

Investment Securities

Investment securities typically comprise a significant segment of a savings association's portfolios interest-earning assets ([Handbook Section 430](#)) and liquid assets ([Handbook Section 530](#)). As such, savings associations must conduct investment securities activities prudently and within the bounds of clear and well-reasoned policies. Savings associations should have diversified portfolios that achieve an appropriate balance between risk and return.

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

LINKS

[Program](#)

[Questionnaire](#)

[Appendix A](#)

[Appendix B](#)

[Appendix C](#)

In addition, savings associations should establish appropriate risk management systems and controls to monitor and control investment portfolio activity and performance. Savings associations must account for investment securities in accordance with generally accepted accounting principles. The appropriate accounting for investment securities can sometimes be complex especially in times of financial market stress, crisis, or collapse as markets have recently experienced.

Current Financial Crisis

The financial crisis of 2007–2009 began in July 2007. The financial crisis made borrowing and equity raising harder. The financial crisis had many effects, including the following:

- Overall tightening of credit.
- Financial markets experienced steep declines.
- Liquidity problems.
- Devaluation of assets.

The Emergency Economic Stabilization Act of 2008 states it is, “An Act to provide authority for the Federal Government to purchase and insure certain types of troubled assets for the purposes of providing stability to and preventing disruption in the economy and financial system and protecting taxpayers, to amend the Internal Revenue Code of 1986 to provide incentives for energy production and conservation, to extend certain expiring provisions, to provide individual income tax relief, and for other purposes.”

The Act is an attempt to restore liquidity to the credit markets.

Rating Agencies

Many investors relied on credit agencies to do the due diligence necessary when buying the securities discussed in this section, but the credit agencies did not take into account the different underwriting standards used for the underlying products. The performance of many of these securities relies on the performance of the underlying pool of assets. While some securities have high-quality loans or investment securities as collateral, other securities have poor and marginal quality assets as collateral.

Credit risk can result in actual credit losses and write-downs or widening credit spreads, which reduces the market value of the securities. Recently, losses often involved securities considered “investment grade” (sometimes even AAA) by Nationally Recognized Statistical Ratings Organizations (NRSROs), such as Moody’s, Standard & Poor’s, or Fitch. The limitations of the ratings process and the lag between credit deterioration and a ratings downgrade mean that neither associations nor examiners should rely solely on ratings when assessing the credit risk of investment securities, especially those securities with more complex structures.

This section outlines the following areas:

- Role of the Investment Portfolio
- Investment Risks
- TB 13a Requirements
- Board and Senior Management Oversight
- Analyzing Individual Securities
- Use of Investment Consultants
- Reporting and Accounting For Securities
- Evaluating Structured Investment Securities

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

- [Appendix A](#) – Total Return Analysis
- [Appendix B](#) – Types of Investment Securities and Associated Risks
- [Appendix C](#) – Glossary

The Glossary contains background information and includes many terms that you may come across when reviewing the investment area.

ROLE OF THE INVESTMENT PORTFOLIO

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

Investment and Portfolio Objectives

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

Investment Risk versus Portfolio Risk

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

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

Permissible Investments and Other Regulatory Requirements

Savings associations have the responsibility to perform a thorough analysis of the quality of any security they buy. Before buying any investment security, management must first determine that the investment is permissible and meets other applicable regulatory requirements. Section 5 of the Home Owners' Loan Act (HOLA) outlines permissible investments for federal savings associations.

Subject to certain restrictions and limitations, the following types of investments, while not an exhaustive list, are permissible investments for savings associations:

- Bankers' bank stock
- Business development credit corporations
- Commercial paper
- Corporate debt securities
- Community development equity investments
- Deposits in insured depository associations
- U.S. Treasury securities
- Securities and instruments issued by U.S. Government-sponsored enterprises
- Foreign assistance investments
- HUD-insured or guaranteed investments
- Liquid assets such as cash and deposits at Federal Reserve Banks and Federal Home Loan Banks
- Mortgage-backed securities
- Mutual funds (with limitations)
- National Housing Partnerships Corporation and related partnerships and joint ventures
- Open-end management investment companies registered with the SEC
- Small business-related securities
- State and local government obligations (see discussion of municipal bonds in [Appendix B](#))

See [Appendix B](#), Types of Investment Securities and Associated Risks, for information on specific types of investments.

Other applicable regulatory requirements include:

- 12 CFR 560.40, Commercial Paper and Corporate Debt Securities

- 12 CFR 560.32, Pass-Through Investments
- TB 13a, Management of Interest Rate Risk, Investment Securities, and Derivative Activities

Capital Considerations

You must ensure that savings associations are correctly risk weighting downgraded investment securities. The capital implications for downgraded securities can be severe, particularly if the security is in a non-senior position. Refer to [CEO Memo 307](#) entitled “Risk Weighting Downgraded Securities” (dated June 25, 2009).

The capital rules allow institutions the option to risk weight mortgage and asset backed securities under the optional ratings based approach (RBA).

Corporate debt securities are NOT eligible for the RBA.

The RBA allows for a 20% risk weight on AAA or AA rated securities; a 50% risk weight on A rated securities; a 100% risk weight on BBB rated securities; and a 200% risk weight on BB rated securities.

Once a security is rated more than one category below investment grade (B or below) or is unrated, it is no longer eligible for the RBA. The risk weight is then based on the position of the security within the securitization structure:

- If the security is in the most senior position in terms of credit risk and is no longer eligible for the RBA (is rated B or below, or is unrated), savings associations generally must use the risk weight appropriate for the underlying assets. The risk-weight would be 50% if the underlying mortgage loans are qualifying single or multifamily mortgage loans (QML). Otherwise the risk weight is 100% for nonqualifying mortgage loans (NQML) or commercial and consumer collateral.
- Under the general risk-based capital rules, the capital treatment for nonsenior securities is covered in the recourse, direct credit substitute, and residual interest rules. A purchased subordinated (nonsenior) mortgage or asset-backed security would be included in the definition of a direct credit substitute because the risk assumed on the subordinated security exceeds its pro rata share of the credit risk in the securitization structure (refer to the definition of direct credit substitute in section 567.1). Once a nonsenior position is downgraded such that it is no longer eligible for the RBA (B or below, or unrated), then a savings association must use the “gross-up” approach. In that case the savings association must risk weight the face value (i.e., amortized cost basis) of its mezzanine position plus the proportional par value of all of the

more senior positions it supports by the risk weight appropriate for the underlying obligor or collateral (100% for most assets)¹.

