Chapter 12

INVESTMENT ANALYSIS

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Chapter 12

INVESTMENT ANALYSIS

Examination Objectives

- Determine adequacy of the credit union's investment policy, procedures, and internal controls
- Assess legality of investments and compliance with related regulations, accounting procedures, and other guidelines
- Evaluate suitability of the investment portfolio in relation to the credit union's business plan, asset-liability management (ALM) strategies, liquidity, and net worth position
- Determine fair value of the investment portfolio and the effect of realized or potential losses from investment transactions on the credit union's earnings and capital position
- Review correction of investment-related problems by management

Associated Risks

The investment area affects all seven risks found in credit union operations – credit, interest rate, liquidity, transaction, compliance, strategic, and reputation. (The Risk-Focused Program chapter contains a description of the seven risks faced by credit unions.) This chapter specifically addresses credit, interest rate, liquidity, transaction, compliance, and other operational risks; however, if credit unions suffer significant losses due to investment decisions, the credit union could also face reputation risk. Examiner's judgment plays an important role in identifying both the type and extent of risks as well as deciding on appropriate examination procedures.

Overview

The investment portfolio serves as an important source of liquidity and can represent a substantial portion of a credit union's assets. Likewise, investment income can serve as an important source for meeting a credit union's operating expenses, dividend payments, and reserve requirements (if applicable.) Thus, the examiner's assessment of management's ability to invest prudently is an important part of the examination.

The extent of the examiners' investment reviews will depend on the following:

- The results of reviews of investment policies, procedures, practices, and internal controls;
- The adequacy of management's risk monitoring system for investments;
- The condition of investment records;
- The volume and materiality of investment transactions; and

- The degree of problems disclosed by previous audits or examinations.

Examiners record the extent of the investment analysis (if they perform such an analysis) in the Scope Workbook. They should also complete applicable investment questionnaires or reports.

Examiner Resources

The key investment references for this chapter are *NCUA Rules and Regulations* §703, IRPS 98-02, and related Guidance Papers. Other resources that may assist examiners in their analysis of complex investment portfolios include:

- Regional capital market specialists (RCMS) in each regional office provide technical assistance;
- Bloomberg terminal, an information vendor system available through each RCMS, provides investment characteristics and analysis;
- Office of Strategic Program Support and Planning (OSPSP) in the Central Office provides additional assistance (examiners should follow regional procedures);
- The NCUA Investment Hotline (1-800-755-5999) provides examiners and credit unions a resource to call and discuss investment questions.

Policies

The board of directors must (1) adopt a written investment policy consistent with the *Federal Credit Union Act*, *NCUA Rules and Regulations*, and other applicable laws; and (2) review and update the investment policy at least annually. A monitoring and reporting program helps ensure the credit union's investment process adheres to the written policy. If the investment review discloses exceptions to sound investment policies or procedures, the examiner will recommend appropriate changes to resolve the concerns.

The credit union's size and asset mix determine the scope of the investment policy. At a minimum, the policy must address the following:

- **Purpose and objectives.** The credit union must document its intentions (purpose) at the time it purchases investment securities, and must classify each security as one of the following: held-to-maturity, available-for-sale, or trading. SFAS 115 contains additional guidance.

  Investment objectives should reflect the relative importance of investments to the credit union's overall goals and objectives. Generally, credit unions attempt to balance the need for safety and liquidity against the need for yield, while maintaining enough flexibility to respond to rapid changes in market interest rates. Thus, investment

objectives should closely coincide with internal asset-liability goals and the short- and long-term business plan.

- **Characteristics of investments.** Investment characteristics describe the permissible investments and explain their pros and cons. The board of directors must specify in the investment policy the types and characteristics of investments permitted for the credit union. Characteristics may include the issuer, maturity, coupon rate, index, cap, floor, coupon formula, call provisions, average life, and interest rate risk (e.g., duration.) For example, a board policy specifying permissible interest rate risk (IRR) of an investment communicates to management the board's tolerance for risk at the instrument level. The policy should ensure management considers the effect of investment characteristics on the marketability and resale value of the investment and the credit union's ability to achieve established liquidity objectives.

- **IRR.** IRR is the potential for change in the value of a security as market interest rates change (also referred to as market risk.) Changes in interest rates can reduce the investment's value. Managing IRR on a total balance sheet basis, which includes monitoring the price sensitivity of the investment portfolio and long-term loans, is a sound business practice. A credit union may consider whether it should specify institution-wide IRR limits (generally for net economic value or earnings exposures) in light of its long-term investment and lending activities and its level of capital.

  Credit unions, especially those that do not establish institution-wide IRR limits, may choose to establish price sensitivity limits on their investment portfolio or individual investments. The officials must understand that, while many investments have good marketability, the selling price of an investment may be sensitive to changes in interest rates. For example, although Treasury securities usually have ready marketability, longer-term fixed-rate Treasury securities generally will experience greater price volatility than shorter-term fixed-rate Treasury securities.

