changes in interest rates or market prices. Forward loan sales agreements are either best efforts or mandatory delivery contracts.

Under a best efforts contract, the mortgage banker commits to deliver up to a specified amount of mortgage loans at a specified price. The commitment is conditioned upon the mortgage banker actually originating the mortgage loans. Although obligated to deliver all closed loans that comply with the contract terms, if the mortgage banker does not originate sufficient mortgage loans to fully cover the contract's specified amount, it does not have to compensate the counterparty for the shortfall.

In a mandatory delivery forward sales contract, the mortgage banker commits to deliver a specified amount of mortgage loans at a specified price on a specified date. If the mortgage banker fails to fulfill its commitment to deliver loans under the contract, it must pay a pair-off fee to the counterparty (purchaser) to compensate the purchaser for its shortfall in delivered loans.

Best efforts contracts expose a mortgage banker to less risk of loss than mandatory delivery contracts because the mortgage banker is not required to pay a pair-off fee due to lack of mortgage loan delivery. Mandatory delivery contracts typically pay a higher price for mortgage loans than best efforts contracts. As a result, many mortgage banking operations utilize a mix of best efforts and mandatory delivery contracts.

Most forward mortgage loan sales contracts meet the derivatives criteria under SFAS 133 and the mortgage banker/ savings association must account for the derivatives at fair value (refer to CEO Memorandum No. 220 for additional guidance). The fair value of a mandatory delivery contract can be determined by direct reference to prices quoted in the secondary market for comparable contracts and taking into consideration assumptions used by market participants. However, the fair value of best efforts contracts is not as readily available, and a savings association must estimate the contract's value based upon current pricing information from purchasers and estimated expected future cash flows.

Nearly all commitments to purchase mortgage loans from third parties meet the derivatives criteria and the association must account for the derivatives at fair value.

Assume Thrift A in the preceding example entered into a mandatory forward loan sales agreement with a notional amount of $8,000,000 (80 percent of its $10,000,000 in outstanding commitments) to hedge its pipeline. As interest rates have increased by quarter-end, the fair value of the loans has decreased. However, Thrift A expects to sell these loans at par (which is in excess of its current fair value) under

the forward sales agreement. At the end of the quarter, the fair value of this forward sales contract is $400,000 or five percent of the notional amount. Without regard to the loan origination commitment, the association records the following journal entry:

Account	Debit	Credit
Derivative assets – Forward loan sales agreement	$400,000	
Gains & losses on derivatives		$400,000
To record the unrealized gain on the forward loan sales agreement.		

In this example, earnings for the period will reflect a net loss on derivatives of $50,000 because of under hedging. The net loss is comprised of the gain on the forward sales agreement of $400,000 ($10,000,000 x 0.80 x 0.05), less the loss on the origination commitment of $450,000 ($10,000,000 x 0.90 x 0.05).

At loan origination, the fair value of the interest rate lock commitment (derivative asset or liability) is capitalized as part of the recorded investment in the loan, as a basis adjustment. In this example, assume that only 70 percent ($7,000,000) of the loans that were subject to the IRLCs are originated and funded, and that the remaining commitments expired unexercised. Also, assume no further changes in market conditions and interest rates, and therefore five percent is still the current pricing factor for the commitments to be capitalized.

The recorded investment would be $6,650,000, computed as follows:

Principal balance	$7,000,000
Origination commitment basis adjustment [$7,000,000 x 0.05]	(350,000)
Recorded investment	$6,650,000

In addition, a gain of $100,000 on the IRLCs would be recognized, as follows:

Derivative liability – IRLC at five percent of principal balance:	
On $9,000,000, previously recorded	$ 450,000
On $7,000,000, to capitalize	(350,000)
To recognize gain on expired IRLC	$ 100,000

The Derivatives Implementation Group (DIG) issued answers to a number of questions related to accounting for derivative instruments and hedging activities. DIG C13 asks: "In what circumstances must a loan commitment be included in the scope of Statement 133 and accounted for as a derivative instrument?" DIG C13 provides a scope exception, indicating that commitments to originate mortgage loans held for investment and nonmortgage loans (such as credit card and installment loans) are not derivatives under SFAS 133. However, commitments to originate mortgage loans that are held for resale must be accounted for as a derivative and measured at fair value. SFAS 149 formalizes this guidance.

DIG C13 only applies before loan closing; as the derivative commitment is exercised, it no longer exists. The fair value of the commitment at the exercise date (loan closing date) is capitalized as part of the loan's carrying amount. Some commitments permit a borrower to "float the loan rate" until closing. When the borrower chooses to float the rate until closing, predominate practice presumes the fair value of the commitment equals zero throughout the commitment term.

One method used to measure changes in fair value for a loan commitment is to assign a value from a "to-be-announced" (TBA) mortgage backed security pricing table, such as a rolling pricing table issued by Freddie Mac. Then, if the loan commitment is still open (i.e., the loan has not closed), an updated pricing table is used at the end of the quarter to compare the day one price to the end of the quarter price. The difference between these two prices is reported as the change in fair value of the loan commitment.

On the day that a loan is closed, that day's pricing table is compared to the day one pricing table. The difference is recorded as a loan cost basis adjustment, is deferred until the loan is sold, and is included in the calculation of the gain or loss on the loan sale.

Loans Held for Sale

The savings association should carry mortgage loans held for sale (HFS / warehouse loans) on the balance sheet at the lower of cost or fair value[4]. Or the savings association may elect the fair value option permitted under SFAS 159, *The Fair Value Option for Financial Assets and Financial Liabilities Including an Amendment of FASB Statement No. 115*, issued in February 2007. The fair value option is described in "Loans Carried at Fair Value under the Fair Value Option" in this handbook section. The cost of mortgage loans is equal to the recorded investment, which is the unamortized principal plus or minus the "basis adjustments" (described below).

Where fair value is less than recorded investment in HFS loans, the amount reported (carrying amount) will reflect a valuation allowance (contra-asset). Changes in the valuation allowance are reflected in earnings.

The recorded investment in most warehouse loans will reflect a basis adjustment for net deferred origination fees and costs, which are not accreted or amortized during the holding period. SFAS 91 requires that deferred origination fees and costs on loans held for investment be accreted or amortized to interest income on a level yield basis over the life of the loans. However, when the loans are held for sale, these deferred fees and costs are recognized as a component of the loans' cost basis and included in the calculation of the gain or loss on the sale of the loans.

The recorded investment in warehouse loans may also include basis adjustments for derivatives and hedging activities. These basis adjustments are the capitalized fair values of loan origination

[4] The principal accounting pronouncement for mortgage banking activities (SFAS 65) was issued in 1982. SFAS 65 requires mortgage loans held for sale to be recorded at the lower of cost or market value (LOCOM). Since that time, the evolution of accounting pronouncements has resulted in the use of fair value, rather than market value especially after the issuance of SFAS 133. Although the term LOCOM continues to be used extensively, it is understood to mean the lower of cost or fair value.

commitment derivatives and capitalized changes in fair values of loans attributable to the risk being hedged under a fair value hedge.

In addition to originating loans, mortgage bankers often purchase loans from brokers or financial institutions with the intent to sell the purchased loans in the near future. The price paid for a purchased loan may include a broker's fee and a premium or discount to reflect changes in market interest rates. Purchase fees, premiums, and discounts are also adjustments to the cost of the purchased loans and are not accreted or amortized during the holding period. Just like loan origination fees and costs, these adjustments are recognized as a component the loans' cost basis and incorporated in the calculation of the gain or loss on the sale of the loans.

Generally, the fair value of warehouse loans is determined by reference to quoted market prices in the secondary market. Secondary market information for prime loans is readily available; however, for nonconforming, Alt-A, A-, home equity, subprime, jumbo, and "scratch-and-dent" loans, secondary market information may be more difficult to obtain.

Either the aggregate or individual loan basis may be used in determining the lower of cost (recorded investment) or fair value. Under the aggregate loan basis approach, loans are grouped by common characteristics and any losses on individual loans in a group can offset any gains on other loans in that group. The sum of all losses by group represents the overall LOCOM adjustment. Under the individual loan basis approach, the sum of any losses on individual loans will represent the overall loss without regard to gains on other loans in the group.

Example of LOCOM for Loans Held for Sale (Warehouse Loans)

Assume three warehouse loans with an aggregate recorded investment and fair value of $1,002 and $998, respectively. The composition of these amounts is as follows:

	Recorded Investment	Fair Value	Gain (Loss)
Loan A	$502	$508	$6
Loan B	299	292	(7)
Loan C	201	198	(3)
Total	$1,002	$998	$(4)

Under the aggregate loan basis approach, an overall loss of $4 would be recognized in current earnings. However, under the individual loan basis, an overall loss of $10 [$7 + $3] would be recognized.

Example of Calculation of Recorded Investment and Carrying Amount

Assume a group of warehouse loans with a face amount of $1,000, deferred origination fees of $10, and deferred origination costs of $18. In addition, there is an IRLC basis adjustment of $(6). This basis adjustment represents a $6 derivative liability that existed at the date of origination of the loans, which resulted from an increase in market interest rates subsequent to the issuance date of the IRLCs. Subsequent to origination of the loans, market interest rates decreased. However, at the balance sheet

date, market interest rates were still slightly higher than the interest rates on the underlying loans. Because of these interest rate changes, the fair value of the loans is 99.8 (percent of par).

The carrying amount of these loans would be their fair value of $998, which is less than their recorded investment of $1,002. Therefore, a valuation allowance of $4 would be established, calculated as follows:

Face Amount		$1,000
Deferred origination costs	$18	
Deferred origination fees	(10)	
Net deferred origination costs	$8	8
IRLC basis adjustment		(6)
Recorded investment in loan		1,002
Valuation allowance		(4)
Carrying amount = fair value [$1,000 x 0.998]		$998

Without regard to any related forward sales agreements, earnings for the period would reflect a $4 loss on these loans. However, a corresponding increase in the fair value of any forward sales agreement derivatives could partially or completely offset this $4 loss, as the counterparties under such contracts would have agreed to purchase these loans at prices greater than their current fair value (such as face or par amount). The fair value of this forward sales contract has increased since initiation.

For loans that a savings association acquired (originated or purchased) with the intent to sell, if management changes its intent and decides to hold them in portfolio, then it may reclassify those loans from held for sale to held for investment. However, such reclassification is permitted only if the association has both the ability and intent to hold the loans for the foreseeable future or until maturity. The association should reclassify such loans as held for investment at the lower of recorded investment or fair value as of the transfer date. Where fair value is less than recorded investment on the transfer date, the difference is treated as a basis adjustment, which establishes a new cost basis. The fair value adjustment will be accreted / amortized to interest income over the life of the loans, similar to basis adjustments on loans held for investment for deferred origination fees and costs, and for purchase fees, premiums, and discounts.

Example of Transfer of Loans from Held for Sale to Held for Investment

Assume the same group of warehouse loans in the prior example is reclassified to held for investment. Subsequent to the valuation above, market interest rates have increased. Accordingly, on the transfer date, the fair value of the loans has decreased to 99.2 (percent of par).

The newly recorded investment in the loans would be the fair value of the loans on the transfer date of $992, and a reclassification valuation basis adjustment of $10 would be established, as follows:

Face amount		$1,000
Deferred origination costs	$18	
Deferred origination fees	(10)	
Net deferred origination costs	$ 8	8
Origination commitment basis adjustment		(6)
Recorded investment before reclassification		1,002
Reclassification valuation basis adjustment		(10)
Recorded investment after reclassification = fair value [$1,000 x 0.992]		$ 992

Without regard to any forward sales agreements, earnings for the period would reflect an additional $6 loss on the loans, computed as follows:

Reclassification valuation basis adjustment	$10
Valuation allowance previously recognized	(4)
Additional loss recognized on transfer of loans to held for investment	$6

Once loans are transferred to held for investment, the mortgage banker must begin recognizing as a yield adjustment (interest income) the amortization or accretion of any deferred amounts, such as loan origination costs and fees, fair value adjustments, and origination commitment basis adjustments.

Loans Carried at Fair Value under the Fair Value Option

SFAS 159 permits entities to choose to measure many financial assets and liabilities and certain other items at fair value through earnings, these were previously not measured at fair value through earnings, including loans-held-for-sale (which are currently required to be measured at the lower of cost or market under SFAS 65). The objective of SFAS 159 is to improve financial reporting by providing entities with the opportunity to mitigate volatility in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting criteria found in SFAS 133. SFAS 159 permits savings associations to elect to measure loans at fair value when acquired (originated or purchased). Unrealized gains and losses on fair value option loans are reported in earnings each quarter.

Loan origination costs and fees for fair value option loans are recognized in earnings as incurred and not deferred under SFAS 91. The election of the fair value option is applied on a loan-by-loan basis and is irrevocable. The fair value measurement is applied to the entire fair value option loan and not to specific risks or portions of the designated loan. SFAS 159 requires significant financial statement disclosures to facilitate comparisons between:

- Entities that choose different measurement attributes for similar assets and liabilities.

- Assets and liabilities in the financial statements of an entity that elects different measurement attributes for similar assets and liabilities.

These disclosures are expected to enable users of financial statements to understand:

- Management's reasons for electing the fair value option.

- How changes in fair value affect earnings for each reporting period.

- The impact to disclosures if management had not elected the fair value option for certain items (such as nonperforming loans).

- The differences between reported fair values and contractual cash flows.

In order to avoid the complexities of hedge accounting, it is likely that many savings associations will elect the fair value option for their mortgage banking activities. SFAS 159 is effective as of the beginning of an entity's first fiscal year that begins after November 15, 2007. Early adoption is permitted as of the beginning of a fiscal year that begins on or before November 15, 2007, provided the entity also elects to apply the provisions of SFAS 157, *Fair Value Measurement*.

Table Funding Arrangements

In a table funding arrangement the mortgage banker performs all activities necessary to underwrite a loan, however, closes the loan in the name of a third party. Therefore, the mortgage banker never "owns" the loan; it brings the loan "to the table" as an agent for the third party investor who funds the loan at closing. SFAS 156 clarified that servicing rights acquired through a table funding arrangement are initially recorded at fair value.

Warehouse Line of Credit

A mortgage banker often establishes a warehouse loan credit facility with a lender in order to leverage its capital. Under this arrangement, the mortgage banker enters into an agreement with a larger lender for a line of credit to fund mortgage loans, which become collateral for the warehouse credit facility. Under a typical warehouse credit facility, the mortgage bank is permitted to draw down 98 percent of the mortgage loan funded amount based on the settlement statement or HUD-1. A simple funding arrangement, assuming a loan amount of $100, is booked as follows:

Account	Debit	Credit
Loans held for sale	$100	
Due to warehouse lender		$98
Cash on deposit with warehouse lender		2
To record draw down of line of credit at loan closing.		

Warehouse agreements allow the mortgage banker to fund the loan before the warehouse lender receives a complete document package (i.e., note, bond, appraisal, etc.). At closing, the loan is in a "wet" status. Usually the mortgage banker is allowed ten days to bring the loan to a "dry" status (i.e., all documents correct and received by the warehouse lender). If the mortgage fails to move to a "dry" status within the ten-day period, the warehouse lender will require the mortgage bank to fully fund the loan. If the mortgage banker is required to fund the entire loan, a journal entry is recorded as follows:

Account	Debit	Credit
Due to warehouse lender	$98	
Cash on deposit with warehouse lender		$98
To record loss of use of line of credit for a loan that continues to be in wet status past the ten-day period.		

Some agreements permit the mortgage banker to cure the deficiency and regain warehouse funding for the loan. If cured, the preceding entry is reversed.

Many warehouse agreements allow the mortgage banker to keep the loan on the credit line for up to 60 days, while it endeavors to sell the loan to an investor. At the end of this period, the usual agreement requires the mortgage banker to fund an additional ten percent of the loan. Typically, the mortgage banker will be required to fund an additional ten percent of the loan balance every ten days until the warehouse funding for the loan is zero. An entry to record an additional ten percent of the funding is:

Account	Debit	Credit
Due to warehouse lender	$10	
Cash on deposit with warehouse lender		$10
To record the mortgage bankers' additional cash investment of ten percent in a $100 loan that was not sold during the past ten days.		

Most warehouse lenders provide a daily on-line statement of the mortgage banker's borrowings and available credit. This statement details the status of each loan, displaying face amount, advanced amount, days on the line of credit, status (wet/dry), and the reference numbers. The reference numbers are both the mortgage banker's loan number and the warehouse lender's loan number, which are usually different. It is critical that the mortgage banker reviews this report and formally reconciles it to the general ledger on a daily basis. In addition to the statement of loan balances, warehouse lenders also provide a daily statement of the mortgage banker's cash account. Because large numbers of transactions flow through this account, the mortgage banker should also reconcile it on a daily basis. Items running through the cash account with the warehouse lender will include the initial funding percentage (two percent in the preceding example), any complete funding due to a failure to "dry" a loan, any additional ten percent fundings due to a slow sale of the loan, interest charges from the warehouse lender, net funds received from loan sales, and any miscellaneous adjustments or transactions.

Warehouse lender interest charges for outstanding loans are usually calculated monthly and collected by the warehouse lender automatically through a charge to the mortgage banker's cash account on a specified date (i.e., three days after billing). The mortgage banker's accounting entry for interest expense is:

Account	Debit	Credit
Interest expense	$5	
Cash on deposit with warehouse lender		$5
To record the interest expense on the warehouse line of credit agreement.		

Assume a loan sells to an investor for 103 and the proceeds are remitted directly to the warehouse lender as required under the agreement. Upon receipt, the warehouse lender deducts the outstanding borrowing due from the sold loan ($98). The balance is credited to the mortgage banker's cash account. The entry would be:

Account	Debit	Credit
Due to warehouse lender	$98	
Cash on deposit with warehouse lender	5	
Gain on mortgage banking activities		3
Loans held for sale		$100
To record the sale of the loan.		