Risks Involved with Securities

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

- Market risk (including interest rate risk)
- Credit risk
- Prepayment risk
- Call risk
- Option risk
- Liquidity risk
- Operational risk
- Settlement risk

An association's sole reliance on outside ratings for material purchases of complex securities is an unsafe and unsound practice.

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

Quality of Securities

The association has the responsibility to perform a thorough analysis of a particular security. Risk increases proportionately with the complexity of the security and as the rating of the security moves down the rating scale. Associations should determine the quality and long-term suitability of investments, especially with respect to complex securities with lower investment grades (for example, Moody's BBB) or securities with different ratings from different rating agencies. An association's sole reliance on outside ratings for material purchases of complex securities is an unsafe and unsound practice.

¹ As with senior positions, when determining the appropriate risk weight to apply to the "grossed up" asset, for mortgage backed securities where the underlying assets represent both qualifying and non qualifying mortgage loans, the savings association must risk weight the non qualifying portion at 100%.

Marketability of Securities

One requirement for savings associations that invest in corporate debt securities is that the securities must be able to be sold with reasonable promptness at a price that corresponds reasonably to their fair value (12 CFR 560.40(a)(2)(i)). It is not required that savings associations invest only in securities, including trust preferred securities sold through a public offering. Rather, a savings association must demonstrate that a viable market exists for the securities to satisfy the regulatory marketability requirement.

INVESTMENT RISKS

Risk Factors

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

Other considerations include:

- Investment horizon
- Taxes
- National, regional, and local economic indicators and conditions

Changes in the economic climate will affect all associations. Effective monitoring of economic and money market trends is key to a sound risk management/risk reduction strategy. Effective risk reduction minimizes the negative impact of these trends, while accentuating the positive impact.

Market Risk

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

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

A savings association can control the degree of interest rate risk in its investment portfolio by managing the weighted average maturity of the securities in its portfolio. In general, the longer the weighted average maturity of a portfolio, the greater the interest rate risk. Similarly, a savings association can also

control interest rate risk exposure by managing the duration of the portfolio. Duration is a more precise measure of the interest rate sensitivity of a security or a portfolio of securities than weighted average maturity. Duration is a measure of the average time required to receive all the cash flows (interest and principal) from a security or a portfolio of securities. The higher a portfolio's duration, the greater the losses when interest rates rise. In general, longer maturities and higher durations carry more risk. For more information on interest rate risk, see [Examination Handbook Section 650](#).

Interest Rate Risk

The high-risk nature of certain investment securities stems from their price volatility caused by changes in interest rates, market expectations, and the credit quality of the issuer. [TB 13a](#) establishes policies for savings associations to follow for interest rate risk limits, required systems for measuring and monitoring interest rate risk, stress testing, and recordkeeping. Savings associations should follow the guidance in [TB 13a](#) when structuring their portfolios and when investing in complex and interest sensitive investment securities and derivative investment products.

Credit Risk

Holding below-investment grade securities exposes savings associations to risk of loss due to significant credit risk of such securities compared with that of investment quality securities. Associations may not purchase below-investment grade corporate debt securities.

Credit risk is the risk that an issuer may default (fail to pay) on principal or interest payments, or that a collateralized security (Collateralized Mortgage Obligation (CMO), Mortgage Backed Security (MBS), Asset Backed Security (ABS), etc.) has insufficient collateral credit support to maintain full payments of principal and interest. Savings associations can manage the credit risk of an investment portfolio by using the following techniques:

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

The benefits of portfolio diversification can break down during periods of financial stress. It is especially important that associations consider concentrations in the investment portfolio. Especially relevant to consider are groups of assets exposed to similar macroeconomic or market scenarios such as rising interest rates, widening credit spreads, loss of market liquidity, and weakness in a particular asset category, such as mortgages.

Savings associations can assess the overall quality of individual securities by analyzing the financial condition of the issuer and other related factors. Such factors include the quality of management, competitive conditions in the industry, economic conditions, and so forth. Savings associations should assess data on the performance of the underlying collateral for collateralized securities.

The necessary information to perform a prepurchase analysis to assess corporate bonds and nonagency CMOs and ABSs should be available in the prospectus for newly issued securities. For previously issued

securities, associations should supplement this information with current credit information on the issuer or underlying collateral pool. Reviews and analyses from NRSROs should be available from the seller of the security (if the association lacks a subscription to the NRSRO). Most of the information is available on Bloomberg. Even if the association does not have access to Bloomberg, its broker can send the necessary screen shots; however, it is important that the association not overly rely on obtaining information from the selling broker.

Many investors rely on credit rating agencies to measure the quality of corporate and municipal bonds as well as collateralized securities. The most widely used bond rating agencies are Standard & Poor's Ratings Services and Moody's Investors Service. Other rating agencies include Fitch Ratings, Dominion Bond Ratings Service, A. M. Best U.S., and Egan-Jones Ratings Company.

Associations should not use ratings as a substitute for its own thorough underwriting analyses. Associations should research the underlying collateral pools on CMOs and monitor performance of the collateral.

Associations should not use ratings as a substitute for its own thorough underwriting analyses.

In addition, associations should be aware of the danger of relying solely on credit rating agencies. Be aware that ratings by credit rating agencies can be a lagging indicator of emerging credit problems, particularly for collateralized securities where collateral performance can change significantly over time.

Savings associations may only invest in investment grade bonds. Investment grade bonds are those in one of the four highest rating categories by a NRSRO. Savings associations, by statute, may not invest in noninvestment grade bonds. The table below shows investment-grade and noninvestment grade ratings of these agencies.

Bond-Quality Ratings

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

Savings associations that invest in corporate bonds should obtain current bond ratings before purchase and should review the ratings of their holdings on a regular basis. For detailed information on bond ratings, see [Appendix B](#), Types of Investment Securities and Associated Risks.

Below Investment Grade Securities

Holding below-investment grade securities exposes savings associations to risk of loss due to the significant credit risk of such securities compared with that of investment quality securities. Associations may not purchase below-investment grade securities.

For both rated and nonrated issues, savings associations should develop a system of periodic credit review. Refer to [Examination Handbook Section 260](#), Classification of Assets.

Asset Classification of Distressed Debt Securities

For determining the classification status of distressed debt securities, you should apply the guidelines contained in [Examination Handbook Section 260](#) and the “Uniform Agreement on the Classification of Assets and Appraisal of Securities Held by Banks and Thrifts” ([CEO Memo 200](#) dated June 15, 2004), which uses external credit ratings as a general proxy for adverse classification definitions. The recent Financial Accounting Standards Board accounting rule adjustments for impairment calculations do not change the analysis performed to assign asset classifications. You should continue to review the reasonableness of impairment calculations, which are reflected as “Loss” if taken in the current period.