  Management must prepare a risk report at least quarterly if the fair value of all securities with (1) embedded options, (2) maturities greater than three years, or (3) complex coupon formulas exceeding net capital. The risk report must document potential effects of interest rate shifts of plus and minus three percent (300 basis points) on each security's fair value and the cumulative effect of those shifts on capital (§703.90.)

- **Liquidity risk.** An investment's liquidity or marketability risk is the risk that inadequate market depth could impede the credit union's ability to promptly sell the investment at a reasonable or fair market price. Generally, Treasury securities have

greater liquidity than other securities. Wide bid-ask spreads characterize illiquid securities. Current examples of illiquid securities include Small Business Administration (SBA) loan participation certificates and smaller or older mortgage-backed securities (MBS.) Additionally, negotiable CD investments in financially weak depository institutions often are less liquid than investments in strong depository institutions.

A credit union must have sufficient liquid assets to meet immediate cash demands. The board should consider current and future liquidity needs based on its business plan (including budget) and asset-liability management strategy. The board should structure the investment portfolio to help meet normal liquidity needs, as well as any unexpected cash outflows.

Proper classification of held-to-maturity, available-for-sale, and trading securities can enable a credit union to meet its liquidity needs without an accounting reclassification. The examiner may question a credit union's assertion that it has the intent and ability to hold securities to maturity if the credit union has had to sell or transfer held-to-maturity securities to meet a liquidity need, especially in instances of a material sale or transfer.

- **Credit risk.** Credit risk is the possible loss that could occur if the issuer of an investment defaults or if the market value of an investment declines because the market perceives an increased probability of default. Credit risk appears most often in uninsured deposits with other (correspondent) financial institutions (e.g., Fed Funds sold.)

  Credit unions should address credit risk in their investment policies as follows:

  - List specific permissible institutions, issuers, and counter-parties <u>or</u> specify criteria for their selection, <u>and</u>
  - Specify limits on the dollar amounts the credit union may invest in each.

  Before making investments that exceed an insured limit, are not insured, or not fully guaranteed as to principal and interest by the U.S. Government or its agencies, enterprises, or corporations, management must perform and document a credit analysis of the investments. Management must update the analysis at least annually as long as the credit union holds the investment. Smaller credit unions that cannot perform a detailed credit analysis should invest funds in appropriate alternatives (e.g., corporate credit unions), albeit, they still must perform due diligence.

- **Concentration risk.** Concentration risk results when the credit union does not properly address diversification in the investment portfolio. Concentration risk can occur when the investments in a portfolio have similar characteristics, such as identical call dates and provisions, the same or related issuers, or the same geographic distribution. Concentrations in investments can increase a credit union's exposure to interest rate, credit, and liquidity risk. The investment policy should specify dollar limits for holdings of obligations with similar characteristics (e.g., fixed vs. variable, type of floating rate index, geographical distribution, etc.) Significant concentrations with individual broker-dealers or safekeepers present risk if management has not performed adequate due diligence. Losses can result when unscrupulous broker-dealers or safekeepers resort to fraud and deceit.

- **Delegation of authority to officials or employees.** The credit union board of directors may delegate the authority, but not the responsibility, for making investment decisions. The board must retain ultimate responsibility. The board may authorize an official of the credit union (normally the president or an investment officer) to invest or divest funds according to the investment policy on a continuing basis. For example, the policy may authorize the manager to transfer funds to an overnight investment account whenever the checking account cash balance exceeds a specified amount or average daily balance. Board policy must state explicitly the authority it has delegated to the manager; §703.30(g) requires professional qualifications by education or experience for individuals given investment authority.

  In other situations, the board may delegate only limited authority to a credit union employee (e.g., complete and sign the necessary papers related to investment transactions.) The board should sufficiently define the delegation of authority so the individual receiving the investment instructions cannot exercise discretionary powers. This individual should report all transactions to the board, investment committee, or executive committee at least monthly. Board policies and procedures should address how the credit union will comply with §703.120 (e.g., the prohibition on acceptance of cash bonuses, merchandise premiums, etc., from broker-dealers.)

- **Delegation of authority to a third-party.** §703.40(c) permits the board to delegate its authority for investing credit union funds to a third party. However, the credit union must ensure that the third party is an investment adviser registered with the Securities and Exchange Commission (SEC), and limit the aggregate amount of such delegations (e.g., dollar amount of investments) to 100 percent of net worth. This restriction does not apply to investments in mutual funds. Also, the 100 percent limitation does not apply to credit unions meeting the Reg Flex requirements of Part 742.

The board should exercise caution when delegating investment decision authority to SEC-registered investment advisers. The board should perform the following additional procedures:

- Investigate the integrity and financial condition of any investment adviser before delegating investment authority;
- Reduce the delegation of authority to writing and explicitly state in board policy the authority delegated to the investment adviser; and
- Understand that the board must set policy limits, approve procedures, understand the overall risks associated with the investments, and receive reports assessing whether the portfolio has remained within established limits.

- **Broker-dealer.** A federal credit union may use a third party (i.e., a broker-dealer) to purchase and sell investments if the broker-dealer holds a current registration as a broker-dealer with (1) the SEC or (2) a depository institution for which a federal regulatory agency regulates the broker-dealer activities. CUSOs that provide broker-dealer services to credit unions must meet the requirements of §703.50.