This completes the normal cycle of a loan through the mortgage banker's warehouse. A loan may also return to the warehouse should the investor reject it for documentation flaws. However, not all warehouse agreements permit this. Some permit the loan to be funded at a lesser amount (e. g., 80 percent) and for a shorter period (30 days, not 60). Loans repurchased because of early payment defaults (EPDs) are generally ineligible for warehouse funding through a line of credit.

Sale and Securitization of Loans, Including Servicing Rights and Other Retained Interests

Sale of Loans with Servicing Released

Most small mortgage bankers sell loans servicing released which means that the investor acquires the right to service the loans along with the loan when purchased. The following example illustrates the accounting for the sale of loans servicing released in the following example. Note that in the following examples of loan sales, the accounting treatment is the same for individual loan sales as well as sales of groups of loans.

Example of Loans Sold – Servicing Released

Assume loans with a cost of $1,000 are sold servicing released for 113 [$1,000 x 1.13 = $1,130]. The accounting entries are:

Account	Debit	Credit
Cash	$1,130	
Loans		$1,000
Gain on sale on sale of loans		130
To record sale of loans and recognize a gain.		

Sale of Loans with Servicing Retained

When a savings association sells mortgage loans, it may retain the right to service the loans for a servicing fee that it collects over the life of the loans as it receives loan payments. This is a loan sale with servicing retained. A typical servicing agreement requires the servicer to carry out the servicing function, including:

- Billing and collection of the borrowers' payments.
- Remittance of payments and reporting to the investors, insurers, and taxing authorities.
- Maintenance of custodial bank accounts.
- Related activities.

The contractual servicing fee set out in loan sales agreements is typically expressed in basis points (bps), each representing 1/100th of a percent. The actual servicing fee amount for a particular period is determined by multiplying the servicing fee expressed in bps by the current outstanding principal balance of the related loan.

The servicing agreement may also require the servicer to provide recourse to the investors in the form of a recourse liability where the servicer assumes the risk of certain credit losses.

SFAS 140 requires that each time a mortgage banker undertakes an obligation to service financial assets it shall recognize either a servicing asset or a servicing liability for that servicing contract. Servicing assets result when the economic benefits for performing the servicing are expected to exceed "adequate compensation." When the economic benefits of servicing are less than adequate compensation, a servicing liability is recognized.

The economic benefits of performing servicing normally include:

- Contractually specified servicing fees
- Earnings on escrow deposits (taxes and insurance)
- Float resulting from timing differences between borrower payments and investor remittances
- Late fees
- Ancillary income.

Adequate compensation is the amount of benefits of servicing that would fairly compensate a substitute servicer should one be required, which includes a profit that would be demanded in the marketplace. A subservicing fee is often considered as a proxy for adequate compensation.

FASB changed the accounting for servicing rights with the issuance of SFAS 156. Each servicer must adopt SFAS 156 as of the beginning of its first fiscal year that begins after September 15, 2006. Early adoption is permitted as of the beginning of a servicer's fiscal year, provided the servicer has not yet issued financial statements for any period of that fiscal year. This means that some servicers adopted SFAS 156 as early as January 1, 2006, while others may adopt as late as September 1, 2007. This handbook section will only address accounting under SFAS 156. Before the adoption of SFAS 156, SFAS 140 required initial recording of servicing rights as an allocation of cost based on relative fair value. You should address accounting questions with your Regional Accountant.

SFAS 156 requires institutions to initially record all servicing rights, both servicing assets and servicing liabilities, at fair value. SFAS 156 permits an entity to choose either the amortization method or fair value measurement method to subsequently measure each class of separately recognized servicing assets and servicing liabilities (servicing rights). Under the amortization method, servicing rights are expensed (amortized or written down) in proportion to and over the period of estimated net servicing income or net servicing loss. The method assesses servicing assets or servicing liabilities for impairment or increased obligation based on fair value at each reporting date. The fair value measurement method measures servicing rights at fair value at each reporting date (end of quarter) with changes in fair value reported in earnings in the period in which the changes occur. Once elected, the savings association should apply the same subsequent measurement method to each servicing asset and servicing liability in a class. Mortgage bankers find it difficult to achieve hedge accounting when hedging their servicing assets. Consequently, we anticipate that many savings associations will elect the fair value measurement option. Electing the fair value measurement option eliminates the SFAS 133 burden of documentation and testing. It also results in accounting treatment that is very similar to SFAS 133 specialized hedge accounting. SFAS 156 requires separate reporting of servicing assets and servicing liabilities. Savings associations may not net servicing rights (assets and liabilities) for financial statement presentation.

Classes of servicing rights are identified based on:

- The availability of market inputs used in determining the fair value,
- The association's method for managing the risks of its servicing assets or servicing liabilities, or
- Both.

Savings associations can make different elections (amortization or fair value) for different classes of servicing assets and servicing liabilities. However, once an association elects the fair value measurement method for a class of servicing (for example, a 30-year fixed rate single family mortgage loan, an ARM, or a payment option ARM), it may not reverse that election. At the beginning of any fiscal year, the association may change its election to measure a particular class of servicing from the amortization method to the fair value method. However, that election is irreversible.

Mortgage servicing rights need not be recognized separately under certain circumstances in a guaranteed mortgage securitization. A guaranteed mortgage securitization (also known as a swap and hold transaction) is a method of converting loans to securities in a transaction that includes a substantive third party guarantee (e.g., Fannie Mae, Freddie Mac, or private insurer). This is not a sale

of loans but rather a change in form of ownership. A savings association that transfers loans to a qualifying special purpose entity in a guaranteed mortgage securitization, retains all of the resulting securities (mortgage-backed securities (MBSs)) and servicing rights and classifies the MBSs as held-to-maturity in accordance with SFAS 115 has two options: it may either recognize its servicing rights separately or together with the assets being serviced, otherwise it must record separately the retained servicing asset or servicing liability.

At every quarter end, the savings association must evaluate and measure for impairment each class of separately recognized servicing asset that it measures using the amortization method. To measure for impairment, the savings association must:

- Stratify servicing rights within a class based on one or more of the predominant risk characteristics of the underlying financial assets. Those characteristics may include financial asset type, size, interest rate, origination date, term, and geographic location.

- Recognize impairment through a valuation allowance for an individual stratum. The amount of impairment recognized separately is the amount by which the carrying amount of a servicing asset for a stratum exceeds its fair value.

- Adjust the valuation allowance to reflect changes in the measurement of impairment subsequent to the initial measurement of impairment. Fair value in excess of the carrying amount of servicing assets for a stratum is not recognized. In other words, servicing assets being measured under the amortization method cannot be written up to fair value when fair value exceeds the carrying amount (assuming fair value hedge accounting is not utilized). However, recoveries of impairment valuation allowances are permitted (not to exceed amortized cost).

The amortization method under SFAS 156 does not discuss when a direct write down of servicing assets should be recorded if the fair value continues to be less than the carrying amount before adjusting for the valuation allowance, indicating that the servicing asset may be other-than-temporarily impaired. SFAS 156 does not delineate how entities should perform periodic other-than-temporary impairment (OTTI) analysis. As a result, entities have developed methodologies for testing and measuring their servicing assets for OTTI.

However, the election of fair value to measure servicing rights results in the writing up or down of the value of the servicing right; therefore, the OTTI analysis is not applicable.

Example of Loans Sold – Servicing Retained

Thrift A originates $1,000 of loans and sells them for $1,100. Thrift A will continue to service the loans in exchange for a fee, which is to be paid periodically from the loans' cash flows. The fair value of the servicing asset is $40.

Net Proceeds and Gain on Sale	Amount
Cash Proceeds	$1,100
Servicing Asset	40
Net Proceeds	1,140
Less: Loans Sold	(1,000)
Gain on Sale	$140

Journal entries:

Account	Debit	Credit
Cash	$1,100	
Servicing asset	40	
Loans held for sale		1,000
Gain on sale of loans		$140
To record loan transfer and recognize servicing asset & gain on mortgage banking activities.		

At every quarter end, the association must evaluate and measure each class of separately recognized servicing liability for increased obligation. For servicing liabilities subsequently measured using the amortization method, if later events have increased the fair value of the liability above the carrying amount (e.g., significant changes in the amount or timing of actual or expected future cash flows relative to the cash flows previously projected), the association must increase the servicing liability and recognize the increase as a charge to earnings.

Sale of Loans with Interest-Only Strip Retained

Mortgage bankers generally retain the right to service sold loans and may retain an additional interest in the cash flows from these loans. This interest is called an interest-only strip (I/O). The interest-only strip results when the seller/servicer retains a right to a portion of interest in excess of the contractually specified servicing fee, as illustrated below:

Borrower Pay Rate (loan coupon)	8.00 %
Investor Pass-through Rate	(7.25) %
Contractually Specified Servicing Fee	(.25) %
Interest-only Strip Retained by Transferor	.50 %

In this type of sale, the mortgage banker continues to carry in its statement of financial position the retained interest in the transferred assets. Initially, the retained interest is valued based on allocating the previous carrying amount between the assets sold and the retained interest based on its relative fair value at the date of transfer. Immediately after recording the I/O at its allocated cost, its carrying amount is adjusted to fair value. The mortgage banker reports the change either in other comprehensive income (if classified as available-for-sale) or in earnings (if classified as trading).

Example of Loans Sold – Servicing and I/O Retained

Thrift A originates $1,000 of loans and sells them for $1,000. Thrift A will continue to service the loans, in exchange for a fee to be paid periodically from the loans' cash flows. In addition, Thrift A retains a portion of the interest on the loans. This component is considered an interest-only strip receivable, and is accounted for at fair value in a manner similar to an available-for-sale or trading security. In this example, Thrift A designates the I/O as available for sale. The fair values of the servicing asset and the I/O strip receivable are $40 and $60, respectively.

Fair Values	
Cash Proceeds	$1,000
Servicing Asset	40
Interest-only strip receivable	60

Net Proceeds	
Cash Proceeds	$1,000
Servicing Asset	40
Net Proceeds	$1,040

Carrying Amount Based on Relative Fair Values			
	Fair Value	**Percentage of Total Fair Value**	**Allocated Carrying Amount**
Loans Sold	$1,040	94.55%	$945.50
Interest-only Strip Receivable	60	5.45%	54.50
Total	$1,100	100.00%	$1,000.00

Journal entries:

Account	**Debit**	**Credit**
Cash	$1,000.00	
I/O strip receivable	54.50	
Servicing asset	40.00	
Loans held for sale		1,000.00
Gain on sale of loans		94.50
To record transfer and to recognize I/O strip receivable and servicing asset		
I/O strip receivable	5.50	
Other comprehensive income		$5.50
To begin to subsequently measure I/O strip receivable like an available-for-sale security		

Sale of Loans with Recourse Retained

The mortgage banker or transferor may agree to retain some or all of the risk of loss due to credit risk on loans sold. This is known as recourse and is recorded at its fair value as a liability. The retained recourse liability reduces the net sales proceeds thereby decreasing any gain or increasing any loss on the sale of transferred loans.

Example of Loans Sold with Recourse Obligation

Thrift A originates $1,000 of loans and sells them for $1,100. Thrift A will continue to service the loans in exchange for a fee, to be paid periodically from the loans' cash flows. In addition, Thrift A assumes a limited recourse obligation to repurchase delinquent loans. At the date of transfer, the fair values of the servicing asset and the recourse obligation are $40 and $80, respectively.

Fair Values	Amount
Cash Proceeds	$1,100
Recourse Obligation	(80)
Servicing Asset	40

Net Proceeds	
Cash Received	$1,100
Plus: Servicing Asset	40
Less: Recourse Obligation	(80)
Net Proceeds	$1,060

Gain on Sale	
Net Proceeds	$1,060
Less: Carrying amount of loans sold	(1,000)
Gain on sale of loans	$60

Journal entries:

Account	Debit	Credit
Cash	$1,100	
Servicing asset	40	
Loans held for sale		1,000
Recourse obligation on loans sold		80
Gain on sale of loans		$60
To record transfer and to recognize servicing asset and recourse obligation		

Recourse and Repurchased Loans

Mortgage bankers are at risk of loss throughout the loan origination and sales process. A mortgage banker records a recourse liability for the estimated loss it will incur on sold loans and continues to carry the liability at fair value. SFAS 140 defines recourse as: "The right of a transferee of receivables to receive payment from the transferor of those receivables for (a) failure of debtors to pay when due, (b) the effects of prepayments, or (c) adjustments resulting from defects in the eligibility of the transferred receivables."

Loan sales provisions often require the mortgage banker to repurchase a loan at par or above (when sales price exceeded par) if there is a defect in underwriting or documentation. Other forms of recourse common in loan sales contracts are (a) early payment default and (b) premium refund clauses. Under an early payment default provision, the mortgage banker is required to repurchase the loan if it becomes delinquent within a specified time after purchase. A premium refund clause requires the mortgage banker to return any premium paid by the investor on loans that pay off shortly after sale.

A mortgage banker that routinely repurchases delinquent or defaulted loans when it is not contractually required to do so runs the risk of being required to record an estimate for implicit recourse. Implicit recourse is the result of a pattern of repurchases from investors when repurchase is not contractually required.

Note that "recourse" may have a different interpretation for accounting purposes and regulatory capital purposes. You should refer to the Capital Adequacy section of the Examination Handbook for more information.

GNMA Loans

Government National Mortgage Association (GNMA) mortgage-backed securities are backed by residential mortgage loans that are insured or guaranteed by the Federal Housing Administration (FHA), the Department of Veterans Affairs/Veterans Administration (VA), or the Farmers Home Administration (FmHA). GNMA programs allow financial institutions to buy back individual delinquent mortgage loans that meet certain criteria from the securitized loan pool for which the institution provides servicing. At the servicer's option and without GNMA's prior authorization, the servicer may repurchase a delinquent loan for an amount equal to 100 percent of the remaining principal balance of the loan plus accrued interest. Under SFAS 140, this buy-back option is a conditional option until the delinquency criteria are met, at which time the option becomes unconditional.

When the loans backing a GNMA security are initially securitized, SFAS 140 would not prohibit the issuer of the security to treat the transaction as a sale for accounting purposes solely due to the conditional repurchase option. The conditional nature of the buy-back option means that the issuer does not maintain effective control over the loans. Assuming the SFAS 140 sales criteria are met, the loans are removed from the issuer's balance sheet. When individual loans later meet GNMA's specified delinquency criteria and are eligible for repurchase, the issuer (provided the issuer is also the servicer) is deemed to have regained effective control over these loans. Under SFAS 140, the loans can no longer

be reported as sold. The delinquent GNMA loans must be brought back onto the seller/servicer's balance sheet as assets and initially recorded at fair value. This is regardless of whether the issuer intends to exercise the buy-back option. An offsetting liability is also recorded.

Whether or not these rebooked delinquent loans are repurchased, the seller/servicer should report them as loans on the TFR Statement of Condition (Schedule SC) and related schedules such as Past Due (Schedule PD). These loans are considered past due in accordance with their contractual terms and the seller/ servicer should report the loans as held for sale or held for investment, based on the facts and circumstances, and in accordance with GAAP. These loans should not be reported as other assets. The offsetting liability should be reported as other borrowings.

For risk-based capital purposes, these rebooked loans should be risk-weighted in the same manner as all other FHA, VA, and FmHA loans, (i.e., at 20 percent to the extent of the conditional guarantee).

Foreclosed GNMA loans are reported as real estate owned (REO) not as a receivable or other asset. Savings associations should refer to EITF Issue 02-09, Accounting for Changes That Result in a Transferor Regaining Control of Financial Assets Sold, and the American Institute of Certified Public Accountants Statements of Position (SOP) 03-3, Accounting for Certain Loans or Debt Securities Acquired in a Transfer, for further guidance on the appropriate accounting of rebooked delinquent loans.

If the servicer of a delinquent GNMA loan was not the transferor/seller of the securitized loan, and the servicer purchases the delinquent loan, the servicer must report the loan as past due even though the servicer was not required to record the loan before purchase.

Securitization of Loans

Securitization generally involves the packaging and transfer of a pool of loans to a trust, which issues securities and other ownership interests (beneficial interests). The trust then sells the mortgage-backed securities or certificates to investors, through either a private placement or public offering. Typically, the mortgage banker will retain the servicing rights for the loans sold and may retain other beneficial interests. Often the mortgage banker retains a subordinate interest that serves as a credit enhancement to the mortgage-backed securities or certificates held by investors. One common form of subordinate interest is a credit enhancing interest-only strip receivable.

Under SFAS 140, when the trust transfers mortgage-backed securities or certificates to investors, most savings associations structure the transfer to qualify for GAAP sale treatment. Although this transaction is accounted for in a manner similar to the sale of loans, the complex structure of many securitizations will often result in the association owning more types of retained or beneficial interests in loans sold. For more information on this topic, refer to Examination Handbook Section 221, Asset-Backed Securitizations.

Example of a Loan Securitization Transaction

Thrift A originates $1,000 of mortgage loans and sells them to a trust in exchange for $1,000 in cash and an interest-only strip (I/O strip) certificate. The allocated carrying value of the loans at the date of

the sale is $945 (see third table below). The trust then sells mortgage-backed certificates to investors, generating the cash proceeds to pay the association. Thrift A will continue to service the loans in exchange for a fee paid periodically from the loans' cash flows. At the date of transfer, the fair value of the servicing rights and I/O strip are $40 and $60, respectively.