A “substandard” asset, by definition, has a well-defined weakness, or weaknesses, that jeopardize its timely repayment according to its contractual terms. Such assets are characterized by the distinct possibility that the institution will sustain some loss if the deficiencies are not corrected. Many downgraded asset-backed securities exhibit credit risk and deteriorating collateral performance, and you should weigh such asset quality concerns as contained in external rating downgrades in determining asset classification status. Nonetheless, while giving deference to external ratings, you should review the facts and circumstances of each situation. The Uniform Agreement affords you some flexibility to either pass a subinvestment grade debt security or classify an investment grade debt security, as appropriate.

Generally, investment grade debt securities without an “Other-Than-Temporary Impairment” (OTTI) and with current ratings are not subject to adverse classification. However, rapid deterioration in the performance of the underlying collateral and changes in the structure and allocation of losses in complex structured products may justify departure from the general rules in the Uniform Agreement and allow for adverse classification of an investment grade security.

Generally, subinvestment grade debt securities are classified substandard. Subinvestment quality debt securities are those in which the investment characteristics are distinctly or predominantly speculative. This group includes debt securities rated below the four highest rating categories (i.e., below BBB), unrated debt securities of equivalent quality, and defaulted debt securities.

Under generally accepted accounting principles (GAAP), as discussed earlier, as savings association must assess whether a decline in fair value below amortized cost of a security is a “temporary” or “other than temporary” impairment². For subinvestment quality “Available for Sale” (AFS) debt

² See CEO Memo 320, issued September 3, 2009, “Accounting Considerations Related to Other-Than-Temporary Impairment of Securities,” for a thorough discussion of these issues.

securities with a “temporary” impairment under GAAP, the amortized cost basis of the security rather than fair value (the amount at which the security is carried on the balance sheet) is classified substandard.

For subinvestment quality debt securities with an “other than temporary impairment,” the allocation of the impairment between loss and substandard classifications depends largely on the institution’s intent to sell. In addition, you must also assess if it is “more likely than not” that the institution will be required to sell the security before recovery of its amortized cost basis, less any credit losses. If the institution’s intent is to sell the security or the institution will be required to sell the security, the entire impairment would be classified as loss. If not, the portion of the impairment attributed to credit loss would be classified as loss; the noncredit loss portion of the impairment typically would be classified as substandard unless a more severe classification is warranted by the specific facts and conditions of the particular case.

Prepayment Risk

Prepayment risk is the risk that an issuer may repay all or part of the principal on a bond prior to maturity. Prepayment risk is a particular concern with MBS. Issuers back MBS with mortgages that borrowers can prepay or refinance. Prepayments reduce the principal of the MBS and the issuer returns the cash flows from prepayments to the holders of the MBS. The risk is that the bonds will repay at an inopportune time, such as when interest rates are falling. Periods of falling interest rates usually generate widespread prepayments. If the investor wants to reinvest the proceeds from the prepayments, the prevailing yields on newly issued bonds are generally lower than the investor previously earned on the bond that prepaid. Further, premiums paid for higher coupon MBS that prepay faster than anticipated will be amortized through income over a shorter period of time, thus reducing the yield of the investment.

Call Risk

Call risk is the probability of loss due to redemption of a debt security by its issuer before its maturity date. The adverse effects of call risk are similar to those of prepayment risk, but the reduction in principal is absolute and immediate.

Option Risk

Option risk is the risk that a change in prevailing interest rates will have an adverse impact on earnings or capital because of changes in the timing of cash flows of an investment. The most common option risk is prepayment risk. In many cases, a favorable nominal return is largely the result of excessive option risk. See also, negative convexity in [C](#), Glossary.

Liquidity Risk

Liquidity risk is the risk to a savings association’s earnings and capital that arises from its inability to meet obligations in a timely manner, without incurring unacceptable loss. Management must ensure that sufficient funds are available at a reasonable cost to meet potential funding demands from

depositors and borrowers as well as meeting operational and lending needs. The most common signs of a possible liquidity problem include rising cost of funds, demand by creditors for repayment or additional collateral, ratings downgrades, credit line decreases, and the reduction of availability of long-term funding. On occasion, the liquidity of entire securities markets can seize up due to financial crisis or panic. For instance, nonagency CMOs, mortgage mutual funds, and especially, auction rate securities have recently provided examples. In addition, certain types of securities are inherently illiquid, such as those of small firms and securities with unusual features. With respect to securities, liquidity risk is the risk that a security will be difficult to sell at a reasonable price within a reasonable time. By law, savings associations may not invest in corporate securities that they cannot sell with reasonable promptness at a price that corresponds reasonably to the fair value of the security. See 12 CFR § 541.7.

Also, see [Section 530, Liquidity Risk Management](#).

Operational Risk

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people, and systems, or from external events. The definition includes legal risk, which is the risk of loss resulting from failure to comply with laws, as well as prudent ethical standards and contractual obligations. Operational risks include natural disasters such as flooding or earthquakes as well as large rogue trading losses.

Settlement Risk

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

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

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

Associations should also pay attention to documents defining disposition of collateral pledged to a counterparty. Contracts that permit re-pledging of collateral with third parties can be a large problem, especially during times of significant financial disruption.

TB 13A REQUIREMENTS

You should ensure that the savings association conducts its investment activities in accordance with [Thrift Bulletin 13a](#). Part III of TB 13a identifies, in broad terms, the types of analysis a savings

association should undertake before making securities investments. A savings association should exercise diligence in assessing the risks and returns associated with investment securities, including expected total return. For a discussion of total return, see [Appendix A](#), Total Return Analysis. As a matter of sound practice, before taking an investment position, an association should:

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

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

Complex and Exempt Securities

[TB 13a](#) defines exempt securities as noncallable, “plain vanilla” instruments such as mortgage pass-through securities, fixed rate securities, and floating rate securities. Complex securities include any collateralized mortgage obligation, real estate mortgage investment trust, callable mortgage pass-through security, stripped mortgage-backed security, structured note, and any security not meeting the definition of an exempt security. Complex securities also include securities such as collateralized bond obligations or collateralized loan obligations, where the cash flows from the asset pools are divided into several tranches that have different repayment and collateral coverage and investment ratings, or that demonstrate other nonstandard features such as having acceptable investment ratings for part of the investment such as the principal amount, but are unrated as to the payment of interest.

Complex securities require a high degree of technical expertise to understand how they might behave under various interest rate, prepayment, and economic conditions.

Complex securities require a high degree of technical expertise to understand how they might behave under various interest rate, prepayment, and economic conditions. Because the market for many complex securities is thin, it is often difficult to liquidate them at a price that reasonably reflects their fair value.

Risk Reduction

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

BOARD AND SENIOR MANAGEMENT OVERSIGHT

The board and senior management should understand their oversight responsibilities regarding the management of investment activities. An appropriate subcommittee of the board may carry out board oversight. In particular, the board, or an appropriate subcommittee of board members, should take the following steps:

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

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

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

- Review periodically the association's investment risk management systems, including related policies, procedures, and risk limits.

Adequate Policies and Procedures

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

- Identify the staff authorized to conduct investment and derivatives activities, their lines of authority, and their responsibilities.
- Identify the types of authorized investments and investment instruments such as required credit quality and maturity range.
- Specify the required type and scope of prepurchase analysis for various types or classes of investment securities.
- Define, where appropriate, position limits and other constraints on each type of authorized investment, including derivatives. The policy may include specific guidelines on how the association may use such instruments.
- Identify dealers, brokers, and counterparties that the board or a board-designated committee authorizes the association to conduct business with and identify credit exposure limits for each authorized entity.
- Ensure that contracts are legally enforceable and documented correctly.
- Establish a code of ethics and standards of professional conduct applicable to personnel involved in investment and derivatives activities.
- Define procedures and approvals necessary for exceptions to policies, limits, and authorizations. This could include what securities savings associations can pledge for repurchase or use to collateralize public funds on deposit.

Monitoring and Reporting

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

Savings associations should have accurate, informative, and timely management information systems, both to inform management and to support compliance with investment policy. Report style, contents, and format will vary among associations, depending on size and complexity of the savings association.

Additional reports may be required depending upon the savings association's circumstances. The information system should be commensurate with the size and complexity of the savings association, and adequate to address its operational requirements. The board of directors and senior management should receive reports for monitoring investment risk on a timely basis.

Recordkeeping

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

Internal Controls

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

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

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

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

- Does the savings association maintain risk exposures at prudent levels?
- Does the savings association employ the risk measures that are appropriate to the nature of the portfolio?

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

ANALYZING INDIVIDUAL SECURITIES

In addition to the initial due diligence review of the investment, management has an ongoing responsibility to monitor the investment, including cash flows, collateral quality, and the performance of the underlying assets of the security at least quarterly to determine the effect of any changes to the association's investment and adjust accordingly, if necessary.

With respect to the purchase of individual securities, management should:

- Determine that the issuer, together with any guarantors, has the financial capacity and willingness to meet the repayment terms of the investment.
- Analyze the legal structure of the investment to determine that the association has the authority to make such an investment.
- Analyze the expected performance of the issuer and any underlying assets. This should include a cash flow analysis prepared by the association or a party engaged by the association other than the seller/broker.
- Analyze the security's expected performance under various loss and interest rate scenarios, its expected effect on the overall interest rate risk profile of the association, and a review of all covenants of any trust agreement that apply to the senior tranches.

- Analyze the entire security. If the security has separate tranches with unequal payments, the analysis should include the effect of the payment priority on the investment purchased. If the security is pre-funded or includes a revolving period, the analysis should include a review of collateral investment parameters.
- Review and analyze the collateral managers, including their historical performance in managing such funds and their ability to make prudent investments, both when the fund is started and during any revolving period.
- Consider the liquidity and price volatility of the security. Base this on a sensitivity analysis that reflects changes in credit quality, interest rates, and prepayment speeds.

Management should fully document all analyses for your review. You should note any failure to document all analyses in the Report of Examination.

Analysis and Stress Testing

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

Management should thoroughly analyze the various risks associated with investment securities before making an investment.

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

- The structure of the instrument.
- The best case and worst-case scenarios in terms of market interest rates, credit losses on the underlying assets, credit and liquidity spreads, and prepayments.
- How the existence of any embedded options or adjustment formulas might affect the instrument's performance under different interest rate scenarios.
- The conditions, if any, under which the instrument's cash flows might be zero or negative.
- The extent to which price quotes for the instrument are available.
- The instrument's universe of potential buyers.
- The potential loss on the instrument (that is, the potential discount from its fair value) if sold prior to maturity.

- That the issuer, together with any guarantors, has the financial capacity and willingness to meet the repayment terms of the investment.
- That analysis of the legal structure of the investment affirms the association's authority to make such investment.
- How the investment is expected to perform under various loss and interest rate scenarios, the impact on the overall risk profile of the association, and how all covenants of any trust agreement apply to the senior tranches.
- The effect of the payment priority should the security be divided into separate tranches with unequal payments.
- That a review and analysis of the collateral managers includes historical performance to document investment prudence.

Evaluation of New Products, Activities, and Financial Instruments

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

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

- A description of the relevant product, activity, or instrument.
- An analysis of the appropriateness of the proposed initiative in relation to the association's overall financial condition and capital levels and investment expertise.
- Descriptions of the procedures to measure, monitor, and control the risks of the proposed product, activity, or instrument.

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

USE OF INVESTMENT CONSULTANTS

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

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

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

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

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

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

Senior management personnel should supervise the activities of the consultant to ensure conformity to the savings association's investment, liquidity, and interest rate risk management plan. Management

must keep the board of directors informed of the performance of the consultant, through periodic reports.

Senior management should be aware of, and execute its responsibility to perform due diligence on any investment instrument, regardless of the presence or lack of presence of investment consultants. Savings associations have the responsibility to perform a thorough analysis of the quality of any security in which they invest. This is especially true of complex instruments. Prior to committing to the purchase of any investment security, management must first determine that the investment meets applicable regulatory policy requirements, including:

- 12 CFR 560.40, Commercial Paper and Corporate Debt Securities
- 12 CFR 560.32, Pass-Through Investments
- [TB 13a](#), Management of Interest Rate Risk, Investment Securities, and Derivative Activities
- [TB 13a-2](#), Structured Advances

REPORTING AND ACCOUNTING FOR SECURITIES

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

Savings associations must categorize each security as trading, available-for-sale (AFS), held-to-maturity consistent with Accounting Standards Codification (ASC) 320 [Investments – Debt and Equity Securities] formerly FASB Statement No. 115 or at fair value if elected under ASC 825-10-25 [Financial Instruments, Overall, Fair Value Option] formerly FASB Statement No. 159. A savings association should determine, at the time it purchases or originates securities, how to categorize the securities. The savings association should not record securities in a suspense account until it determines the appropriate category. Management should periodically reassess its security categorization decisions to ensure they remain appropriate.