Thrift A would recognize a gain on the sale of $95, computed as follows:

Cash proceeds	$1,000
Mortgage servicing rights, at fair value	40
Total proceeds	1,040
Loans sold, at allocated cost	(945)
Gain on sale	$ 95

In addition, Thrift A would record assets for retained interests of $95, as follows:

Interest-only strip certificate, at allocated cost	$ 55
Mortgage servicing rights, at fair value	40
Total retained interests	$ 95

The allocated cost of the loans sold and I/O strip certificate of $945 and $55, respectively, are computed as follows:

	Fair Value	Allocation Percent	Allocated Cost
Loans, with servicing	1,040	94.5%	$ 945
Interest-only strip certificate	60	5.5%	55
Total allocation base	$1,100	100.0%	$1,000

Note that the "cash basis gain" on the sale is zero ($1,000 in cash proceeds, less loans sold at total cost of $1,000), while the "accrual basis" gain on the sale is $95 ($1,040 in total proceeds, less loans sold at allocated cost of $945). Also note that, in this example, because the loans were sold at par, the $95 gain recognized is equal to the initial investment in the retained interests (the servicing rights and the I/O of $55 and $40, respectively), as the cash proceeds are equal to the recorded investment in the loans sold.

Miscellaneous Accounting and Reporting

Savings associations should maintain separate general ledger accounts for balance sheet and income statement purposes. Commonly used accounts include:

Assets

- Loans Held for Sale
  - Capitalized interest rate lock commitments
  - LOCOM adjustments
  - Hedge basis adjustments (if SFAS 133 hedged)
  - Fair value adjustments under the fair value option
- Loan commitment derivatives
- Forward sales agreements and other derivative instruments

Liabilities

- Loan commitment derivatives
- Forward sales agreements and other derivative instruments
- Fair value gains and losses under the fair value option

(Note: Derivative assets and liabilities may not be reported as a net amount on financial statements.)

Income Statement (gains and losses related to the following)

- Interest rate lock commitments
- Forward sales agreements and other derivative instruments
- LOCOM adjustments
- Hedge basis adjustments
- Fair value gains and losses under the fair value option
- Loan sales

(Note: These accounts are often reported together as a single line on the income statement labeled "mortgage banking income" or "gain and loss on mortgage banking activities.")

Regulatory Capital Treatment of Servicing Assets

Savings associations include servicing assets in calculating regulatory capital subject to both of the following two limitations:

- For the total of mortgage and nonmortgage servicing assets and purchased credit card relationships (PCCRs) include in regulatory capital the lesser of:
  - 100 percent of Tier 1 (core) capital.
  - 90 percent of fair value.
  - 100 percent of carrying amount.
- For nonmortgage servicing assets and PCCRs (as a separate sublimit), include the lesser of the following in regulatory capital:
  - 25 percent of Tier 1 (core) capital.
  - 90 percent of fair value.
  - 100 percent of carrying amount.

Therefore, for regulatory capital calculation purposes, servicing assets are never included in an amount that exceeds 90 percent of fair value. Refer to the TFR instructions for treatment of a corresponding deferred tax liability.

Principal Mortgage Banking Accounting Pronouncements

SFAS 65, *Accounting for Certain Mortgage Banking Activities*, issued September 1982, provides accounting and reporting standards for the origination and purchase of mortgage loans. Mortgage loans held for sale are reported at the lower of cost or market value.

SFAS 91, *Accounting for Nonrefundable Fees and Costs Associated with Origination or Acquiring Loans and Initial Direct Costs of Leases*, issued December 1986, establishes the accounting for nonrefundable loan fees (such as loan origination fees) and costs (such as costs to originate a loan) associated with lending, committing to lend, or purchasing a loan or group of loans (i.e., premiums or discounts). Direct fees and costs for originating a loan and premiums and discounts from purchasing a loan are recognized over the life of the loan as an adjustment of yield unless the loan is held for resale.

SFAS 115, *Accounting for Certain Investment in Debt and Equity Securities*, issued May 1993, addresses the accounting and reporting for investments in certain debt and equity securities. SFAS 115 does not apply to unsecuritized loans; however, after mortgage loans are converted to mortgage-backed securities, the provisions of SFAS 115 apply.

SFAS 133, *Accounting for Derivative Instruments and Hedging Activities*, issued June 1998, establishes accounting and reporting standards for derivative instruments and hedging activities. SFAS 133 requires that an entity recognize all derivatives as either assets or liabilities in the statement of financial position (i.e., balance sheet or Statement of Condition) and measure those instruments at fair value with periodic changes in fair value recognized in earnings. A mortgage banker often uses derivatives to hedge its exposure to loss resulting from changes in market interest rates and the borrowers' penalty-free option to prepay their loans. Exposure to loss is embedded in loan commitments, loans held-for-sale, and servicing assets and liabilities.

SFAS 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities*, a replacement of FASB Statement No. 125, issued September 2000, provides accounting and reporting standards for transfers of financial assets (such as mortgage loans), extinguishments of liabilities, and servicing of financial assets. SFAS 140 is based on the application of a financial-components approach that focuses on legal control. Under that approach, after a transfer of financial assets (loans), a mortgage banker recognizes the financial instruments and servicing assets it controls and the liabilities it has incurred, derecognizes financial assets when control has been surrendered, and derecognizes liabilities when extinguished. SFAS 140 provides distinguishes transfers of financial assets that are accounted for as sales from transfers that are accounted for as secured borrowings. SFAS 155 and 156 amended SFAS 140.

SFAS 149, *Amendment of Statement 133 on Derivative Instruments and Hedging Activities*, issued April 2003, requires that contracts with comparable characteristics be accounted for similarly, clarifies under what circumstances a contract with an initial net investment meets the characteristic of a derivative as discussed in SFAS 133, and clarifies when a derivative contains a financing component that warrants special reporting in the statement of cash flows. SFAS 149 also formalized the guidance in the FASB's derivatives implementation group issue number C13 related to when loan commitments are accounted for as derivative instruments.

SFAS 155, *Accounting for Certain Hybrid Financial Instruments - an amendment of FASB Statements No. 133 and 140*, issued February 2006, permits fair value remeasurement for any hybrid financial instrument that contains an embedded derivative that otherwise would require bifurcation. SFAS 155 also amends SFAS 140 to eliminate the prohibition on a qualifying special-purpose entity (QSPE) from holding a derivative that pertains to a beneficial interest other than another derivative, clarifies that concentrations of credit risk in the form of subordination are not embedded derivatives, and clarifies which I/O strips and principal-only strips are not subject to the requirements of SFAS 133.

SFAS 156, *Accounting for Servicing of Financial Assets - an amendment of FASB Statement No. 140*, issued March 2006, amends SFAS 140 with respect to the accounting for separately recognized servicing assets and servicing liabilities. SFAS 156 requires all loan servicing assets and servicing liabilities to be initially recognized at fair value. After initial recognition, the servicer elects to either continue measuring servicing assets and liabilities at fair value or to amortize servicing assets and liabilities in proportion to and over the period of estimated net servicing income or liability. Further, SFAS 156 requires institutions to assess servicing assets and liabilities accounted for under the amortized cost method for impairment or increased obligation based on fair value.

SFAS 157, *Fair Value Measurements*, issued September 2006, defines fair value, establishes a framework for measuring fair value in GAAP, and expands disclosures about fair value measurements. SFAS 157 provides a common definition of fair value for use when other accounting pronouncements require or permit fair value measurements. Accordingly, SFAS 157 does not require any new fair value measurements. However, for some entities, the application of this Statement will change current practice.

Before SFAS 157, there were different definitions of fair value and limited guidance for applying those definitions in GAAP. Moreover, that guidance was dispersed among the many accounting pronouncements that require fair value measurements. Differences in that guidance created inconsistencies that added to the complexity in applying GAAP.

The SFAS 157 definition of fair value retains the exchange price notion from earlier definitions of fair value. This Statement clarifies that the exchange price is the price in an orderly transaction between market participants to sell the asset or transfer the liability in the market in which the reporting entity would transact for the asset or liability, that is, the principal or most advantageous market for the asset or liability. The transaction to sell the asset or transfer the liability is a hypothetical transaction at the measurement date, considered from the perspective of a market participant that holds the asset or owes the liability. Therefore, the definition focuses on the price that would be received to sell the asset or paid to transfer the liability (an exit price), not the price that would be paid to acquire the asset or received to assume the liability (an entry price).

SFAS 157 emphasizes that fair value is a market-based measurement, not an entity-specific measurement. Therefore, a fair value measurement should be determined based on the assumptions that market participants would use in pricing the asset or liability. As a basis for considering market participant assumptions in fair value measurements, this Statement establishes a fair value hierarchy (levels). The objective of the levels is to rank the inputs used to estimate fair value to provide a framework for assessing the relative reliability of the fair value estimates. Entities should use the most reliable (highest level) inputs available. The SFAS 157 hierarchy structure is:

- Observable Inputs – market participant assumptions developed based on market data obtained from sources independent of the reporting entity

  — Level 1 Inputs – Unadjusted quoted prices in active markets for the identical assets and liabilities that the reporting entity has the ability to access at the measurement date. Examples: Treasury bonds and exchange traded securities.

  — Level 2 Inputs – Other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active. Examples: loans traded within the secondary market and plain vanilla interest rate swaps.

- Unobservable Inputs

  — Level 3 Inputs – Entity specific inputs to the extent that observable inputs are unavailable. Because there is little to no market activity, these inputs reflect the entity's supposition about the assumptions of market participants based on the best information available in the circumstances. In those situations, the reporting entity need not undertake all possible efforts to obtain information about market participant assumptions. However, the reporting entity must not ignore information about market participant assumptions that is reasonably available without undue cost and effort. Examples: credit enhancing I/O strips and private equity securities.

SFAS 157 clarifies that market participant assumptions include assumptions about risk, for example, the risk inherent in a particular valuation technique used to measure fair value (such as a pricing model) and/or the risk inherent in the inputs to the valuation technique. A fair value measurement should include an adjustment for risk if market participants would include one in pricing the related asset or liability, even if the adjustment is difficult to determine. Therefore, a measurement (for example, a "mark-to-model" measurement) that does not include an adjustment for risk would not represent a fair value measurement if market participants would include one in pricing the related asset or liability.

SFAS 157 clarifies that a fair value measurement for a liability reflects its nonperformance risk (the risk that the obligation will not be fulfilled). Because nonperformance risk includes the reporting entity's credit risk, the reporting entity should consider the effect of its credit risk (credit standing) on the fair value of the liability in all periods in which the liability is measured at fair value under other accounting pronouncements, including FASB 133.

SFAS 157 affirms the requirement of other FASB Statements that the fair value of a position in a financial instrument (including a block) that trades in an active market should be measured as the product of the quoted price for the individual instrument times the quantity held (within Level 1 of the fair value hierarchy). The quoted price should not be adjusted because of the size of the position relative to trading volume (blockage factor).

SFAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. Earlier application is encouraged. The provisions of this Statement should generally be applied prospectively as of the beginning of the fiscal year in which this Statement is initially applied.

SFAS 159, The Fair Value Option for Financial Assets ad Financial Liabilities Including an Amendment of FASB Statement No. 115, issued February 2007, permits entities to choose to measure many financial assets and financial liabilities, including loans, at fair value through earnings. The objective of SFAS 159 is to improve financial reporting by providing entities with the opportunity to mitigate volatility in reported earnings caused by measuring related assets and liabilities differently without having to apply complex hedge accounting criteria under SFAS 133. Unrealized gains and losses on items for which the fair value option has been elected are reported in earnings each quarter. Upfront costs and fees (such as nonrefundable fees and costs associated with originating or acquiring loans) related to fair value option loans are recognized in earnings as incurred and not deferred under SFAS

91. The decision to elect the fair value option is applied on an instrument-by-instrument basis and is irrevocable.

SFAS 159 is effective as of the beginning of an entity's first fiscal year that begins after November 15, 2007. Early adoption is permitted as of the beginning of a fiscal year that begins on or before November 15, 2007, provided the entity also elects to apply the provisions of SFAS 157.

ACCOUNTING REFERENCES

SFAS 65	Accounting for Certain Mortgage Banking Activities, issued September 1982
SFAS 91	Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases, issued December 1986
SFAS 115	Accounting for Certain Investment in Debt and Equity Securities, issued May 1993
SFAS 133	Accounting for Derivative Instruments and Hedging Activities, issued June 1998
SFAS 140	Accounting for Transfers and Servicing of Financial Assets and extinguishments of Liabilities, a Replacement of FASB Statement No. 125, issued September 2000
SFAS 149	Accounting for Derivative Instruments and Hedging Activities, issued April 2003
SFAS 155	Accounting for Certain Hybrid Financial Instruments –an amendment of FASB Statements No. 133 and 140, issued February 2006
SFAS 156	Accounting for Servicing of Financial Assets – an amendment of FASB Statement No. 140, issued March 2006
SFAS 157	Fair Value Measurements, issued September 2006
SFAS 159	The Fair Value Option for Financial Assets and Financial Liabilities Including an Amendment of FASB Statement No. 115, issued February 2007
EITF 02-09	Accounting for Changes That Result in a Transferor Regaining Control of Financial Assets Sold
EITF 99-20	Recognition of Interest Income and Impairment on Purchased and Retained Beneficial Interest in Securitized Financial Assets
SAB 105	(SEC Staff Accounting Bulletin), Application of Accounting Principles to Loan Commitments, issued March 2004
SAB 109	(SEC Staff Accounting Bulletin), Written Loan Commitments Recorded at Fair Value Through Earnings, issued November 2007
SOP 01-6	(AICPA Statement of Position), Accounting by Certain Entities (Including Entities with Trade Receivables) That Lend to or Finance the Activities of Others

SOP 03-3 Accounting for Certain Loans or Debt Securities Acquired in a Transfer

AICPA Audit and Accounting Guide – Depository and Lending Institutions

FIN-45, (FASB Interpretation No. 45), Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others - an Interpretation of FASB Statements No. 5, 57, and 107 and Rescission of FASB Interpretation No. 34, issued November 2002

FASB Concepts Statements No. 7: Using Cash Flow Information and Present Value in Accounting Measurements, issued February 2000.FASB Staff Implementation Guidance, Guide to Implementation of Statement 140 on Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities, issued February 2001.

Regulatory References

CEO 220 Interagency Advisory on Accounting and Reporting for Commitments to Originate and Sell Mortgage Loans (May 3, 2005)

REGULATORY CAPITAL CONSIDERATIONS

Regulatory Capital Limits of Servicing Assets

The amount of servicing assets (mortgage and *non*mortgage) and purchased credit card relationships (PCCRs) that may be included in Tier 1 (core) capital is subject to several limitations.

First, mortgage servicing assets and PCCRs are subject to a value limitation. Specifically, these assets must be valued at the lesser of:

- 90 percent of fair market value. OTS has reserved the authority to require any savings association to perform an independent market valuation of assets; OR
- 100 percent of the remaining amortized book value, as determined in the instructions to the TFR (12 CFR 567.12(c) & (d)).

Second, the maximum aggregate amount of servicing assets and PCCRs that may be included in core (tier 1) capital is limited to the lesser of:

- 100 percent of the amount of core (tier 1) capital;[5] OR
- The value limitation for servicing assets and PCCRs (12 CFR 567.12(e)(i)).

Finally, the maximum amount of nonmortgage servicing assets and PCCRS is subject to a separate sublimit. The maximum allowable amount of these assets combined is limited to the lesser of:

- 25 percent of the amount of core (tier 1) capital; OR
- The aggregate of the value limitations for all nonmortgage servicing assets and PCCRs (12 CFR 567.12(e)(ii)).

For TFR reporting purposes, savings associations must deduct the portion of servicing assets and PCCRS that do not qualify for inclusion in Tier 1 capital.

When calculating the disallowed portion under the 25 percent and 100 percent of Tier 1 limitations for TFR reporting purposes, associations may reduce the disallowed amount by any corresponding deferred tax liability. To calculate the corresponding deferred tax liability, the association determines the amount of servicing assets that exceeds Tier 1 (core) capital based on the limitations. Then it calculates any corresponding deferred tax liability on that excess amount. The association reduces the portion of servicing assets and PCCRs that exceeded Tier 1 capital by the corresponding deferred tax liability. That amount becomes the deduction for reporting purposes.

[5] For the purposes of this limitation and the separate sublimit on PCCRs, core (tier 1) capital is calculated before the deduction for disallowed assets (12 CFR 567.12(e)(3)(i)).

Regulatory Capital Treatment of Early Payment Default and Premium Refund Clauses

The definition of *recourse* for generally accepted accounting principles (GAAP) and regulatory capital purposes may differ. Savings associations should review both standards. The risk-based capital regulations contain extensive language of what constitutes recourse and a direct credit substitute (see 12 CFR 567 and the Capital Adequacy Handbook Section for details). Statement of Financial Accounting Standards No. 140, Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities, contains the definition of *recourse* and guidance on how to account for such items as recourse, early payment defaults, and premium refunds under GAAP.

If a sale and servicing agreement with an investor addresses items such as residual interest, credit enhancing IOs, credit derivatives, or credit enhancing representations and warranties, such items may fall within the regulatory definition of *recourse* and the association will likely be required to hold capital for the particular exposure.

Credit enhancing representations and warranties made on transferred assets are recourse obligations. See definition of *recourse* at 12 CFR 567.1. Similarly, if a servicer makes or assumes credit-enhancing representations and warranties with respect to purchased loan-servicing assets, the representations and warrantees are direct credit substitutes. See definition of *direct credit substitute* at 12 CFR 567.6.