Fair Value Accounting

Fair value accounting is a market-based measurement for determining the value of assets and liabilities on a reporting entity's books. In September 2006, the FASB issued FAS 157 to create a uniform definition of fair value and provide guidance for applying the definition of fair value to promote consistency, comparability, and transparency in fair value measurements. ASC 820 [Fair Value Measurements and Disclosures] formerly FAS 157 is effective for financial statements issued for fiscal years after November 15, 2007, or in the case of nonfinancial assets and liabilities, such as goodwill, for fiscal years after November 15, 2008.

ASC 820 defines fair value as “the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”

ASC 820 only applies when another accounting rule requires or permits a fair value measure for that item. ASC 820 does not introduce any new requirements mandating the use of fair value. There are two major changes in approach:

- Fair value is based on the exit price (for an asset, the price at which it would be sold (bid price)) rather than an entry price (for an asset, the price at which it would be bought (ask price)). This is true regardless of whether the entity plans to hold the asset for investment or for resale.
- ASC 820 emphasizes that fair value is market-based rather than entity-specific.

ASC 820 does not require associations to use fair value on any new classes of assets. It does apply to assets and liabilities that the association carries at fair value in accordance with other applicable rules. The accounting rules on fair value are complex. For financial services, providers must carry some asset classes at fair value, such as derivatives and marketable equity securities. For other types of assets, such as loan receivables and debt securities, it depends on whether the association holds the assets for trading or for investment. Associations must carry all trading assets at fair value. Savings associations must carry loans and debt securities held for investment or to maturity at amortized cost, unless they are deemed to be impaired at which time a loss is recognized. If available-for-sale or held-for-sale, the association must carry these assets at fair value or the lower of cost or fair value, respectively. (ASC 948 [Financial Services – Mortgage Banking] formerly FAS 65 and ASC 310 [Receivables] formerly FAS 114 cover the accounting for loans, and ASC 320 [Investments – Debt and Equity Securities] formerly FAS 115 covers the accounting for securities.)

ASC 820 seeks to maximize observable inputs and minimize unobservable inputs. There are three levels of inputs:

Level 1 Inputs	Level 2 Inputs	Level 3 Inputs
Quoted prices for identical assets in active markets, unadjusted for “blockage factor” (unit of measure) (price x quantity)	Quoted prices for similar assets, quoted prices in inactive markets, observable market data (interest rates, yield curves, prepayment speeds)	Unobservable (entity generated) inputs used when observable inputs unavailable
Example:	Example:	Example:
Exchange traded securities, futures or options	Residential mortgage loans held-for-sale	Mortgage servicing rights or retained beneficial interest in securitization

On October 10, 2008, the FASB issued FSP FAS 157-3 – *Determining the Fair Value of a Financial Asset When the Market for That Asset Is Not Active*. The FSP emphasizes even in times of market dislocation, it

is not appropriate to conclude that all market activity represents forced liquidations or distressed sales. However, it is also not appropriate to automatically conclude that any transaction price is determinative of fair value.

Determining fair value in a dislocated market depends on the facts and circumstances and may require the use of significant judgment about whether individual transactions are forced liquidations or distressed sales.

In determining fair value for a financial asset, the use of an associations own assumptions about future cash flows and appropriately risk-adjusted discount rates is acceptable when relevant observable inputs are not available.

In 2008, because associations sold MBS at increasingly reduced prices, it became clear that the value given to some MBS was less than the present value of the expected cash flows from those assets even given the current state of the market.

In an uncertain environment, it is a challenge to obtain market values. Sometimes associations use pricing services. For debt securities, a pricing service may use the mean between quoted bid and asked prices or the last sales price to price securities when such prices are readily available and are representative of the securities' market values. If such prices are not readily available, the pricing service may use yields or prices of securities of comparable quality, coupon, maturity, and type; indications as to values from dealers; and general market conditions.

Due to continuing concerns, however, with what many felt was an overreliance on the "last transaction price," April 9, 2009, the FASB issued FASB Staff Position (FSP) FAS 157-4, Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly. When weighting indications of fair value resulting from the use of multiple valuation techniques, an association shall consider the reasonableness of the range of fair value estimates. The objective is to determine the point within that range that is most representative of fair value under current market conditions.

All the authoritative fair value FASB guidance including FSPs have been codified in ASC 820 [Fair Value Measurements and Disclosures].

Other-than-temporary Impairment

The global financial crisis has seen the fair value³ of many securities decline below their amortized cost basis⁴ and thus those securities are impaired under U.S. GAAP. Consequently, association management must assess whether the fair value decline represents a temporary or other-than-temporary impairment

³ Under GAAP Fair Value Measurements and Disclosures (FASB ASC 820), fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

⁴ Amortized cost basis includes adjustments made to the cost of an investment for accretion, amortization, collection of cash, previous other-than-temporary impairments recognized in earnings (less any cumulative-effect adjustments recognized in accordance with the transition provisions of FASB ASC 320-10-65), and fair value hedge accounting adjustments.

(OTTI). This assessment is important as it can directly affect the accounting treatment, impacting earnings and regulatory capital.

[CEO Memo 320](#) issued September 3, 2009 addresses in detail the process for assessing OTTI of debt securities, supervisory expectations and authoritative references. You should refer to this and FASB guidance, and contact regional accountants with questions.

There are three key steps in assessing OTTI:

Step 1: Determine whether an investment is impaired

Step 2: Evaluate whether impairment is temporary or OTTI

Step 3: If an impairment is OTTI, recognize an impairment loss

Step 1. Determine whether an investment is impaired

If the fair value of the security is less than its amortized cost basis, it is impaired. An association shall determine whether an AFS, Held-to-Maturity (HTM), or cost-method investment is impaired at the end of each quarter (TFR reporting period). An association should not “look through” the form of its investment; for example, an investment in a mutual fund that invests only in debt securities is assessed for OTTI as an equity security, not as a debt security.

Step 2. Determine whether an investment is temporary or OTTI

The impairment is either temporary or other than temporary as determined through evaluation under the two accounting models:

- Investment security model; or
- Beneficial interest model, as appropriate.

Investment security model (Always use this model first)

This is a general model that applies to debt securities, equity securities and cost method investments. For securities that meet the definition of a debt security under GAAP the security is OTTI if:

- Management intends to sell the security, or
- It is “more likely than not” that the savings association will be required to sell the security before recovery of its amortized cost basis, or
- The savings association does not expect to recover its entire amortized cost basis in the investment security (credit loss). Thus, if an association expects a credit loss the impairment is considered OTTI. A credit loss only exists when the fair value is less than the amortized cost

basis. It is possible that a credit loss may exist for a security whose fair value exceeds its amortized cost basis (e.g. securities purchased at a discount). In that case, the security would not be considered “impaired” under Step 1 above and there is no recognition of the credit loss in the income statement.

While each security is assessed based on its individual facts and circumstances, generally the longer the period of time the security has been impaired and the greater the amount of decline in fair value (severity and duration), the more likely a security is OTTI.

Beneficial interest model (Only used for limited securities which are “not OTTI” when evaluated under the Investment security model).

The beneficial interest model is a specialized model that is applied to a subset of debt securities which are beneficial interests⁵ in securitized financial assets. It applies to beneficial interest that: (1) are not “high credit quality” (e.g. AAA or AA), or (2) can be contractually prepaid such that the savings association would not recover substantially all its recorded investment; the securities are OTTI if there has been an adverse change in cash flows expected to be collected, when compared to the cash flows previously projected. Examples include interest-only strips (I/Os) or the residual interest in a securitization. Note that these investments are ALSO subject to the Investment security model.

Step 3. If OTTI, recognize an impairment loss

In certain circumstances for debt securities, OTTI is separated and accounted as two components: (1) the credit loss amount, recognized in earnings; and (2) the amount related to all other factors (noncredit loss) recognized in other comprehensive income (OCI), net of applicable taxes. However in other circumstances the entire amount of impairment shall be recognized in earnings.

Methodology to calculate credit loss

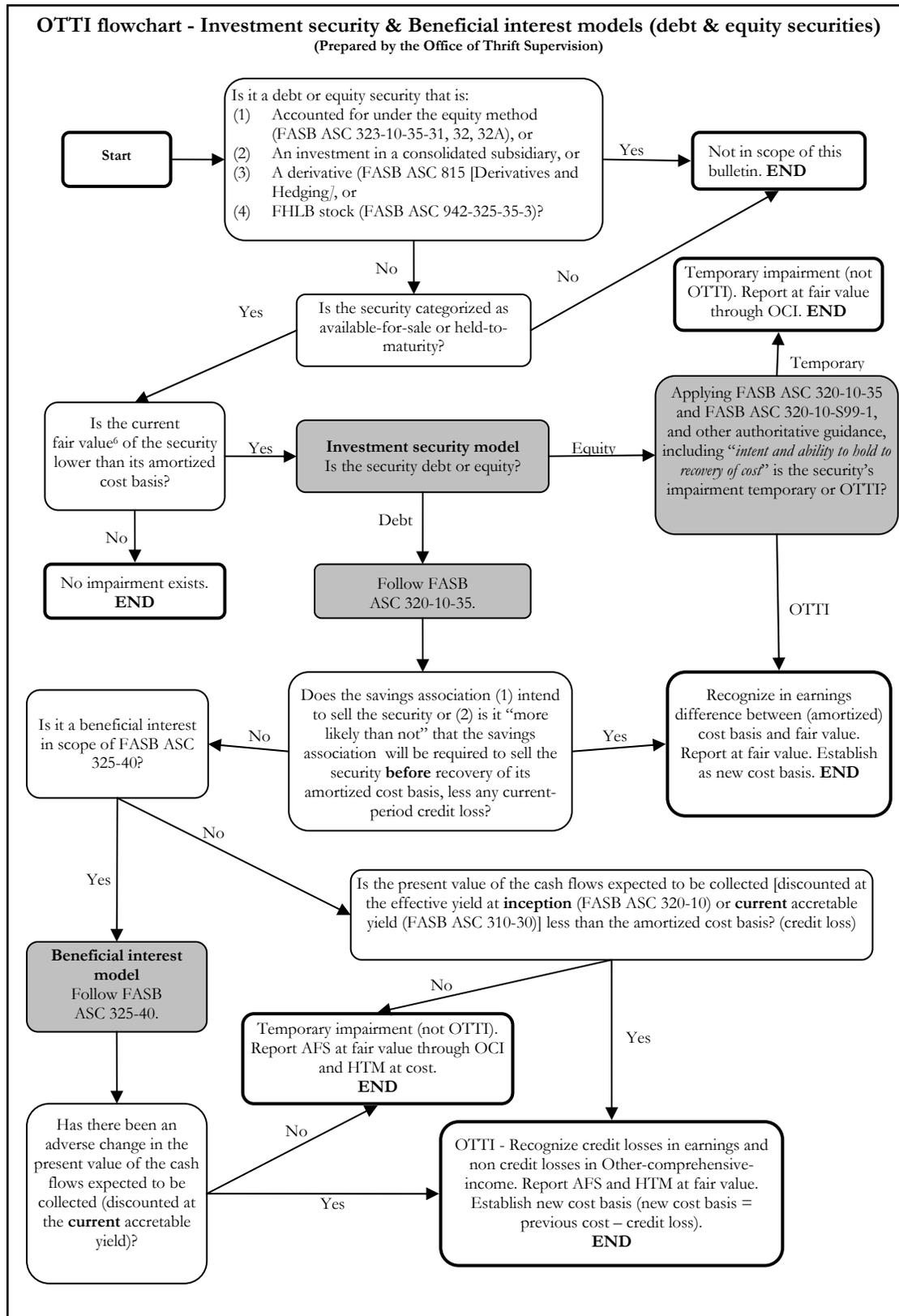
Under the Investment security model, the credit loss amount (the excess cost over the present value of cash flows expected to be collected) shall be recognized in earnings using the appropriate calculated methodology:

- For FASB ASC 320-10 debt securities, discount the cash flows expected to be collected at the original effective interest rate at the date of acquisition.
- For FASB ASC 310-30 debt securities acquired with deteriorated credit quality, discount the cash flows expected to be collected at the current accretable yield.

Under the Beneficial interest model, the credit loss amount is determined based on discounting the cash flows expected to be collected using the yield currently used to accrete the beneficial interest.

⁵ The rights to receive all or portions of specified cash flows to a trust or other entity whether in the form of debt or equity.

Refer to the flow chart which illustrates the process and under what circumstances an OTTI impairment loss is recognized in earnings or both OCI and earnings.