The definition of *credit enhancing representations and warranties* is defined as representations and warranties that are made or assumed with respect in connection with a transfer of assets that obligate the savings association to protect investors from losses arising from credit risk in the assets transferred or loans serviced. This term also includes promises to protect a party from losses resulting from the default or nonperformance of another party or from an insufficiency in the value of the collateral. See definition of *credit enhancing representations and warranties* at 12 CFR 567.1. This definition, however, specifically excludes certain types of contractual clauses. Certain representations and warranties that permit the return of an asset in instance of fraud, misrepresentation, and incomplete documentation, are not credit enhancing. The capital regulation, however, specifically addresses two standard types of clauses that may be deemed a credit enhancement:

- Early payment default (EPD) clauses.
- Premium refund (PR) clauses.

EPD clauses allow the investor to require the seller to repurchase a loan (or pay set amounts) if the loan becomes delinquent within a stated time period. PR clauses require the seller to repay the pricing premium if the loan prepays within set timeframes. Typically, an EPD clause is enforced due to concerns with credit while a PR clause may be activated because of credit or interest rate issues.

The language in the definition of *credit enhancing representations and warranties* (see 12 CFR 567.1) for EPD and PR states:

(3) *Credit-enhancing representations and warranties do not include:*

(i) *Early-default clauses and similar warranties* ***that permit the return of****, or premium refund clauses covering,* ***qualifying mortgage loans*** *for a period* ***not to exceed 120 days*** *from the date of transfer. These warranties may cover only those loans that were originated* ***within one year*** *of the date of the transfer.* [6] (Emphasis added.)

(ii) *Premium refund clauses covering assets guaranteed, in whole or in part, by the United States government, a United States government agency, or a United States government-sponsored enterprise, provided the premium refund clause is for a period not to exceed 120 days from the date of transfer.*

(iii) *Warranties that permit the return of assets in instances of fraud, misrepresentation, or incomplete documentation.*

By way of example:

- If a construction/permanent loan is sold 15 months after origination and the first payment to the investor is not made on time, it is considered recourse, because the sale took place more than one year after the loan's origination.

- If a clause states that the buyer may return a loan if the loan becomes 90 days delinquent within the first year, it exceeds the 120-day time frame, and is considered recourse.

Early default and premium refund clauses are often more complex than the two examples provided here. These clauses should be analyzed on a case-by-case basis and discussed with the regional office to determine whether they fall within the exception provided in the recourse regulation.

Moreover, as each contract can differ, management must determine if their agreements with investors contain such clauses and if those clauses exceed the 120-day timeframe. Even with standard agreements and guides, most sellers enter into side agreements that will modify the standard agreement, so it may be necessary to look at addendums to find these clauses. Thus, management must review all loan sales agreements for recourse or credit enhancements, including any new or modified agreements. This may require that the association develop a system to track any loans sold that are subject to such clauses. Management must review all loan sales agreements for recourse or credit enhancements, including any new or modified agreements. This may require that the association develop a system to track any loans sold that are subject to such clauses.

[6] *Qualifying mortgage loan* is defined in 12 CFR 567.1 and generally includes one- to four-family mortgage loans that are eligible for the 50 percent risk weight.

Other Regulatory Capital Issues

Servicer Cash Advances

A *servicer cash advance* is defined as funds that a **residential mortgage servicer** advances to ensure an uninterrupted flow of payments, including advances made to cover foreclosure costs or other expenses to facilitate the timely collection of the loan. Servicer cash advances are not recourse obligations or direct credit substitutes for regulatory capital purposes under certain circumstances. A servicer cash advance is not a recourse obligation or direct credit substitute if:

- the servicer is entitled to full reimbursement and this right is not subordinated to other claims on the cash flows from the underlying asset pool; or

- for any one loan, the servicer's obligation to make nonreimbursable advances is contractually limited to an "insignificant amount" of the outstanding unpaid principal balance (UPB) of the loan. See definition of *servicer cash advance* at 12 CFR 567.1.

Savings associations that act as servicers should establish policies on servicer cash advances and use discretion in determining what constitutes an "insignificant" servicer cash advance. The banking agencies will monitor industry practice and may revisit this issue if this exemption from recourse treatment is used inappropriately. OTS may scrutinize amounts exceeding 4.0 percent of the UPB. Further, the agencies will use their supervisory authority to apply recourse or direct credit substitute treatment to servicer cash advances that expose a banking organization acting as a servicer to excessive levels of credit risk (66 FR 59614 at 5924 (Nov. 29, 2001)).

Servicing Liability

No calculations for regulatory capital are necessary with regard to a servicing liability. However, the servicing liability should not be used to reduce or offset any servicing asset for regulatory capital purposes (i.e., should not be netted against each other).

Servicing for GNMA

GNMA allows servicers to buy back individual delinquent mortgage loans that meet certain criteria from the loan pool for which the association provides servicing. At the servicer's option and without GNMA's prior authorization, the servicer may repurchase a delinquent loan for an amount equal to 100 percent of the remaining principal balance of the loan plus accrued interest. Indeed, when the loans backing a GNMA security are initially sold and securitized and assuming all SFAS 140 sale criteria are met, SFAS 140 permits the issuer of the security to treat the transaction as a sale for accounting purposes. At that point GAAP considers the buy-back option to be a conditional option.

However, when individual loans later meet GNMA's specified delinquency criteria and are eligible for repurchase, GAAP deems the issuer (provided the issuer is also the servicer) to have regained effective control over such loans. GAAP then considers the buy-back option to be unconditional and under SFAS 140, GAAP requires the seller/servicer to bring the delinquent loan back onto its balance sheet

as assets (i.e., re-recognize) and initially record it at fair value. This accounting treatment is required regardless of whether the issuer intends to exercise the buy-back option.

The seller/servicer should report these loans on the TFR Schedule SC – Consolidated Statement of Condition and related schedules, such as Schedule PD – Consolidated Past Due and Nonaccrual. The loans are considered past due in accordance with their contractual terms and should be reported as held for sale or held for investment, based on the facts and circumstances, and in accordance with GAAP. These loans should not be reported as other assets. The offsetting liability should be reported as other borrowings.

For risk-based capital purposes, these rebooked loans should be risk-weighted in the same manner as all other FHA, VA, and FmHA loans, (i.e., at 20 percent to the extent of the conditional guarantee).

Foreclosed GNMA loans are reported as real estate owned (REO), not as a receivable or other asset. Savings associations should refer to EITF Issue 02-09, Accounting for Changes That Result in a Transferor Regaining Control of Financial Assets Sold, and the American Institute of Certified Public Accountants Statements of Position (SOP) 03-3, Accounting for Certain Loans or Debt Securities Acquired in a Transfer, for further guidance on the appropriate accounting of rebooked delinquent loans.

If the servicer of a delinquent GNMA loan was not the transferor/seller of the securitized loan, re-recognition of the delinquent loans would not be required once the repurchase option was considered unconditional. Should the servicer purchase the delinquent loan, however, the servicer must report the loan as past due even though the servicer was not required to record the loan before purchase.

REFERENCES

Home Owners' Loan Act

Part 1464(c) Investment Authority

Part 1464(c) lists the loans and investments allowed for federal savings associations. It defines each of these loans and investments and references relevant links to other sections of US law. It also outlines authority regarding mortgages, securities, business development, credit cards, etc.

Part 1468 Transactions with Affiliates and Loans to Insiders

Part 1468 defines a savings association's affiliates. It lists when transactions with affiliates are allowed, and when the Director can enforce further restrictions on these transactions. It also lists prohibitions against lending to executive officers, directors, and principle shareholders.

CODE OF FEDERAL REGULATIONS

12 CFR

§ 202, Equal Credit Opportunity Act (ECOA) (Regulation B)

Regulation B's primary purpose is to promote the availability of credit, including mortgages, to all creditworthy applicants without regard to prohibited bases (race, color, religion, national origin, sex, marital status, age, receipt of public assistance, and exercise of rights under the Consumer Credit Protection Act). The regulation contains disclosure and notification provisions as well as specific prohibitions.

§ 203, Home Mortgage Disclosure Act (HMDA) (Regulation C)

Regulation C requires certain lenders to collect specific data regarding certain home loan applications and purchases. The lender reports this data to its supervisory agency. Disclosures prepared from HMDA data show lending patterns based on various characteristics such as sex, age, or race of the borrower.

§ 226, Truth-in-Lending Act (TILA) (Regulation Z)

Regulation Z's primary purpose is to promote the informed use of consumer credit, including mortgages, by requiring disclosures about its terms and cost. The regulation does not govern charges for consumer credit. Regulation Z contains several disclosure requirements specific to home mortgages. Home equity lines of credit, certain high cost mortgages (Section 32), and reverse mortgages are subject to additional disclosure requirements.

§ 528, Nondiscrimination Requirements

Section 528 covers nondiscrimination requirements in lending, appraisal, underwriting, loan applications, advertising, loan application register, employment, and complaints.

§ 535, Prohibited Consumer Credit Practices

Section 535 covers unfair credit practices, unfair and deceptive cosigner practices, when a lender may not assess late charges, and state exemptions. It requires the "Notice of Cosigner" disclaimer that lenders must provide cosigners before becoming obligated.

§ 560, Lending and Investments

Section 560 sets forth the lending and investment powers of savings associations and their subsidiaries. It also addresses disclosures for alternative mortgages and contains safety and soundness based lending and investment provisions.

§ 560.30, General Lending and Investment Powers

Section 560.30 includes a chart listing HOLA-approved loans for savings associations and their subsidiaries. It also explains asset limitations for these loans and where OTS may set individual limitations as necessary.

§ 560.101, Real Estate Lending Standards

Section 560.101 outlines real estate lending standards. It addresses interagency guidance, loan portfolio management, underwriting standards, loan administration, LTV limits, loan exclusions, and exceptions.

§ 560.170, Establishment and Maintenance of Records

Section 560.170 lists documentation that savings associations and their subsidiaries should collect to make informed lending decisions. It also requires lenders to monitor the performance of their portfolios.

§ 560.210, OTS Mortgage Regulations

Section 560.210 conforms OTS ARM disclosure requirements with a cross-reference to the Regulation Z disclosure provisions. It applies to all closed-end adjustable- and fixed-rate mortgage loans secured by property occupied or to be occupied by the borrower.

§ 563.41, Loans and Other Transactions with Affiliates and Subsidiaries

Section 563.41 implements section 11(a) of HOLA. It prohibits certain transactions with affiliates and subsidiaries, and allows OTS to further restrict transactions with affiliates. This section outlines when lending to affiliates is allowed, and what records savings associations must keep to record transactions with affiliates.

§ 563.43, Loans by Savings Associations to Their Executive Officers, Directors, and Principal Shareholders

Section 563.43 subjects savings associations, savings association subsidiaries, and savings association insiders to the restrictions contained in 12 CFR Part 215, subparts A and B of the Federal Reserve Board's Regulation O. It includes exceptions to this rule and definitions of "insiders."

§ 563.172, Derivative

Section 563.172 defines financial derivatives, and establishes conditions, requirements, and recordkeeping for Federal and state chartered savings associations that invest in them.

§ 563.176, IRR Management

Section 563.176 directs the board of directors of a savings association or its designated committee to review the association's interest rate risk exposure and establish a policy for the management of that risk. The rule requires that the association's interest rate risk policy must be approved by the board of directors, and management shall establish guidelines and procedures to ensure that the policy is successfully implemented.

§ 563.177, Procedures for Monitoring Bank Secrecy Act Compliance

Section 563.177 requires savings associations to implement a program to comply with the recordkeeping and reporting requirements of the Bank Secrecy Act.

§ 563.180, Suspicious Activity Reports and other reports and statements

Section 563.180 outlines the rules for savings associations or service corporations for filing a SAR with the appropriate federal law enforcement agencies and the U.S. Treasury.

§ 563e, Community Reinvestment Act (CRA)

Section 563e encourages depository institutions to help meet the credit needs, particularly home mortgage needs, of the communities in which they operate. It requires OTS to assess the record of each institution in helping to meet the credit needs of its entire community, including low- and moderate-income neighborhoods, consistent with safe and sound operations, and to take that record into account when deciding whether to approve an application by the institution for a deposit facility.

§ 564, Appraisals

Section 564 identifies when appraisals by state-certified appraisers are necessary for financial transactions. It sets forth minimum appraisal standards and provides guidelines for management to help implement appraisal policies.

§ 567.1, Capital: Qualifying Mortgage Loans

Section 567.1 defines capital and how assets apply towards capital calculations. It describes qualifying mortgage loans, multifamily mortgages, and residential construction loans.

§ 567.6, Capital: Risk-Based Capital Credit Risk-Weight Categories

Part 567.6 defines which risk-weight to use on mortgages and other assets when calculating risk-based capital. This section is a thorough reference on how to calculate risk-based capital.

§ 570, Safety and Soundness Standards

Section 570 outlines safety and soundness standards in lending and other operations. It explains how OTS takes action on safety and soundness deficiencies in savings associations. It also describes the compliance plan and actions a savings association must enact when deemed deficient.

§ 571, Fair Credit Reporting

Section 571 regulates various aspects of the consumer reporting industry. It places disclosure obligations on users of consumer reports, including mortgage lenders. It establishes requirements applicable for furnishing information to consumer reporting agencies. It also requires timely responses to consumer inquiries regarding information maintained by consumer reporting agencies.

§ 572, Loans in Areas Having Special Flood Hazards

Section 572 implements the requirements of the National Flood Insurance Act Program. This section prohibits making mortgage loans in certain flood hazard areas without flood insurance. It contains requirements for disclosures, flood hazard determinations, and forced placement of insurance.

§ 590.3, Operations (Preemption)

Section 590.3 preempts the constitution or law of any state that limits the rate or amount of interest, discount points, finance charges, or other charges which may be charged, taken, received, or reserved. The section also lists federally related loans that are exempt from state laws.

§ 590.4, Consumer Protection Rules for Federally Related Loans, Mortgages, Credit Sales, and Advances Secured by First Liens on Residential Manufactured Housing

Section 590.4 lists consumer protection regulations for mortgages. It defines when fees are allowable and how to compute various fees (late fees, prepayment fees, over-payment refunds, deferral fees). It also establishes time frames for lenders to provide notices of default and foreclosure.

24 CFR

§ 3500, Real Estate Settlements and Procedures Act (RESPA)

Section 3500 defines standard mortgage industry terminology. It explains what RESPA covers and what is exempt. The section gives instructions for forms lenders provide, including good faith estimates and HUD-1/1A settlement statements. It also outlines rules regarding kickbacks, unearned fees, affiliated business arrangements, titles, escrow accounts, validity of contracts and liens, and mortgage servicing transfers.

31 CFR

§ 103.121, Customer Identification Programs for banks, savings associations, credit unions, and certain non-Federally regulated banks

Section 103.121 sets forth the requirement for savings associations to implement a written Customer Identification Program (CIP).

CEO Memos

CEO 104, Interagency Guidelines on Subprime Lending

CEO 104 outlines the controls a savings association should have when engaging in subprime lending. It includes capitalization, risk management, planning and strategy, and examination objectives.

CEO 119, Interagency Guidelines on Asset Securitization Activities

CEO 119 outlines the risk management and controls a savings association should have when engaging in securitization activities. The guidelines emphasize that institutions are expected to support any securitization-related retained interest by documenting the fair value utilizing reasonable, conservative valuation assumptions that can be objectively verified.

CEO 128, Revised Uniform Retail Credit and Account Management Policy

CEO 128 issues the revised interagency policy for classifying retail credit. Retail credit including consumer loans, individual credit cards, one- to four-family residential mortgages, student loans, and home equity lines of credit, are generally classified based on loan performance rather than a detailed analysis of each loan. The policy guidelines also set new standards for charging off loans based on their past-due status, bankruptcy, and fraud as well as standards for re-aging delinquent accounts.

CEO 137, Expanded Guidance for Subprime Lending Programs

CEO 137 defines subprime lending. It explains how to evaluate ALLL adequacy and what examiners look for in an examination of a savings association's subprime portfolio. It expands on 1999 interagency subprime lending guidance.

CEO 184, Independent Appraisal and Evaluation Functions

CEO 184 reminds savings associations to maintain standards of independence when performing appraisals. It advises how to select an independent appraiser and how examiners will review appraisals.

CEO 219, Frequently Asked Questions about the Final Section 316 Customer Identification Program Rules

CEO 219 announces Interagency guidance in the form of Frequent Asked Questions about the application of Section 326 of the USA PATRIOT Act and its implementing regulation, 31 CFR 103.121. Section 103.121 requires savings associations to have a Customer Identification Program (CIP).

CEO 220, Interagency Advisory on Accounting and Reporting for Commitments to Originate and Sell Mortgage Loans

CEO 220 explains the appropriate accounting and reporting for derivatives. Such derivatives include commitments to originate mortgages held for resale and selling mortgages under mandatory delivery and best efforts contracts. The guidance ensures savings associations follow GAAP in their accounting and reporting of derivatives.

CEO 222, Credit Risk Management Guidance for Home Equity Lending

CEO 222 provides guidance promoting sound HELOC and home equity loan risk management practices. It covers product development, marketing, originations, underwriting, collateral valuation management, account management, portfolio management, operations, servicing, collections, secondary markets, and ALLL.

CEO 240, 2006 Revisions to Uniform Standards of Professional Appraisal Practice

CEO 240 highlights revisions included in the 2006 Uniform Standards of Professional Appraisal Practice (USPAP). It includes questions and answers about changes in appraisal rules from the 2005 USPAP.

CEO 244, Interagency Guidance on Nontraditional Mortgage Product Risks

CEO 244 introduces interagency guidance on sound risk management practices for interest-only, payment option, and other nontraditional mortgages. The Interagency guidance defines nontraditional mortgages. It also offers guidelines on loan terms, underwriting standards, risk layering, and consumer protection.

OTS Examination Handbook

Section 201, Overview: Lending Operations and Portfolio Risk Management

Section 201 focuses on responsibilities of the board of directors and management in overseeing lending functions of savings associations. These responsibilities include risk management, portfolio diversification, strategic planning, and lending policies. The handbook section reviews these responsibilities in detail.

Section 208, Real Estate Appraisal and Evaluation

Section 208 provides examiner guidance on a savings association's administration of its appraisal and evaluation programs, instructions for appraisal reports, evaluating real estate when an appraisal is not required, and a summary of the OTS appraisal regulation.

Section 211, Loans to One Borrower (LTOB)

Section 211 covers concentration risk and legal lending limits for extensions of credit by savings associations to one person or group of people related by a common enterprise. The handbook section explains LTOB lending limits, exceptions, and how to calculate the limits.

Section 212, One- to Four-Family Residential Real Estate Lending

Section 212 addresses one- to four-family residential lending. It has two main sections:

- Real Estate Lending Policies and Operations provides an overview of real estate lending standards, loan portfolio risk management, and other underwriting considerations.

- Underwriting Considerations for Specific Loan Products covers subprime mortgage lending, adjustable rate mortgages including negatively amortizing loans, interest-only loans, home equity loans, manufactured housing loans, and reverse mortgage loans.

Section 217, Consumer Lending, Appendix A, Interagency Guidance on Subprime Lending

Section 217 covers capitalization, risk management, planning and strategy, lending policy, loan administration procedures, loan review and monitoring, consumer protection, securitization and sale, reevaluation, and examination objectives for subprime lending.

Section 221, Asset-Backed Securitization

Asset securitization is the process by which loans or other credit exposures are pooled and reconstituted into securities, with one or more classes or positions that may be sold. This section reviews the securitization process and examinations and risk management of securities. It also provides accounting and capital considerations.

Section 260, Classification of Assets

Section 260 provides OTS policy on the risk classification of assets when assessing a savings association's asset quality. The section defines nonadverse classifications (Pass and Special Mention) and adverse classifications (Substandard and Doubtful). It also details how various elements of financial instruments put assets into the three categories.

Section 261, Adequacy of Valuation Allowances

A valuation allowance is a contra account, established and maintained through charges against current earnings to absorb losses inherent in an institution's portfolio. The valuation allowance for loans and leases is also known as ALLL. The section provides guidelines for assessing ALLL and supporting this assessment when savings association management disagrees and would like to hold less capital.

Section 1100, Compliance Examination Oversight Program

Section 1100 outlines standards and methods for compliance examinations. It includes a compliance oversight flowchart as well as descriptions of the core compliance examination: lending operations, retail operations, Bank Secrecy Act, and fair lending.

Section 1200, Fair Lending

It is unlawful for any lender to discriminate in its housing-related lending activities against any person based on race, color, religion, national origin, sex, familial status, or handicap. This handbook section provides guidance on nondiscriminatory lending rules. It includes sections on lending, appraisals, underwriting, applications, advertising, and examining for compliance with fair lending legislation.

Section 1300, Consumer Laws and Regulations

Section 1300 contains background information, regulatory guidance, and examination programs for the following laws:

- The Fair Credit Reporting Act (FCRA) – This section outlines the five examination modules and exceptions to rules. The five modules are 1) Obtaining Consumer Reports, 2) Obtaining Information and Sharing Among Affiliates, 3) Disclosures to Consumers and Miscellaneous Requirements, 4) Financial Institutions as Furnishers of Information, and 5) Consumer Alerts and Identity Theft Protections.

- Controlling the Assault of Nonsolicited Pornography and Marketing Act of 2003 – This section outlines consumer protection for nonsolicited marketing.

- Restitution (Joint Policy Statement on Administrative Enforcement of TILA–Restitution, 1980; revised 1998.) – Using cease and desist authority, TILA restitution may be ordered for understatements of the annual percentage rate (APR) and finance charge disclosures resulting from clear and consistent pattern or practice of disclosure errors, gross negligence, a willful violation of the Act, and for isolated disclosure errors.

- Homeowners Protection Act – This section defines, outlines requirements, and sets limits on private mortgage insurance (PMI) as outlined in HPA. HPA contains disclosure requirements and provides for the cancellation or termination of PMI.

- Homeownership Counseling Procedures – This section extends homeownership counseling notification provisions to all creditors that service conventional mortgage loans and loans insured by the Department of Housing and Urban Development (HUD). A creditor must notify a homeowner who fails to pay any amount by the date the amount is due, under the terms of the home loan, of the availability of homeownership counseling.

- Fair Debt Collection Practices Act – This Act eliminates abusive, deceptive, and unfair debt collection practices, including debts arising from mortgage loans. It applies only to the collection of debt incurred by a consumer primarily for personal, family, or household purposes.

Section 1400, FFIEC Bank Secrecy Act/ Anti-Money Laundering Examination Manual (BSA/AML)

Section 1400 contains the interagency core examination procedures for assessing BSA/AML compliance and regulatory requirements, as well as expanded examination procedures for enterprise-wide compliance, products and services, and persons and entities. The section includes Appendices that cover laws, definitions, terrorism red flags, and acronyms.

Thrift Bulletins

TB 13a, Management of Interest Rate Risk, Investment Securities, and Derivative Activities

TB 13a provides guidance on how a savings association can manage its changing financial situation because of interest rate risk (IRR), and how examiners assess risk management. It covers repricing, yield curve, basis, and options risk, and measuring and setting limits on IRR. It also outlines how to analyze and stress test risks and returns with investment securities and financial derivatives.

TB 55a, Interagency Appraisal and Evaluation Guidelines

A real estate lending program should include an appropriate real estate appraisal and evaluation program. TB 55a outlines how examiners assess these programs. It explains minimum appraisal standards and the appraisal process for savings associations.

TB 72a, Interagency Guidance on High Loan-to-Value Residential Real Estate Lending

TB 72a outlines some rules and risk-management strategies for high loan-to-value (LTV) mortgages. It explains the characteristics of high LTV residential loans.

TB 82a, Third Party Arrangements

TB 82a provides guidance on assessing risks emerging from third-party arrangements. Third-party arrangements include accounting services, legal services, data processing, mortgage brokering, etc. It explains when savings associations must report third-party arrangements to OTS, and the process savings associations should use to choose a third-party servicer.

Other References

Fannie Mae and Freddie Mac Seller Servicer and Underwriting Guidelines

These guidelines provide underwriting standards for the GSEs' seller-servicers.

FHA Underwriting Guidelines

The guidelines provide underwriting standards for lenders that originate FHA insured mortgages.

Accounting References

See Accounting Section

MORTGAGE BANKING: GLOSSARY

A – Or A-minus Loan – See Alternative A Loan (Alt A).

"A" Quality Credit – A borrower with the best credit rating, typically deserving of the lowest prices that lenders offer.

ABS - Asset-Backed Security – A financial security typically collateralized by nonmortgage related assets; however, the term *asset-backed security* may include mortgage related consumer products such as home equity lines of credit (HELOC) and Subprime "home equity" loans.

Accelerated Amortization – An accounting technique in which the larger portion of the asset's book value is written off in the early years of the asset's expected life.

Accelerated Remittance Cycle (ARC) – An option whereby an entity selling and/or servicing mortgages to/for FHLMC reduces the guarantee fee it pays by paying principal and interest payments early and shortening the monthly remittance delay. Remittance requirements are a component of servicing asset valuation due to their impact on assumptions of float profitability. Super ARC is also a remittance option that calls for even faster payment to FHLMC.

Accident and Health Premium – A payment by a borrower to ensure that mortgage payments continue to be paid if the borrower becomes disabled or ill.

Adjustable Rate Mortgage (ARM) also known as a **variable rate mortgage (VRM)** – A mortgage loan that allows a lender to adjust periodically the interest rate in accordance with a specified index agreed to at the inception of the loan.

Alternative A Loan (Alt A) – A term generally used by the industry to denote loans that do not satisfy the regular criteria for conforming or jumbo loan programs, but are first-lien loans to prime quality borrowers. Typically these loans will have one or more characteristics that set them apart from conforming loans (such as loan documentation, LTV, occupancy status, property type, etc.).

Alternative Mortgage Products (see also **Nontraditional**) – A type of mortgage that allows borrowers to defer payment of principal and sometimes interest. Examples include interest only loans and payment option ARMs.

Amortization – The process of paying off a loan by gradually reducing the balance through a series of installment payments. Also, the process of writing off mortgage servicing assets over the expected remaining economic life of the asset.

Ancillary Income – Ancillary income is generated by such items as late charges, insurance premiums, and assumption and payoff fees.

Annual Mortgage Statement – A report prepared by the lender or servicing agent for a mortgagor that states the amount of taxes, insurance, and interest that were paid during the year, and the outstanding principal balance.

Ask Price – The price a seller would propose to receive in exchange for a security.

Assignment of Trade (AOT) – Loan sale arrangement where the seller assigns both a forward commitment and a group of loans (to fill that forward) to the buyer. The buyer is then responsible to pair-off the forward or to create the MBS and deliver it.

Automated Underwriting System (AUS) – A system into which a loan originator enters a borrower's application information, which is subject to verification. The system typically accesses borrower's credit reports to determine the likelihood that the loan will repay as agreed. The assessment is typically based on the way similar mortgages with comparable borrower, property, and loan characteristics have performed. The AUS makes preliminary recommendations regarding the loan (e.g., approve, refer, or caution). Some systems also make pricing recommendations.

Automated Valuation Model (AVM) / Automated Valuation System – Online databases that match similar properties using historical sales prices to derive a range of comparable sales prices. The model considers limited factual data, such as square footage, the number of rooms and bedrooms, property age, and lot size. Some AVMs use historical information derived from county records, while other AVMs collect information from appraisal reports, where a property's physical characteristics have been verified.

Balloon Mortgage – A mortgage for which the periodic installments of principal and interest do not fully amortize the loan. The balance of the mortgage is due in a lump sum (balloon payment) at the end of the term.

Bankruptcy – A proceeding in a federal court to relieve the debts of an individual or a business unable to pay its creditors. Bankruptcy can involve liquidation of a debtor's assets (Chapter 7), or reorganization of a debtor's liabilities (Chapter 11 or 13).

Behavioral Servicing Models – Specialized servicing model that assists in identifying the best collection strategies for each subset of borrowers in a pool of loans depending on their payment behavior.

Best Efforts Commitment/ Optional Delivery Commitment – An agreement that requires an investor to buy mortgages at an agreed-upon price. The seller is not, however, required to sell or deliver a specified amount of mortgages to the investor.

Bid Price – The price that a buyer would pay for a security. The bid/ask spread reflects the liquidity of an instrument. Larger spreads are reflective of less liquid instruments. See also Ask price.

Broker / Loan Broker – An individual employed on a fee or commission basis as agent to bring buyers and sellers together and assist in negotiating contracts between them. (See Mortgage Broker and Third-party Originator (TPO)).

Broker Price Opinion (BPO) – An alternative evaluation product used to estimate the probable selling price of a residential property commonly performed by a local licensed real estate professional (broker) that is knowledgeable of local market trends and values. This evaluation product is not an appraisal and is not performed by a licensed or certified real estate appraiser. A BPO may not be used as an appraisal, or in lieu of an appraisal in a federally related transaction.

Broker TPO Transaction – A mortgage loan for which a third party originator takes an application, and may process or underwrite the mortgage documents, then assigns the documents to another mortgage lender. After receiving the assigned mortgage documents, the mortgage lender underwrites, funds, and closes the mortgage in its own name.

Bulk Servicing Purchase/ Sale – Transfer of servicing in a one-time transaction where all loan files and portfolio information are transferred on a specific date or within a short, specified time frame. Ownership of the underlying mortgages is not affected by the transaction. See also purchased mortgage servicing rights.

Buy-down Guarantee – See guarantee fee buy-down.

Buy-down Mortgage – A mortgage in which a lender accepts a below-market interest rate in return for an interest rate subsidy paid as additional discount points by the builder, seller, or buyer.

Buy-up Guarantee – See guarantee fee buy-up.

Cap/ Periodic Rate Cap / Lifetime Loan Cap or Ceiling – In an adjustable rate mortgage, a limit on the amount the interest rate may increase per period and/or over the life of the loan. (See also floor.) (See Interest rate cap for the hedging definition.)

Capitalize – The act of converting a series of anticipated cash flows into present value by discounting them at an established rate of return.

Capitalized Value – The net present value of a set of future cash flows.

Cash Flow Hedge – A type of hedge defined by FAS 133. An entity may designate a derivative instrument as hedging the exposure to variability in expected future cash flows that is attributable to a particular risk. That exposure may be associated with a recognized asset or liability such as all or some of the future interest payments due for a variable-rate debt. Alternatively, that exposure may be associated with a forecasted transaction such as a planned purchase or sale. Certain requirements must be met to qualify for cash flow hedge accounting. Gains or losses from the effective portion of a derivative used for a qualifying cash flow hedge are reported in comprehensive income. In other words, the gains and losses are used to adjust equity but are not included in income or losses from operations. Gains or losses from the ineffective portion of hedges must be reflected in earnings.

Cash Market or Cash Window – Also referred to as the spot market, where mortgage loans and/or mortgage-backed securities trade for immediate delivery.

Certain Nonsecurity Financial Instruments (CNFIs) – CNFIs include interest-only (IO) strip receivables, other receivables, or retained interest in securitizations that can be contractually prepaid or settled without the holder recovering all of the recorded investment.

Certificate of Reasonable Value (CRV) – A document issued by the Veterans Administration (VA) that establishes a maximum value and loan amount for a VA-guaranteed mortgage.

Chapter 7 – Bankruptcy filing which gives a trustee the power to distribute a debtor's assets to creditors. Also called a "liquidation."

Chapter 11 – A bankruptcy reorganization by a business allowing the debtor to maintain operating control of the business while restructuring debts and working out a repayment schedule acceptable to the creditors. Also called "debtor in possession."

Chapter 13 – A debt repayment plan where an individual debtor files a budget with the bankruptcy court and agrees to make partial payment to creditors over a three-to-five year period. Also called "wage earner plan."

Cheapest to Deliver – The cash market instrument that is the least expensive instrument to acquire and deliver into an exchange-traded contract at maturity.

Closed-end Mortgage – A mortgage loan that prohibits the borrower from obtaining additional funds under the same mortgage.

Closing – Consummation of a mortgage loan transaction during which the note and other legal documents are signed and the loan proceeds are disbursed.

Closing Costs – Fees paid to effect the closing of a mortgage. Common closing costs include origination fees, discount points, title insurance fees, survey fees, appraisal fees, and attorney's fees.

Closing Statement – A financial disclosure giving an account of all funds received and expected at closing, including escrow deposits for taxes, hazard insurance, and mortgage insurance. All federally insured or guaranteed and most conventionally financed loans use a uniform closing statement. See also HUD I.

CMO – Collateralized Mortgage Obligation – Mortgage backed security where payments on the underlying collateral are partitioned to provide for different maturity classes, called tranches. Investors choose to buy one or more tranches, with each tranche representing a different interest in the cash-flow stream of the collateral. As the collateral cash-flow change, the amounts and/or timing of the cash flows paid the investors changes.

COFI (Cost of Funds Index) – Index used to determine interest rate changes for adjustable rate mortgages based on thrifts' funding costs. The most widely used COFI index is based on the FHLB's 11th District cost of funds.

Collections – The servicing procedure followed to bring a delinquent mortgage current and to file the required notices to begin foreclosure when necessary.

Collection Float – The total time period between when a check is prepared by the remitter and when the check is presented to the remitter's bank. The float also includes the mail float, processing float, and transit float, and is considered the disbursement float for the organization that issues the check.

Collection Report – The form used by a mortgage servicer in reporting collection from mortgagors, including payments in full, repayment of advances, tax and insurance funds for foreclosed mortgages, and any other items not remitted as regular installment payments.

Combined Loan-to-value (CLTV) – The principal balance of all mortgage liens on the property divided by the value of the property.

Commitment (lender/borrower) – An agreement, often in writing, between a lender and a borrower to lend money at a future date or for a specified time period subject to specified conditions.

Commitment (seller/investor) – A written agreement between a seller of loans and an investor to sell and buy mortgages under specified terms for a specified period.

Commitment Fee (lender/borrower) – A fee paid by a potential borrower to the potential lender for the lender's promise to lend money at a specified date in the future, or for a specified period of time and under specified terms. The timing of income recognition for these fees should follow GAAP using the specified contractual terms.

Commitment Fee (seller/investor) – A fee paid by the loan seller to the investor in return for the investor's promise to purchase a loan or a package of loans at an agreed-upon price at a future date.

Conforming Mortgage – A mortgage loan that meets all requirements (loan type, amount, and age) for purchase by the FHLMC or FNMA.

Constant Maturity Swaps (CMS) – A variation of the fixed-rate-for-floating-rate interest rate swap. The rate on one side of the constant maturity swap is either fixed or reset periodically at or relative to LIBOR (or another floating reference index rate). The constant maturity side, which gives the swap its name, is reset each period relative to a regularly available fixed maturity market rate. This constant maturity rate is the yield on an instrument with a longer life than the length of the reset period, so the parties to a constant maturity swap have exposure to changes in a longer-term market rate. The CMS is priced to reflect the relative values of either fixed or floating rates on one side and an intermediate-term fixed-rate instrument that covers a segment of the forward curve and moves out along the forward curve at each reset date.

Conventional Mortgage – A mortgage loan that is not government-guaranteed or government-insured. There are two types of conventional loans, conforming and nonconforming. See also conforming mortgage and nonconforming mortgage.

Convertible Mortgage – An adjustable rate mortgage that may be converted to a fixed rate mortgage at one or more specified times over its term.