Supervisory Expectations

Management is responsible for assessing and documenting quarterly whether each impaired security is OTTI under GAAP. Reporting systems should be in place to monitor the severity and duration of securities impaired on an instrument by instrument basis. Management should have detailed written policies which state the criteria that lead to a rebuttable presumption that OTTI exists. Savings association management is responsible for ensuring that there are robust processes for ensuring the security valuations are consistent with FASB ASC 820 [Fair Value Measurements and Disclosures] (FASB ASC 820).

You should review and conclude on the adequacy, timeliness, and accuracy of the following practices:

- Management's policies and procedures to identify securities with potential OTTI.
- The fair value methodology used for assessing impairment and compliance with FASB ASC 820.
- The process used to evaluate individual securities in accordance with FASB ASC 320-10-35 (Investment security model) and FASB ASC 325-40 (Beneficial security model), as applicable.
- Documentation supporting temporary or OTTI determinations.

Appropriate documentation to review should include, but not be limited to:

- An analysis of the security's cost basis and fair value
- The severity and duration of the impairment
- Key components in the securities terms or structure that affect its fair value
- OTTI impact on regulatory capital
- Financial performance of issuer and underlying collateral
- Credit rating, as applicable
- Analyst reports
- Internal and external auditor reviews.

The two examples of predetermined parameters below are included for illustration purposes only and are not intended to be either requirements or safe harbors. Securities that fall within the predetermined parameters should be reviewed in greater detail to assess whether based on the facts and circumstances they are OTTI or not OTTI.

- Any security that is impaired by 7 percent or more for two consecutive quarters or any amount for twelve consecutive months.
- Any debt security, other than one backed by the full faith and credit of the U.S. government, that is impaired by greater than 10 percent or impaired by any amount for six consecutive months.

Proper Categorization of Securities

Management should thoroughly analyze the various risks associated with investment securities before making an investment.

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

Trading Assets

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

Fair Value Option

Permits an association to choose, at specified election dates, to measure eligible items at fair value (the fair value option).

Held-to-Maturity

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

Available-for-Sale

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

Changes in Categorization

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

Trading Activity

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

Gains Trading

Gains trading is the purchase of a security and the subsequent sale of the same security at a profit after a short holding period. Savings associations typically retain securities acquired for this purpose that the savings association cannot sell at a profit in the AFS or held-to-maturity portfolio. Savings associations may use gains trading to defer recognition of losses because unrealized losses on AFS and held-to-maturity debt securities do not directly affect regulatory capital. Generally, savings associations do not report unrealized losses in income until they sell the security. A pattern of selling above-market securities at a gain while retaining below-market securities overstates the association's financial health.

When-Issued Securities Trading

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

Pair-offs

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

Extended Settlements

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

Repositioning Repurchase Agreements

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

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

Short Sales

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

Adjusted Trading

Adjusted trading is not acceptable under any circumstances. Adjusted trading involves the sale of a security to a broker dealer at a price above the prevailing market value. Simultaneously, the savings association purchases and books a different security, frequently a lower-rated or lower quality issue, or one with a longer maturity, at a price above its market value. Thus, the savings association reimburses the dealer for losses on the purchase from the savings association and ensures the dealer a profit. Such transactions inappropriately defer the recognition of losses on the security sold and establish an excessive cost basis for the newly acquired security. Consequently, the banking agencies prohibit such transactions. In addition, these transactions may be in violation of 18 USC §§ 1001, False Statements or Entries, and 1005, False Entries.

Adjusted trading is not acceptable under any circumstances.

EVALUATING STRUCTURED INVESTMENT SECURITIES

The credit risk of structured, collateralized investment securities, such as CMOs, Collateralized Debt Obligations (CDOs), and ABSs, depends on the structure of the deal and the characteristics and performance of the underlying assets.

Structural Considerations

The seniority of the tranche. If there are losses on the underlying assets, will the security be the first to absorb the loss, the last, or somewhere in-between? The first loss (subordinate) tranches are

obviously the riskiest, but those risks are also easy to understand. The value of subsequent loss (mezzanine) tranches (which are usually rated investment grade, sometimes even AAA) can decline quite quickly once losses reach a certain threshold. Some tranches are labeled as “senior” but do not actually represent the most senior class. These classes are usually known as “senior support” and offer credit protection to the most senior (super senior) tranches.

The level of credit support available. Consider how much is available in credit support (subordinated tranches, excess spread, insurance, overcollateralization) to absorb losses on the underlying assets. Levels of credit support can change over time – for better or worse. This change is often expressed as a percentage of the total deal or as a percentage of the security in question. The type of credit support may be important as well. If a guaranty from a bond insurer represents a significant element of the security’s credit support, then the risk of the bond can increase if the bond insurer experiences financial troubles.

Once credit support is exhausted, whether the tranche absorbs further losses proportionately. If losses are proportional, the security never experiences more losses than the underlying asset. For example, suppose that a deal has a 10% subordinated tranche and the issuer proportions the remaining losses among the remaining senior tranches. If there is a loss on the underlying assets of 10% or less, the senior tranches will not experience a loss. If the underlying assets experience a 20% loss, the loss on the underlying assets will be 10/90 or 11% loss. Only a total loss on the underlying assets will result in a total loss on the tranche. For many mezzanine tranches, however, losses are borne disproportionately. Consider now a 5% first loss tranche, a 5% second loss tranche, and a 90% senior tranches. Loss rates on the three tranches will occur as follows:

Loss on Underlying	Loss on Subordinate	Loss on Mezzanine	Loss on Senior
0	0	0	0
3%	60%	0	0
6%	100%	20%	0
8%	100%	60%	0
10%	100%	100%	0
20%	100%	100%	11.1%
60%	100%	100%	55.6%
100%	100%	100%	100%

The thickness of the tranche. Another consideration is the size of the tranche relative to the more senior securities that it supports, or the tranche’s thickness. In CDO terminology, it equals the difference between the detachment point and the attachment point. The detachment point is the point at which the level of losses on the underlying assets wipe out the tranche, which is the proportional support provided for senior tranches. The attachment point is the level of losses on the underlying assets at which a tranche would first incur a credit loss; comparable to a credit support percentage. . Thinner tranches have more risk for a given level of credit support. Consider the following example. Two tranches have attachment points of 5%. One has a detachment point of 6% while the other has a detachment point of 10%. The first tranche will absorb losses much more quickly, as illustrated below:

Loss on Underlying	Loss on Tranche A	Loss on Tranche B
5%	0	0
5.5%	50%	10%
6%	100%	20%
8%	100%	60%
10%	100%	100%

Evaluating the Underlying Collateral

A bond's structure, by itself, does not necessarily make it safe or risky. A credit support cushion of 10% may be more than sufficient for a diversified portfolio of high quality corporate bonds, but not for a portfolio of subprime mortgages. The experience of CDOs backed by subprime mortgages provides a good example. Many first loss and mezzanine tranches were virtually wiped out. Even super senior tranches can experience losses if the losses on the underlying assets are large enough. It is also important to consider that subprime mortgages did not directly back these CDOs; securities backed by subprime mortgages backed the CDOs. Those underlying securities, in turn, were often mezzanine tranches that bore a disproportionate share of the losses on the underlying mortgages, magnifying the loss on the CDO. Some considerations in evaluating the quality and performance of the collateral include the following:

A bond's structure, by itself, does not necessarily make it safe or risky.