Convexity (Gamma) – A measure of the sensitivity of duration to changes in yield levels. Convexity is a measure of the stability or instability of the measured duration over a range of yields. If convexity is low, that is, if the price/yield relationship is close to a straight line, duration is stable. If convexity is high, duration is unstable. The greater an instrument's convexity, the less accurate duration will be. Convexity is a measure of the curvature of how the price of a bond changes as the interest rate changes. Specifically, duration can be formulated as the first derivative of the price function of the bond with respect to the interest rate in question, and the convexity as the second derivative.

Correlation – The degree of relationship between two sets of data. A correlation near plus 1, called a positive correlation, indicates that changes in one set of data are closely related to changes in the other set and that the data sets change in the same direction. A correlation near minus 1, called negative correlation, indicates that changes in one set of data are closely related to changes in the other set and that the data sets change in the opposite direction. A correlation near zero indicates little or no relationship between the changes in the two sets of data.

Correspondent / Correspondent Originator – An entity that originates mortgage loans that are sold to other mortgage bankers.

Cost of Funds Index (COFI) – Index used to determine interest rate changes for adjustable rate mortgages based on thrifts' funding costs. The most widely used COFI index is based on the FHLB's 11th District cost of funds.

Coupon Rate – The annual interest rate on a debt or a MBS. The mortgage note rate backing the MBS is higher and based on the mortgage loan note rate.

CPR (Conditional Prepayment Rate) – (see also **prepayment speed**) – A standard of measurement of the projected annual rate of prepayment excluding normally scheduled amortization for a seasoned mortgage loan or pool of loans. See also PSA and SMM.

Cram Down – An informal name for a settlement or terms that a debtor forces creditors to accept. For example, a debtor in Chapter 11 bankruptcy proceedings can, subject to some restrictions, have a plan to resolve the bankruptcy approved by the court even though a creditor or a class of creditors objects.

Credit Enhancements – This can encompass a variety of provisions to reduce the credit risk (to the buyer) – This may involve over-collateralization, recourse to the seller, standard reps and warranties, and other types. (See also recourse, early payment default, first payment default, reps and warranties, servicing premium refund, and risk based capital adjustment for recourse.)

Cross Hedge – A hedge transaction in which a cash market instrument is hedged by an option contract for a different underlying instrument. Sometimes called proxy hedge, surrogate hedge, or tandem hedge.

Curtailment – An amount paid by a borrower of more than the scheduled principal amount due. This type of payment reduces the remaining balance and shortens the term of the loan.

Custodial Accounts – Bank accounts for the deposit of funds belonging to others.

Custodian – Usually a commercial bank which holds for safekeeping mortgages and related documents backing a mortgage-backed security. Custodians may be required to examine and certify documents.

Dealer – A firm that acquires and sells MBS as principal and typically maintains an inventory in these securities.

Debt to Income Ratio (DTI) – Relationship of a borrower's monthly payment obligations on long-term debts divided by gross monthly income, expressed as a percentage.

Deficiency Judgment – A court order to pay the balance owed on a loan if the proceeds from the sale of the security are insufficient to pay off the loan.

Delinquency – Failure of a borrower to make timely payments specified under a loan agreement.

Delinquencies – Indicate the number of days (such as, 30, 60, 90) the borrower is contractually past due as of the cut-off date. Common mortgage securitization practice is to utilize the OTS calculation method for home-equity products and the Mortgage Banker Association's (MBA) calculation method for traditional prime products[7]. Foreclosure and REOs are treated identically under both methods.

Delta – A risk metric used by traders/risk managers to quantify risk exposure of a position/portfolio. Delta is synonymously used to refer to the duration, which measures the first order (linear) sensitivity to a financial instrument or risk position.

A delta hedge is a simple type of hedge that is widely used by derivative dealers to reduce or eliminate a portfolio's exposure to some underlier, or underlying instrument (i.e., mortgage pipeline, warehouse, or MSR). The dealer calculates the portfolio's delta with respect to the underlier, and then adds an offsetting position in the underlier to make the portfolio's delta zero.

A problem encountered with delta hedging is the fact that the position's delta will change with movements in the underlier, thereby throwing off the delta hedge. The inevitable solution to this problem is to constantly readjust the delta hedge as the underlier moves. This technique is called dynamic hedging. A portfolio that has a zero delta is said to be delta neutral.

[7] Under the OTS method, a loan is considered delinquent if a monthly payment has not been received by the close of business on the loan's due date in the following month. The cut-off date for information under both methods is as of the end of the calendar month. Therefore, a loan with a due date of 8/1/06, with no payment received by the close of business on 8/31/06, would have been reported as **current** on the September statement to certificate holders. Assuming no payments are made during September, the loan would be reflected as delinquent on the October statement. Under the Mortgage Banker Association Delinquency Calculation Method, a loan would be considered delinquent if the payment had not been received by the end of the day immediately preceding the loan's next due date (generally the last day of the month that the payment was due). In the example above, the same loan would have been reported as **delinquent** on the September statement to certificate holders.

Derivatives – Financial instruments whose value depends upon the values of underlying assets, interest rates, currency exchange rates, or indexes. Large financial institutions use derivatives for hedging. Options, futures, swaps, and swaptions are common derivatives used for hedging purposes.

In FAS 133, FASB defines derivatives narrowly. With some exceptions, FAS 133 defines a derivative instrument to be any financial instrument or other contract that has all three of the following characteristics:

The financial instrument or contract has both:

- One or more underlying instruments.
- One or more notional amounts, payment provisions, or both.

The financial instrument or contract either does not require an initial investment or requires an initial net investment that is "smaller than the amount that would be required for other types of contracts that would be expected to have a similar response to changes in market factors."

The terms of the financial instrument or contract either:

- Require or permit net settlement.
- Provide that the contract can be readily settled net by a means outside the contract.
- Provide for delivery or an asset that puts the recipient in a position not substantially different from net settlement.

Desktop Underwriting System – FNMA's DU (Desktop Underwriter) and FHLMC's LP (Loan Prospector) – See automated underwriting systems (or AUS).

Direct Endorsement – A Housing and Urban Development (HUD) program that enables an eligible lender to process and close single-family applications for Federal Housing Administration-insured loans without HUD's prior review.

Discount – The amount by which the price of a note is less than its face value, increasing its yield to the investor.

Discount Rate – The rate used to calculate the present value of future cash flow streams generated by mortgage servicing rights. In more general terms, it is the rate at which future dollars are converted into present value. The time value of money can be interpreted as the rate at which individuals are willing to trade present for future consumption or as the opportunity cost of capital.

Down Payment Assistance Programs – Programs developed to assist homebuyers who generally meet qualifications for a mortgage loan, except for the required down payment and closing costs.

Due Diligence Review – An examination by a purchaser of a servicing portfolio. Generally the reviewer will look at credit quality and underwriting of the loan collateral underlying the servicing rights; correctness and completeness of the loan documents; the seller's servicing practices and methodologies; and the accuracy of the portfolio offering document. As used here, a re-underwriting of the loan in line with borrower's request to determine the feasibility of the request by lender.

Duration – A measure of the average timing of cash flows of a financial instrument. Duration is computed by summing the present values of all of the future cash flows of the instrument after multiplying each by the time until receipt, and then dividing that product by the sum of the present value of the future cash flows without weighting them for the time of receipt. One way to view duration is as the balancing point for a series of cash flows.

DV01 (Dollar value of 1 basis point) – The present value impact of a 1 basis point move in an interest rate. It is often used as a price alternative to duration (a time measure).

Early Payment Default (EPD) – A provision in the sales contract that requires a seller to repurchase or indemnify a purchaser against loss if a loan becomes delinquent. The regulations permit a seller to repurchase delinquent loans within 120 days of the sale date without recourse ramifications if the loans were first liens, sold within one year of origination and qualify for the 50 percent risk based capital category.

Early Pay-Off (EPO) – A provision in a loan sales contract similar to the EPD clause. If the sold loans prepays within a contractually set period after the sale, the seller may have to repay set amounts. This type of clause is subject to the same risk based capital treatments as the EPD clauses.

Early Pool Buyouts – An agency-approved loan servicing option of buying eligible delinquent loans from MBS pools to eliminate the servicer's exposure to principal and interest payment pass-through requirements.

Earnings at Risk (EAR) – The quantity by which net income is projected to decline in the event of an adverse change in prevailing interest rates. One measure of an institution's exposure to adverse consequences from changes in prevailing interest rates. See Value at Risk for an alternative measure.

Errors and Omissions (E&O) Insurance – Liability insurance coverage for errors, mistakes, and negligence in the usual activities of a mortgage banker. Fraudulent behavior is not included.

Escrow Account – Cash held in abeyance until an event occurs or does not occur. For example, funds paid monthly by a mortgagor to the mortgagee are held in escrow until they are due to the taxing authority.

Escrow – The portion of the borrower's monthly payments held by the servicer to pay taxes, insurance, mortgage insurance (if required), and other related expenses as they become due. In some parts of the United States, escrows are also known as impounds or reserves.

Escrow Analysis – The periodic review of escrow accounts to determine whether current monthly deposits will provide sufficient funds to pay taxes, insurance, and related expenses when due.

Excess Yield – The interest rate spread between the weighted average coupon rate (WAC) of a mortgage loan pool and the pass-through interest rate after deducting the servicing fee and the guarantee fee. For example, when the WAC is 9.00 percent for the pool, the pass-through rate is 8.50 percent, the servicing fee is 0.25 percent, and the guarantee fee is 0.21 percent, the excess yield is 0.04 percent.

Fair Value Hedge – A type of hedge defined by FAS 133. An entity may designate a derivative instrument as hedging the exposure to changes in the fair value of an asset or a liability, or a portion of an asset or a liability. Certain requirements must be met to qualify for fair value hedge accounting. Changes in the fair market value of the derivative instrument in qualifying fair value hedges are recorded and reported in earnings. At the same time, gains or losses associated with the hedged risk are also recognized in current earnings. The carrying value (book value) of hedged asset/liability must be adjusted commensurately with resulting basis adjustment, producing a prospective yield adjustment thus offsetting the related derivative loss/gain in the same accounting period.

Fallout – Loans in the origination pipeline that do not close or close under terms different from initial expectations (e.g., a rate-locked loan is allowed to close at lower rate to retain customer). The historical fallout ratio is used to estimate the desired coverage for expected loan closings (pull-through) subject to price risk in the secondary market. Volatile rate changes can significantly impact expected fallout and make pipeline hedging more difficult. It is the inverse of the pull-through rate.

Fannie Mae / FNMA – A stockholder-owned corporation (formerly the Federal National Mortgage Association) created by Congress in a 1968 amendment to the National Housing Act (12 USC 1716). Fannie Mae operates mortgage purchase and securitization programs to support the secondary market in mortgages on residential property.

Fannie Mae 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. As a result, Fannie Mae emerged as a private, for-profit corporation with the public goal of promoting affordable housing by increasing the availability of FHA and VA mortgages. Fannie Mae expanded to include purchasing authorization of conventional mortgages in 1970, securitizing mortgages into the guaranteed MBS market in 1984, and conventional multifamily mortgages in 1984. It now buys conventional mortgages of all types under a variety of set and negotiated servicing requirements that include recourse and nonrecourse servicing.

Federal Home Loan Banks (FHLBs) – Certain FHLBs purchase single-family mortgages from their member financial institutions through Chicago's MPF program and Seattle's MPP program. These mortgages must meet the same requirements as mortgages that Fannie Mae and Freddie Mac are permitted to purchase (single-family one – to four-family conforming loans within the size limit established by Congress).

Federal Home Loan Banks (FHLBs) Mortgage Programs – Certain FHLBs purchase single-family mortgages from their member financial institutions through these programs and provide an alternative to selling mortgage loans to FNMA and FHLMC. These programs permit a participating institution to share in the credit risk with the FHLB and receive compensation accordingly. These mortgages must meet the same requirements as mortgages that FNMA and FHLMC are permitted to purchase (single-family one- to four-family conforming loans within the size limit established by Congress).

Federal Home Loan Mortgage Corporation (FHLMC), also known as **Freddie Mac** – A stockholder-owned corporation created by Congress in the Emergency Home Finance Act of 1970 (12 USC 1451). Freddie Mac operates mortgage purchase and securitization programs to support the secondary market in mortgages on residential property.

The Emergency Home Finance Act created FHLMC in 1970. Like FNMA, Freddie Mac is a privately owned and managed corporation chartered by the U.S. Government to promote affordable housing through greater mortgage availability. Its initial purpose was to boost the liquidity of saving associations by adopting Ginnie Mae's MBS program to the conventional mortgage market. In 1978, it began swapping 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) and is legally structured slightly differently than Ginnie Mae securities. For practical purposes, however, FHLMC's program is similar to GNMA and FNMA. The recent adoption by Freddie Mac's Gold PC of many of the payment provisions of Fannie Mae's MBS makes the two mortgage securities very similar.

Federal Housing Administration (FHA) – A federal agency of the Department of Housing and Urban Development (HUD) established in 1934 under the National Housing Act. The FHA supports the secondary market in mortgages on residential property by providing mortgage insurance for certain residential mortgages.

FHA – See Federal Housing Administration.

FHA Loan – A loan insured by the Federal Housing Administration made through an approved lender.

FHA Value – The value established by the Federal Housing Administration as the basis for determining the maximum mortgage amount that may be insured for a particular property. The FHA value is the sum of the appraised value plus the FHA estimate of closing costs.

FHLMC – See Federal Home Loan Mortgage Corporation.

Credit Score – A consumer will have three Credit scores, one from each national credit bureau. Credit scores are a measure of a consumer's financial responsibility and risk of default, based on their credit repayment history, their level of outstanding credit related to available credit lines, and their frequency in seeking credit. Most lenders evaluate a borrower's credit score in conjunction with other factors when evaluating a loan application.

First Payment Default (FPD) – If the borrower does not make the first required payment, it is referred to as a FPD. Some refer to the first payment due under the note but others refer to the first payment due to the investor. If the sale to the investor takes several months, that difference can be material.

Fixed Rate Mortgage (FRM) – A mortgage for which the interest rate remains the same over the life of the loan.

Float – In mortgage servicing, the period of time between receipt of a borrower's loan payment and remittance of funds to investors.

Floor – An investor safeguard on an adjustable rate mortgage that limits the amount the interest rate may decline per period and/or over the life of the loan. (See also cap). (See interest rate floor for the hedging instrument.)

Flow Basis Production / Flow Basis Delivery Commitment – See Best efforts commitment.

Forbearance – In mortgage banking, the act of refraining from taking legal action when a mortgage is delinquent. Forbearance usually is granted only if a borrower has made satisfactory arrangements to pay the amount owed at a future date.

Forced Placed Insurance – Insurance purchased by a creditor covering personal or real property owned by debtor. In some cases, forced placed flood insurance is required by law. In other cases, creditors are granted the right to force place insurance by provisions in loan agreements, security agreements, and/or mortgages. Forced placed insurance is almost exclusively purchased when the debtor refuses to obtain or renew required insurance coverage.

Forward Rate Agreement (FRA) – A customized agreement between two parties specifying the rate to be paid at some future date. Usually tied to LIBOR.

Forward Sales Agreement / Forward Commitment – An agreement between a buyer and seller for delivery of a specific commodity at a given time in the future, at a strike price determined at present. It is also called forward delivery contract. These commitments may be firm or optional. (See Mandatory Commitment and Optional Delivery Commitment.)

Foreclosures – A remedy provided by state law for creditors secured by an interest in real property to obtain title to the property under certain conditions.

Futures – Contracts for the purchase or sale of commodities in the future, usually on or before a particular date. Futures contracts on fixed-income instruments, such as Treasury bills, are referred to as financial futures.

Gain-on-Sale (GOS) – the amount by which the sales price exceeded the carrying value of the loan.

Gamma – The rate of change of an option's delta for a small change in the price of the option's underlying. Gamma is a risk metric that measures the second order (quadratic) sensitivity to a financial instrument or risk position. See also delta and convexity.

GNMA I – A mortgage-backed security program in which individual mortgage lenders issue securities backed by the "full faith and credit of the United States government." The mortgages comprising the security are government-insured or government-guaranteed. The issuer is responsible for passing principal and interest payments directly to the securities holders, whether or not the homeowner makes the monthly payment on the mortgage. All mortgages in a GNMA I pool must have the same note rate.

GNMA II – Under the GNMA II program, monthly payments are made to the security holders through a paying agent. Multiple issuer pools may be formed through the aggregation of loan packages of more than one GNMA issuer. Under this option, packages submitted by various GNMA issuers for a particular issue date and pass-through rate are aggregated into a single pool backing a single issue of GNMA II certificates. Each security issued under a multiple issuer pool is backed by a proportionate interest in the entire pool rather than solely by the loan package contributed by any one GNMA issuer. Single issuer pools also may be formed. Mortgages underlying a particular GNMA II certificate may have annual interest rates that vary from each other, by established thresholds.

Government National Mortgage Association (GNMA), also known as **Ginnie Mae** – A federal government corporation created as part of the Department of Housing and Urban Development (HUD) in 1968 by an amendment to the National Housing Act (12 USC 1716). GNMA guarantees mortgage-backed securities that are insured by the Federal Housing Administration or guaranteed by the VA and backed by the full faith and credit of the U.S. government.

Ginnie Mae formed in 1968 when Fannie Mae split into two distinct entities. It is a corporation wholly owned by the U.S. Government within HUD. Ginnie Mae pools FHA, Farmers Home Administration (FmHA), and VA mortgages and issues guaranteed MBSs backed by those pools. Since the federal government already underwrites and guarantees FHA, FmHA, and VA mortgages, there is virtually no additional risk or cost to the government to guarantee the resulting MBSs. GNMA guarantees the timely payment of principal and interest on its MBSs, but requires the servicer to advance its own funds to pay investors on time for all delinquencies. In addition, 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.

GNMA Buy-Backs – See early pool buyouts.

Government-sponsored Enterprise (GSE) – A private organization with a government charter and backing. GSE's include: the Federal Home Loan Mortgage Corporation (FHLMC), Federal National Mortgage Association (FNMA or Fannie Mae), Sally Mae (Student Loan Marketing Corporation), and the Tennessee Valley Authority (TVA).

Graduated payment Mortgage (GPM) – A flexible payment mortgage in which the payments increase for a specified period of time and then level off. GPMs usually result in negative amortization during the early years of the mortgage's life.

Growing Equity Mortgage (GEM) – A graduated payment mortgage in which increases in the borrower's mortgage payments are used to accelerate reduction of principal on the loan. These graduated payment loans do not involve negative amortization.

Guarantee (or Guaranty) Fee – The fee paid to a federal agency (or private entity) in return for its agreement to accept a portion of the loss exposure. Currently, typical guarantee fees required by the FHLMC and Fannie Mae for loan sales without recourse range from 0.16 percent to 0.25 percent of the pool balance annually. The GNMA guarantee fee on pools of federally insured or guaranteed loans is lower, 0.06 percent annually.

Guarantee Fee Buy-down (Buy-Down) – An arrangement in which the seller of mortgages pays a lower guarantee fee in return for less cash when the loans are sold. Guarantee fee buy-downs allow a bank to collect a higher excess servicing fee over the life of the serviced loans. See also guarantee fee.

Guarantee Fee Buy-up (Buy-Up) – An up-front fee paid to a loan seller in exchange for a higher guarantee fee. Guarantee fee buy-ups increase the cash received for the mortgages when they are sold, and reduce the excess servicing fee to be collected over the life of the underlying serviced loans. See also guarantee fee.

Hazard Insurance – Insurance coverage that protects the insured in case of property loss or damage.

Hedge – To reduce risk or behavior that reduces risk from future price movements. A transaction undertaken to reduce risk by offsetting the risk in another transaction. The risk in one position is hedged by counterbalancing it with the risk in another transaction. The values of each position must change inversely and with a high degree of correlation.

Hedge Effectiveness – The extent to which a hedge transaction results in the offsetting changes in value or cash flow that the transaction was and is intended to provide. FAS 133 requires users to regularly assess the effectiveness of hedges. See cash flow hedge, fair value hedge, and FAS 133.

Hedge Ratio – The relationship between the size of a position needed in a hedge instrument and the size of the position being hedged. The hedge ratio is determined by the delta.

High LTV Residential Real Estate Loan – Any loan, line of credit, or combination of credits secured by liens on or interests in owner-occupied one – to four-family residential property that equals or exceeds 90 percent of the real estate's appraised value, unless the loan has appropriate credit support. Appropriate credit support may include mortgage insurance, readily marketable collateral, or other acceptable collateral that reduces the LTV ratio below 90 percent.

Home Mortgage Disclosure Act (HMDA) – A Federal law that requires certain types of lenders to compile and disclose data on where their mortgage and home improvement loans are being made.

Housing Expense Ratio – The borrower's monthly payment obligation on housing and other applicable housing expenses divided by gross monthly income, expressed as a percentage. The housing expense ratio is a principal metric in qualifying borrowers for loans.

HUD – A governmental entity responsible for the implementation and administration of housing and urban development programs. HUD was established by the Housing and Urban Development Act of 1965 to supersede the Housing and Home Finance Agency.

HUD I – Standard form used to disclose costs at closing. All charges imposed in the transaction, including mortgage broker fees, must be disclosed separately.

Indemnification Letter / Agreement – A written agreement given by the loan seller to the buyer to hold the buyer harmless for a specific issue affecting the loan. The agreement may cover a set period (say 2 or 5 years) or it may be for the life of the loan (LOL).

Innovative Mortgage Products – See Alternative mortgage products.

Interest-only loans – For a specified number of years (e.g., three or five years) the borrower is required to pay only interest on the loan. IO loans can be fixed rate, hybrid, or ARM mortgages.

Interest-only Security (IO or I/O) – A security that pays only the interest distributions from a pool of underlying loans. The principal cash flows from the underlying loans are paid to a separate principal-only (PO) security. The cash flows from the underlying loans are thus "stripped" into two separate securities. IOs generally decline in value as rates fall, due to the increased prepayments of the underlying mortgage loans. This reduces the amount of interest received by the security holder over the life of the underlying loans. Servicing rights have cash flow risks similar to IO securities. IOs can be categorized as rate sensitive and credit sensitive. Rate sensitive IOs have little or no credit risk, but are subject to market risk as interest rates change. Credit sensitive IOs provide credit support to senior positions; hence they are subject to both credit risk and market risk. Credit sensitive IOs are known as credit enhancing IOs in the capital rules literature.

Interest-only Strip – A contractual right to receive some or all of the interest due on a bond, mortgage loan, collateralized mortgage obligation, or other interest-bearing financial asset. The interest only strip or "excess yield" consists of forward-looking estimates of interest earned on the underlying assets less the servicing fee paid to the servicer, administration and trustee fees, coupon paid to investors, and credit losses. Interest only strips may or may not be in the form of a security.

Interest Rate Cap – An upper limit on a variable interest rate paid or received in a transaction. Also, an interest rate contract typically used in hedging where one party is paid if an index rate moves above an established strike rate, effectively maintaining a cap on the interest rate.

Interest Rate Collar – Risk management tool that mitigates risk by restricting the range to which a variable rate instrument may rise (cap) or fall (floor).

Interest Rate Floor – A lower limit on a variable interest rate paid or received in a transaction. Also, an interest rate contract typically used in hedging where one party is paid if an index rate moves below an established strike rate, effectively maintaining a floor on the interest rate. An interest rate floor typically is utilized to benefit a servicer as rates decline below a specified level, which has an offsetting effect to the runoff of MSRs.

Interest Rate Option – Right but not an obligation to pay or receive a specific interest rate on a predetermined principal for a set interval.

Interest Rate Swap – A financial instrument often used in hedging where two parties agree to swap net cash flows, on agreed-upon dates, for an agreed-upon period of time, for interest on an agreed-upon principal, or notional, amount. The notional amount is not typically exchanged, as only net interest cash flows are remitted.

Introductory Rate (or Teaser Rate) – For an adjustable rate loan, the initial accrual rate is typically below the fully indexed rate (index plus margin). Teaser rate is sometimes used to refer to a rate that is even lower than the current market introductory rate offered by most lenders.

Inventory – A mortgage bankers' closed loans intended for sale.

Investor – A person or institution that buys mortgage loans and/or securities, or has a financial interest in these instruments.

Investor Advances – In mortgage banking, funds advanced and costs incurred by the servicer on behalf of a delinquent mortgagor.

Jumbo Loan – A mortgage in an amount larger than the statutory limit on loans that may be purchased or securitized by the FHLMC or FNMA.

LIBOR – See London Interbank Offered Rate.

Lien – An interest or encumbrance held by a creditor in a debtor's real or personal property for the satisfaction of a debt. The lien may arise as a result of a consensual contract between the debtor and the creditor such as a security agreement or a mortgage. Alternatively, liens may be established by courts or by statutes. See consensual lien, judicial lien, and statutory lien.

Loan Broker – See Broker.

Loan Guaranty Certificate – A Veterans Administration document that certifies the dollar amount of a mortgage loan that is guaranteed.

Loan Prospector – FHLMC's desktop underwriting system.

Loan Production Office, or LPO – An office where loan application, underwriting, and/or loan closes take place. This office does not take deposits and it is not considered a branch of the savings association.

Loan Serviced for Others, or **LSFO** – The dollar amount of loans being serviced for outside investors.

Loan-to-value Ratio (LTV) – The ratio of the mortgage amount to the appraised value of the underlying property. Most mortgage lenders and secondary marketing participants set a maximum LTV for acceptable loans.

Lockbox – A postal address, maintained by the firm's bank, that is used solely for the purpose of collecting checks. A major goal of a lockbox is to reduce collection float, since the receipts are immediately credited to the firm's bank account.

Locking the loan – A borrower's exercise of his or her option to lock in an interest rate and points. A lock can be exercised at the time of application or later.

LOCOM – Acronym for Lower of Cost or Market. The accounting practice of reflecting the value of an asset at the lower of its historical cost or market value.

London Interbank Offered Rate (LIBOR) – The rate the highest quality banks pay for Eurodollar deposits. There is a different LIBOR for each deposit maturity. LIBOR is commonly used as an index that represents short-term rates.

LPO – Acronym for Loan Production Office.

LSFO – Acronym for Loans Serviced For Others.

Mandatory Commitment/ Mandatory Delivery Commitment/ Mandatory Forward Sales Agreement – The institution is obligated to deliver a specific dollar volume of mortgages to the investor. If the institution is unable to deliver the required volume within the specified commitment period, it may be required to either purchase loans from other sources to deliver or pay the investor a pair-off fee.

Mark-to-Market (MTM) – The process whereby the book value or collateral value of the security is adjusted to reflect the current market value.

Margin – In an adjustable rate mortgage, the spread between the index rate used and the mortgage interest rate.

Marginal Cost – In economics and finance, marginal cost is the change in total cost that arises when the quantity produced (or purchased) changes by one unit. Economies of scale are said to exist when marginal cost is less than the average cost per unit. This means that the average cost will decline as new volumes are added.

Marginal Cost to Originate – It is the increase in total costs when one additional loan is originated.

Marginal Cost to Service – It is the increase in total servicing costs when one additional loan is added to the servicing portfolio.

Master Servicer – Contractually responsible servicer of a mortgage or pool of mortgages that is included in a servicing or subservicing arrangement.

Maximum Loan Amount – The highest loan dollar amount permitted by a GSE or agency for conforming mortgages.

MBA – Mortgage Bankers Association – The national association representing the mortgage banking business.

MBA Cost Study Report – The annual report provides analysis of income and costs associated with origination, warehousing, marketing, and servicing.

MBS – Mortgage Backed Security – An investment instrument backed by mortgage loans as security. Ownership is evidenced by an undivided interest in a pool of mortgages or trust deeds. Cash inflows from the underlying mortgages are used to pay interest and principal on the securities. (Note – OTS's TFR instructions refer to this as an MPS or mortgage pool security.)

MBSCC (MBS Clearing Corporation) – The book entry depository for GNMA MBS.

MERS – Stands for the Mortgage Electronic Registrations System. MERS is a separate corporation that acts as the nominee for the lender and any of the lenders successors. MERS is the mortgagee and the loan is registered in the MERs system. When the loan is sold, the MERS system records the transaction but MERS remains as the mortgagee.

Mortgage Banker – An individual or firm that originates, purchases, sells, and/or services loans secured by mortgages on real property.

Mortgage Broker – (See Broker and Loan Broker) An individual or firm that receives a commission for matching mortgage borrowers with lenders. Mortgage brokers typically do not fund the loans they help originate.

Mortgage Derivative Product (MDP) – see CMO.

Mortgage Insurance (MI) or Private Mortgage Insurance (PMI) – Insurance coverage that protects mortgage lenders or investors in the event the borrower defaults. By absorbing some of the credit risk, MI allows lenders to make loans with lower down payments. The federal government offers MI for FHA loans; private companies offer MI for conventional loans. See also private mortgage insurance.

Mortgage Pool – A group of mortgage loans with similar characteristics that are combined to form the underlying collateral of a mortgage-backed security.

Mortgage Servicing Rights (MSR) – The right to service a mortgage loan or a portfolio of loans. The cost associated with acquiring these rights from other institutions may be capitalized under certain circumstances. The terms MSA and MSL (Mortgage Servicing Asset and Liability, respectively) are generally used only by the accounting world, to refer to the balance sheet item. The rest of the mortgage industry, banking industry, capital markets use the term MSR to refer to the right to be paid to service loans for other investors.

MTA (Monthly Treasury Average) – This index is the 12-month moving average of the monthly average yields of U.S. Treasury securities adjusted to a constant maturity of one year. It is calculated by averaging the previous 12 monthly values of the 1-Year Constant Maturity Treasury.

MTM – (Mark to Market) – The process whereby the book value or collateral value of the security is adjusted to reflect current market value.

National Association of Mortgage Brokers (NAMB) – Professional society for mortgage brokers developed to foster professional certification and business relationships.

National Association of Realtors(r) (NAR) – Trade association representing real estate sales professionals. Realtors(r) is a registered trademark of the National Association, and is properly used only to describe members of the Association, not all real estate brokers or agents.

Natural Hedges – One operation or balance sheet item offsets the risks of another operation or balance sheet item. For example, many mortgage bankers believe a "natural hedge" for the MSR portfolio is the loan origination/production operation. That is because generally, as the MSR portfolio declines in value due to falling interest rates, loan production increases due to refinancing opportunities. This would normally result in increasing gain-on-sale for loans sold.

Negative Amortization, also referred to as **neg am** – The addition of due but unpaid interest to the principal of a mortgage loan, causing the loan balance to increase rather than decrease. Negative amortization occurs when the periodic installment payments on a loan are insufficient to repay principal and interest due.

Negative Carry, also known as **negative spread** – In warehousing, the expense incurred when the interest rate paid for short-term warehouse financing is greater than the interest rate earned on the mortgages held in the warehouse.

Negative Convexity – A phrase used to describe a particular type of instability in the duration of an instrument. Negative convexity means that as yields rise, duration rises and as yields fall, duration falls. Graphically, this is seen as a price/yield curve for which the price at very low and very high yields is less than the price indicated by a straight, tangent line. For an instrument with negative convexity, duration understates the interest rate sensitivity. If convexity is low, that is, if the price/yield relationship is close to a straight line, duration is stable. If convexity is high, duration is unstable. The greater an instrument's convexity, the less accurate duration will be. Callable bonds, mortgage loans, and mortgage-backed bonds typically have negative convexity.

NIMS – Net Interest Margin Securities – A NIM securitization structure is created when an issuer securitizes residual cash flows from existing asset-backed transactions. Residual certificates receive cash flow on a monthly basis only after all fees and expenses related to the transaction and amounts due on all other classes of certificates have been paid.

No-bid – An option that permits the VA to pay the guaranty rather than take possession of the property and pay the full amount of the loan.

Nonconforming Mortgage – A mortgage loan that does not meet the standards of eligibility for purchase or securitization by the FHLMC or Fannie Mae. The loan amount, the loan-to-value ratio, the term, or some other aspect of the loan does not conform to the agencies' standards.

Nontraditional Mortgage Product – A type of mortgage that allows borrowers to defer payment of principal and sometimes interest. Examples include interest only loans and payment option ARMs.

Normal Servicing Fee – The rate representative of what an investor pays to the servicer for performing servicing duties for similar loans. The servicing fee rates set by GNMA, FNMA, and FHLMC are generally considered normal servicing fees. Currently, the normal servicing fee rate is 0.25 percent for fixed rate mortgages, 0.375 percent for adjustable rate mortgages, and 0.44 percent for federally insured and guaranteed loans. A bank may not use its cost to service loans as the normal servicing fee.

Notional Amount – The principal amount or face value of a financial derivative. The notional amount is used to calculate the payments that are exchanged by the counterparties in the transaction. Market participants refer to notional principal because, unlike bonds or other conventional credit instruments, these types of derivatives do not involve an exchange of principal. Rather, the parties state the principal amount only as a basis for calculating the sizes of the interest related payments that they exchange. In this application, principal is only a reference point or idea – hence the term. Also called the notional principal balance.

Option ARM – an alternative or nontraditional mortgage product where the borrower may choose from several payment amounts. The payment options often include amounts that allow for negative amortization, interest-only, or amortizing payments.

Option Adjusted Spread (OAS) – A measurement of investment return that measures the return from the investment after deducting the value of any embedded options given up. OAS calculations separate underlying security cash flows. The cash flows are discounted at mutually independent discount rates appropriate to expected maturity. The discount rates are derived from a benchmark yield curve representing the currently available (spot) yields for risk-free investments (typically U.S. Treasury obligations) or sometimes LIBOR of various maturities. OAS is quoted as a spread expressed in basis points.

Optional Delivery Commitment – See Best efforts commitment.

Origination Fee – The fee a lender charges to prepare documents, make credit checks, and inspect the property being financed. Origination fees are usually stated as a percentage of the face value of the loan.

Overage – The amount of yield (interest and discount points) provided in a new mortgage that exceeds the minimum yield required by a mortgage lender or wholesaler.

Overage Pricing – Selectively increasing the price (interest rate or origination fees and points) of a mortgage loan above the bank's standard rate to certain customers. These activities have the potential to result in disparate treatment of and disparate impact against consumers on a prohibited basis.

Over-the-counter (OTC) Market – The market created by dealers trading securities electronically linked versus on an organized exchange.

Pair-off Arrangement – A method to offset a commitment to sell and deliver mortgages. In this transaction, the seller liquidates its commitment to sell (forward sales contract) by entering into a commitment to purchase the product sold or by paying the counterparty a fee. The amount of this pair-off offset amount equals the impact of the market movement on the price of mortgages covered under the commitment.

Pair-off Fee – See pair-off arrangement.

Participation Certificate (Freddie Mac PC or FHLMC PC) – A mortgage pass-through security issued by the FHLMC that is backed by a pool of conventional mortgages purchased from a seller. The seller **typically** retains a 5 percent to 10 percent interest in the pool.

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Pass-through or Pass-through Certificate (PC) – A mortgage-backed security in which principal and interest are passed through to the investors as received. The mortgage collateral is held by a trust in which the investors own an undivided interest.