- **Average FICO score and FICO score ranges.** A higher average score indicates a lower risk pool of borrowers. The median FICO score is 723 and most scores fall between 650 and 800.
- **Percentage full doc.** Limited documentation loans, especially those that do not require income verification, tend to be more likely to default.
- **Percentage ARMs.** Adjustable rate mortgages tend to experience higher defaults. Moreover, the low initial payment rates on many ARMs mean that default experience prior to reset can be artificially low.
- **Percentage delinquent (30-59 day, 60-89 day, 90+, in foreclosure, and Real Estate Owned).** Also, consider adverse trends.
- **Loan to value (LTV) ratios.** Higher LTVs mean more risk. LTVs are usually based on the ratio of the amortized loan balance to its original appraised value, so may be understated in markets that have experienced a sharp decline in housing prices.
- **Loan purpose.** Consider, for example, a high percentage of investor loans, which can be more speculative and riskier.

- **Lien status.** Second mortgages tend to experience higher default rates and higher losses given default. Consider the combined LTV or CLTV taking into account the level of equity including the 1st and 2nd lien position relative to appraised value.
- **Geographic concentrations.** Especially consider concentrations in states with volatile real estate markets, such as California, Florida, Nevada, and Arizona. Consider not only the geographic concentration of a particular bond but also the geographical concentration of the association's portfolio as a whole.

Modeling Investment Securities

Large, complex associations with a concentration of investment securities should have an effective risk management program and produce, on a regular basis, internal reports on the actual and expected performance of all investment securities. Smaller associations often rely on third-party firms for analytical support.

At all sized associations management must understand how the reports were produced and must be able to document and support the reasonableness of all assumptions. Below is a description of some information that you may encounter when reviewing risk management reports dealing with nonagency MBS.

Assumptions Used in Models

In order to determine impairment on nonagency MBS, management will be required to make assumptions about the future performance of the security. In general, there are three key assumptions management must make when assessing future performance:

- Voluntary prepayments – typically expressed as a “CPR” estimate. CPR stands for conditional prepayment rate. It is the percentage of loan balances that will be voluntarily prepaid (in full) each year.
- Defaults – typically expressed as a “CDR” estimate. CDR stands for conditional default rate. It is the percentage of loan balances that will default each year.
- Loss severities – the percent of loss the bank expects to incur on a defaulted loan.

Once the association has established these assumptions, they must be entered into systems such as Intex, Bloomberg, or LehmanLive and used to produce cash flows on the underlying collateral and the bond – cash flows that reflect the bond's credit protection and all deal-specific performance triggers. To determine the reasonableness of the association's assumptions, you should contact their regional capital market specialists or the Risk Modeling and Analysis Division in Washington, D.C.

Once the association estimates the expected cash flows the association should use the appropriate discount rate to calculate the present value. In general, there are two discount rates you should be concerned with when reviewing an association's valuation estimates:

- **Fair value** (if level 2 or 3 inputs are being used). Use a risk-adjusted discount rate that market participants would use to determine an exit price. Discount rates may be as high as 12 percent for “prime” bonds, 15 percent for Alt-A bonds and 20 percent or more for subprime securities.
- **Credit loss.** A credit loss only exists for accounting purposes when the fair value of the security is less than the amortized cost basis (book value). (1) For debt securities within the scope of FASB ASC 320-10 [Investments – Debt and Equity Securities, Overall] use the effective interest rate implicit in the security when purchased. The present value calculated can be thought of as the “intrinsic value.” (2) For debt securities within the scope of FASB ASC 310-30 [Receivables, Loans and Debt Securities Acquired with Deteriorated Credit Quality] use the current accretable yield rate. For both (1) and (2) if the bond’s “intrinsic value” is lower than the bond’s book value, the difference is the credit loss on the bond.

REFERENCES

United States Code (12 USC)

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

Code of Federal Regulations (12 CFR)

- | | |
|----------|---|
| § 541.7 | Corporate Debt Security |
| § 560.30 | General Lending and Investment Powers of Federal Savings Associations |
| § 560.31 | Election Regarding Classification of Loans or Investments |
| § 560.32 | Pass-Through Investments |
| § 560.36 | De Minimis Investments |
| § 560.40 | Commercial Paper and Corporate Debt Securities |
| § 560.42 | State and Local Government Obligations |
| § 560.43 | Foreign Assistance Investments |
| § 560.93 | Lending Limitations |
| § 562.1 | Regulatory Reporting Requirements |

§ 562.2 Regulatory Reports

§ 563.172 Financial Derivatives

§ 567.1 Definitions

Office of Thrift Supervision Guidance

CEO Memos

No. 200 Classification of Assets and Appraisal of Securities

No. 249 Securities Related Activities of Savings Associations

No. 296 Regulation R and Bank Brokerage Activities

No. 307 Risk Weighting Downgraded Securities

No. 320 Accounting Considerations Related to Other-Than-Temporary Impairment of Securities

Regulatory Bulletins

RB 3b Policy Statement on Growth for Savings Associations

Thrift Bulletins

TB 13a Management of Interest Rate Risk, Investment Securities, and Derivative Activities

TB 13a-2 Structured Advances

TB 73a Investing in Complex Securities

TB 84 Interagency Statement on the Purchase and Risk Management of Life Insurance

Transmittals

TR 423 Regulation R; Final Rule, Technical Amendments

FFIEC Policy Statement

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

Financial Accounting Standards Board Accounting Standards Codification (ASC)

310-20	Receivables, Nonrefundable Fees and Costs (formerly SFAS 91)
825	Financial Instruments (formerly SFAS 107)
320	Debt and Equity Securities (formerly SFAS 115)
860	Transfers and Servicing (formerly SFAS 140)
820	Fair Value Measurements and Disclosures (formerly SFAS 157)
825-10-25	Financial Instruments, Overall, Fair Value Option (formerly SFAS 159)

Other References

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