Pass-through Rate – The interest rate paid to the investors who purchase mortgage loans or mortgage-backed securities. Typically, the pass-through rate is less than the coupon rate of the underlying mortgages.

Payoff Letter – A statement detailing the unpaid principal balance, accrued interest, outstanding late charges, legal fees, and all other amounts necessary to pay off the lender in full.

Pipeline – In mortgage lending, loan applications in process that have not closed.

PITI – Principal, Interest, Taxes, and Insurance – The payment a borrower must make to cover the principal and interest on the loan as well as the amounts needed for the escrows amounts to pay taxes and insurance.

PMI (Private Mortgage Insurance) – Insurance written by a private company protecting the mortgage lender against financial loss occasioned by a borrower defaulting on the mortgage. See also Mortgage Insurance.

Pool – A collection of mortgage loans with similar characteristics.

Pool Factor – The outstanding mortgage pool principal balance divided by the original principal balance.

Portfolio Lender – A company that holds loans in portfolio rather than selling them in the secondary market.

Positive Carry, also known as **positive spread** – Circumstance where the cost of financing an investment is less than the return obtained from that investment. In warehousing, positive carry results when the interest rate paid for short-term warehouse financing is less than the interest rate earned on the mortgages held in the warehouse.

Positive Convexity – A particular type of instability in the duration of an instrument. Positive convexity means that as yields rise, duration declines. Graphically, this is seen as a price/yield curve for which the price at very low and very high yields exceeds the price indicated by a straight, tangent line. For an instrument with positive convexity, duration overstates the interest rate sensitivity. If convexity is low, that is, if the price/yield relationship is close to a straight line, duration is stable. If convexity is high, duration is unstable. The greater an instrument's convexity, the less accurate duration will be.

Preliminary Title Search – A title search by a title company prior to the issuance of a title binder or commitment to insure.

Prepayment – The payment of all or part of a loan before it is contractually due.

Prepayment Penalty – A fee that must be paid to the lender if the borrower prepays a loan within a defined time period.

Prepayment Speed – See also CPR, PSA, and SMM. The rate at which mortgage prepayments occur or are projected to occur, expressed as a percentage of the outstanding principal balance.

Price – For MBS and other investments, it represents the percentage relationship between the amount paid for an instrument and the face value of that instrument with par equal to 100. The amount over par reflects a premium and the amount under par a discount.

Price Level Adjusted Mortgage – A mortgage loan in which the interest rate remains fixed but the outstanding balance is adjusted for inflation periodically using an appropriate index such as the consumer price index or cost-of-living index. At the end of each period, the outstanding balance is adjusted for inflation, and monthly payments are recomputed based on the new balance.

Primary Market – For a mortgage lender, the market in which it originates mortgages and lends funds directly to homeowners.

Primary Servicer – The primary servicer responsibilities include payment collection, cash management, escrow administration, customer service, and investor reporting. The primary servicer should maintain effective systems to report loan activity directly to the trustee and/or investor, or when in place, to the master servicer, who oversees and monitors the primary servicer's performance.

Prime Rate – The interest rate commercial banks charge their most creditworthy customers for short-term loans and it is used as an index for many types of other loans.

Principal-Only Mortgage Strips (PO Strip) – A PO strip is the principal portion of a collateralized mortgage obligation. A PO strip has positive convexity and a long duration. Its yield increases as prepayments increase, making it an effective vehicle to hedge MSRs.

Private Mortgage Insurance (PMI) – See PMI.

Production Scoring System – A system that ties quality control issues to the prices paid for the production. Whether the loans are produced through retail or wholesale methods, there is a price paid for that production. The scoring system set quality control standards for the production are to meet and holds them accountable by adjusting the price paid (fee paid originators, underwriters, closers, etc). When dealing with brokers, this may be referred to as a broker scorecard.

PSA – (Public Securities Association) prepayment model – A standard of measurement of the projected annual rate of prepayment for a mortgage loan or pool of loans. A 100 PSA prepayment rate assumes that loans prepay at a 6 percent annual rate after the 30th month of origination. From origination to the 30th month, the annualized prepayment rate increases in a linear manner by 0.2 percent each month (6 percent divided by 30). See also CPR, SMM.

Quality Control – In mortgage banking, policies and procedures designed to maintain optimal levels of quality, accuracy, and efficiency in producing, selling, and servicing mortgage loans.

Rating Agency – A company that assigns credit ratings for issuances of certain types of debt obligations, including mortgage and asset backed securities that can be traded on a secondary market. Credit ratings for regulatory purposes must be issued by "Nationally Recognized Statistical Rating Organizations," or NRSRO's, a designation granted by the SEC indicating that the issuer produces credible and reliable ratings.

Rate Sensitive – The exposure of either the bank's earnings or its market value to fluctuations caused by changes in prevailing interest rates.

Real Estate Mortgage Investment Conduit (REMIC) – A pass-through tax entity for issuing multi-class mortgage-backed securities, which allows the issuer to treat the security as a sale of assets for tax and accounting purposes. Most CMOs are issued as REMICs.

Real Estate Owned, REO – Property a lender acquires as the result of foreclosure.

Receiver Swaps – Interest rate swaps where the institution receives a fixed payment and pays a floating payment normally tied to short-term LIBOR. Commonly used as a part of an MSR hedge program.

Recourse Servicing – Mortgage servicing in which the company servicing a mortgage has assumed the financial risk in the event the borrower defaults on the loan.

Registered Agent – a mortgage loan producing entity that has contracted with an investor to generate loans for that investor to a specified standard in return for a set fee per loan.

Regulation AB – Regulation AB and the related rules governing offerings of asset-backed and mortgage-backed securities that were adopted by the Securities and Exchange Commission in December 2004 provide a consolidated, comprehensive set of registration, disclosure, and reporting requirements for these securities. The rules require extensive additional disclosure in asset-backed security prospectuses, including expanded descriptions and financial disclosure regarding transaction parties and static pool data for portfolios and prior securitizations. The rules include, among other things, requirements for additional periodic reports and new standards for assessment of servicing compliance and the related accountants' attestation.

Regulation B – Federal Reserve regulation prohibiting discrimination against consumer credit applicants, and establishing guidelines for collecting and evaluating credit information.

Regulation Z – Regulation drafted by the Federal Reserve Board to implement the Truth-In – Lending Act, requiring full written disclosure of the credit portion of a purchase, including the annual percentage rate.

Relative Value – A phrase used to refer to whether or not a security's price is relatively cheap, relatively fair, or relatively rich (expensive) compared to prices for other securities.

Remittance – Monetary payment transferred by a loan customer to a lender.

RESPA – The Real Estate Settlement Procedures Act of 1974 (RESPA) (12 USC 2601-17), which became effective on June 20, 1975. The act requires lenders, mortgage brokers, or servicers of home loans to provide borrowers with pertinent and timely disclosures of the nature and costs of the real estate settlement process. The act also protects borrowers against certain abusive practices, such as kickbacks, and places limitations upon the use of escrow accounts.

Reps and Warranties, Representations and Warranties – This term is used to cover the representation and warranties of the seller to the buyer of loans. Standard reps and warranties generally cover item such as the loans are all the type presented (all 30-yr fixed and not arms), they all meet the documentation and underwriting requirements of the buyer, and there is no fraud.

Retail Production – Mortgage loan production for which the origination and underwriting process was handled exclusively by the bank or a consolidated subsidiary of the bank.

Reverse Mortgage – A type of loan used to convert a borrower's home equity into one or more cash payments while the borrower retains ownership of the property (continuing to live there). Repayment of the loan is deferred until the borrower is no longer living in the home. Among other qualification criteria, the reverse mortgage is presently only available to borrowers age 62 and older.

Risk Management – Controlling the probability, and/or the severity, of a potential adverse event so that the consequences of that event are within acceptable limits. Since all risks have, by definition, the potential to generate losses, and since capital is the ultimate protection against failure resulting from losses, the underlying basis of risk management is equivalent to managing solvency risk.

Roll of a contract – cost of the drop – representing the cost to roll out of one forward sale commitment position and into a later dated position of otherwise similar terms.

Scenario Analysis – An outline of a hypothetical situation or chain of events. For example, an economic forecast, best and worst case forecasts, or stressed events. Typically, a scenario analysis is the process of examining the anticipated performance of an investment or financial positions under a variety of alternative potential interest rate environments. In mortgage banking pipeline management, scenario analysis is the process of modeling the anticipated effects of interest rate changes on income or fair value of the mortgage banking operation (pipeline and warehouse positions). Scenario analysis incorporates assumptions for changes in strategies of the institution's managers and its customers' behavior that are anticipated with the modeled changes in interest rates.

Seasoned Mortgage Portfolio – A mortgage portfolio that has reached its peak delinquency level, generally after 30 to 48 months.

Secondary Mortgage Market – The market in which lenders and investors buy and sell existing mortgages.

Securitization – The process and the result of pooling financial assets together and issuing liability and equity obligations backed by the resulting pool of assets to convert those assets into marketable securities. Any type of financial asset can be securitized. Securitized mortgage obligations may be called mortgage-backed securities or collateralized mortgage obligations. Securitized nonmortgage assets are typically called asset-backed securities. A single loan or groups of similar loans may be securitized. Loans to be securitized must usually be underwritten with terms and documents that conform to wholesale market standards. For some securitizations, additional credit support, called credit enhancement, may be obtained through insurance, a letter of credit, over collateralization or other means. Many securitizations use multi-tranche (senior/subordinate) structures that allocate the principal and interest cash flows from the underlying assets in patterns that create higher and lower risk securities.

Seller/Servicer – FNMA and FHLMC reference to an entity that meets the requirements to sell and service mortgages for these GSEs.

Sensitivity Tests (Analysis) – A single variant test to see how dependent a forecast, projection or stress test outcome is upon a selected variable or assumption. For example, a secondary marketing manager might perform a sensitivity analysis by examining a range of rate/price risk forecasts to determine the range of possible values for the pipeline and warehouse positions. In that example, the secondary marketing manager would be able to see how sensitive the mortgage pipeline and warehouse positions are to changes in interest rates or mortgage prices.

Servicer – A firm that performs servicing functions, such as collecting mortgage payments, sending statements, or administering borrower escrow accounts.

Servicing, also known as **loan administration (**See also **LSFO)** – A mortgage banking function that includes document custodianship, receipt of payments, cash management, escrow administration, investor accounting, customer service, loan setup and payoff, collections, and the administration of other real estate owned.

Servicing Agreement – A written agreement between an investor and a mortgage servicer stipulating the rights and obligations of each party.

Servicing Fee – The contractual fee due to the mortgage servicer for performing various loan servicing duties for investors.

Servicing Premium Refund – a common clause in many sales agreements that may require the seller to refund the fee paid for the servicing rights if certain conditions occur. (Also, see reps and warranties.)

Servicing Released – A stipulation in a mortgage sales agreement that specifies that the seller is not responsible for servicing the loans.

Servicing Release Premium– SRP – A fee paid to a correspondent originator to entice that loan producer to sell their loan and associated servicing. This represents a significant portion, if not the majority, of the fair value of the MSR associated with that loan.

Servicing Retained – A stipulation in a mortgage sales agreement that specifies that, in return for a fee, the seller is responsible for servicing the mortgages.

Servicing Runoff – Reduction in the principal of a servicing portfolio resulting from monthly payments, mortgage prepayments, and foreclosures. Runoff reduces future servicing fee income and other related cash flows as well as the current market value of the servicing portfolio.

Settlement – The consummation of a transaction. In mortgage lending, the closing of a mortgage loan or the delivery of a loan or security to a buyer. See also closing.

Short Sale – An arrangement entered into between a loan servicer and a delinquent borrower. The servicer allows the borrower to sell the property to a third party at less than the outstanding balance. This saves the servicer the time and expense involved in a foreclosure action. The servicer must normally obtain the approval of the investor before entering into a short sale agreement. See also forbearance.

SMM (Single Monthly Mortality) – SMM is the conditional prepayment rate (CPR) expressed on a monthly basis. See also CPR and PSA.

Special Purpose Entity (SPE) – A legal entity, sometimes a trust or a limited partnership, typically created solely for the purpose of holding assets.

Special Servicer – The special servicer is responsible for maximizing recoveries predominantly on portfolios of subprime, home equity, nonperforming, and other loans that necessitate intensive default-related activities, as well as liquidating real estate owned (REO) assets.

Standby Commitment – An agreement to purchase mortgages at the option of the issuer synonymous with optional delivery or a short put.

Static Pool Analysis – A measure for assessing the performance of a pool of serviced loans by providing a cumulative default and prepayment history for estimating expected future portfolio cash flows and determining the cash yield on servicing assets. Static pool analysis captures information from a specified population of loans originated or acquired during a specified time frame or from a specific origination source and tracks scheduled payments, prepayments, and default frequency. The information is used to determine performance behavior for evaluation of portfolio cash flow dynamics. These statistics can identify high-risk segments of the portfolio of serviced assets and allow management to determine why a segment failed to perform as profitably as expected.

Stripped MBS – An instrument that segregates the principal from interest to make separate interest only and principal only MBS.

Subprime Loans, also known as **nonprime loans** – Generally, loans whose borrowers have weakened credit histories, reduced repayment capacity, or incomplete credit history.

Sub-servicer – A company that performs the on-going servicing activities for a mortgage or pool of mortgages under the terms of an agreement with the contractually responsible servicer.

Sub-servicing Agreement – An agreement between the owner of the servicing and the party doing set servicing tasks.

Surety Bond – Written evidence of a third party, called the surety, that will be primarily liable for a debt in the case of default.

TBA – Acronym for "To be Announced." Most new MBS pass-through bonds can be purchased on a TBA basis.

Table Funding – Mortgage transaction where the broker or third-party originator (TPO) closes the mortgage in its own name for simultaneous assignment to an investor who advanced money for the funding at closing.

Tax Liens – A claim against property for unpaid taxes.

Teaser Rate – See Introductory rate.

Third Party Originator (TPO) – See Broker or Correspondent.

Third-party Servicing (Subservicer) – Mortgage loan Servicer that performs the on-going servicing activities for a mortgage or pool of mortgages under the terms of an agreement with the contractually responsible servicer.

Title I Loan – Under the Title I loan insurance program, established by Title I of the National Housing Act in 1934, lenders make loans from their own funds, and HUD insures the lender against loss if the borrower defaults on the loan. Title I loans are made for property improvement or manufactured home and lot purchase. Title I loans are also used as part of state and local community revitalization programs.

VA – See Veterans Administration.

VA Loan – A loan made through an approved lender and partially guaranteed by the Veterans Administration.

VA No-bid – An option, which allows the Veterans Administration (VA) to pay only the amount of its guarantee on a defaulted mortgage loan, leaving the investor with the title to the foreclosed property. The VA must exercise this option when it is in the government's best interest. No-bid properties become other real estate owned.

Value at Risk (VAR) – Value-at-Risk is a general measure of risk developed to equate risk across products and to aggregate risk on a portfolio basis. VAR is defined as the predicted worst-case loss with a specific confidence level (for example, 95 percent) over a period of time (for example, 1 day). See earnings at risk for an alternative measure of interest rate risk.

Vantage Score – A credit risk score that was developed through the utilization of information from the three national credit-reporting companies. In the past, the agencies had each used their own proprietary formulas to create their own scores. With vantage score, a single methodology is used to create the scores.

Veterans Administration (VA) – The traditional name for the Department of Veterans Affairs, now a cabinet-level agency of the U.S. government. The Servicemen's Readjustment Act of 1944 authorized the VA to offer the Home Loan Guaranty program to veterans. The program encourages mortgage lenders to offer long-term, low down payment financing to eligible veterans by partially guaranteeing the lender against loss.

Vintage Analysis – This tool for analyzing performance trends entails review of actual serviced portfolio behavior and its implication for future default, prepayment, and delinquency rates that impact the economic value of MSAs. This information can be compared with historical changes in underwriting standards, credit-scoring processes, and new product development to ensure that loan pricing is consistent with perceived product risk.

Volatility (Vega) – Statistical term to quantify the dispersion of variables such as rates or prices around the mean. A measure of the variability of the price of an underlying financial instrument, rate, commodity, or currency. Volatility only measures the quantity of the change – not the direction. Volatility is not influenced by the direction of the change; it does not matter whether the price rises or falls. Vega is the change in an option's price resulting from changes in the volatility of the price for the underlying.

Warehouse (loan) – In mortgage lending, this refers to newly closed loans that are funded and awaiting sale or delivery to an investor.

Warehouse Financing – The short-term borrowing of funds by a mortgage banker, collateralized by warehouse loans. This form of interim financing is used until the warehouse loans are sold to a permanent investor. This financing can take the form of a repurchase agreement, an agreement between the mortgage banker and a lender, whereby the former sells the latter loans at a specified price with a commitment to buy them back at a later date for another specified price.

WARM – See weighted average remaining maturity.

Weighted Average Coupon (WAC) – The weighted average of the gross interest rates of the mortgages in a mortgage pool. The balance of each mortgage is used as the weighting factor.

Weighted Average Life (WAL) – The average number of years for which each dollar of unpaid principal on a loan or mortgage remains outstanding. Once calculated, WAL tells how many years it will take to pay half of the outstanding principal.

Weighted Average Maturity (WAM) – The weighted average of the remaining terms to maturity of the mortgages in a mortgage pool as of the security issue date.

Weighted Average Remaining Maturity (WARM) – The weighted average of the remaining terms to maturity of the mortgages in a mortgage pool subsequent to the security issue date. The difference between the weighted average maturity and the weighted average remaining maturity is the weighted average loan age (WALA).

Yield Curve – A graphic representation of market yields for fixed income securities plotted against the maturities of these instruments.