  A credit union making an investment in a certificate of deposit (CD) must either send funds directly to the issuing depository institution or use a broker-dealer. A federal credit union may use a third party (i.e., a CD finder) to locate institutions offering high CD rates, and may compensate the finder for that service, but it must send the funds directly to the depository institution offering the CD and not through the finder. (Refer to the section of this chapter on Broker-Dealer Analysis; Letter to Credit Unions No. 157, September 1994; and Letter to Credit Unions No. 00-CU-05, September 2000 for additional guidance.)

- **Safekeeping.** Either the SEC or a federal or state depository institution regulatory agency must regulate and supervise any safekeeping institution that a federal credit union uses for custody of purchased investments. Actual or opportunity losses can result from inappropriate safekeeping arrangements for investments. (Refer to the section of this chapter on Safekeeping for guidance.)

- **Surveillance and divestiture.** For investments that fail to meet the requirements of the *FCU Act*, *NCUA Rules and Regulations*, or board policy, the policy must address how the credit union will handle these investments. The policy should include provisions for monitoring and reporting of high-risk investments.

- **Trading account.** Federal credit unions engaging in investment trading must adopt expanded policies that address the trading issue, and sufficient resources, knowledge, systems, and procedures to manage the risks. The policy should address size limitations of the trading account, stop loss or sale provisions, and limits on the length of time the credit union may hold an investment in the trading account.

- **Operational risks.** In addition to the requirements above, credit unions' investment policies should address the various types of risks inherent in the investment process, including:

  - Management risk. Management risk is the loss potential resulting from lack of knowledge about various characteristics of the intended investment instrument. Before making any investment, management must thoroughly understand the intended security and ensure that the investment's risk characteristics are consistent with the credit union's overall investment objectives and business goals. Management's unfamiliarity with the pricing of an investment or terms of the investment transaction can result in losses if the price management paid exceeds the fair value. Therefore, management must understand how the investment instrument reacts to changes in market interest rates.

  - Transactional or operational risk. This risk arises from deficiencies in information systems or internal controls that can result in unexpected loss. Sources of operational risk include inadequate procedures, human error, system failure, and fraud. The first line of defense in controlling operating risks is effective internal controls, including separation of duties and supervision of persons executing investment transactions from those responsible for processing transactions and accounting for investments; and

  - Compliance or legal risk. Federal credit unions must ensure that investments comply with the *FCU Act*, *NCUA Rules and Regulations*, and other applicable laws. Legal risk includes the risk that contracts, such as custodial agreements and repurchase agreements, are not legally enforceable or properly documented. Federal credit unions should adequately evaluate agreements before entering into a contract to ensure (1) compliance with applicable laws, and (2) inclusion of all bargained for duties and provisions, such as the ordinary duty of care for a safekeeper, or the requirement for a perfected first priority security interest in repurchase collateral.

During the review of the board and the executive committee minutes, examiners should ' determine that the board fulfills its responsibilities and that any individual to whom the '

board has delegated its authority submits the proper reports. Board minutes should clearly outline to whom the board has delegated authority and the extent of that authority. Examiners should review such delegations during each examination.

In summary, credit unions can reduce investment risks by:

- Fully evaluating each type of investment before purchase, including the creditworthiness and/or the financial condition of the issuer and the potential IRR of the proposed investment;
- Analyzing the financial condition and reputation of any intermediary to the transaction, such as a broker-dealer; and
- Diversifying the investment portfolio by type, maturity, geographical location, guarantor, etc.

Examination Guidance

Examiners should complete the "Investment Controls" questionnaire before determining the extent of investment risk. The examiner may decide to expand the review if (1) the credit union has changed its investment policies since the last examination, (2) the examiner or auditor noted investment internal control or other weaknesses, (3) the credit union changed substantially its investment mix, or (4) the credit union has material amounts of complex investments in its investment portfolio.

If the examiner and supervisory examiner determine the necessity of reviewing investments, the examiners should sample each investment type. For example, if the credit union has 100 CDs, the examiner may review a sample of five CDs. If problems exist, examiners should expand their analysis to the point of determining the severity of the problems and developing plans for correction.

Examiners may review broker/dealer activity, when applicable, to determine the existence and extent of any resulting problems. Examiners may also review a sample of investments made through a new broker/dealer.

Classification of Securities SFAS 115

Federal credit unions must report securities in accordance with generally accepted accounting principles (GAAP), which require categorizing a security in one of three classifications:

- **Trading securities** - debt and equity securities that the credit union bought and holds primarily for the purpose of selling in the near term (held for only a short period of

time.) The credit union reports trading securities at fair value through the income statement;

- **Held-To-Maturity securities** - debt securities that the credit union has the positive intent and ability to hold to maturity. The credit union reports held-to-maturity securities at amortized cost; and

- **Available-For-Sale securities** - debt and equity securities not classified as either trading or held-to-maturity securities. Credit unions report available-for-sale securities at fair value through a separate component of equity on the balance sheet, Accumulated Unrealized Gains/Losses on Available-for-Sale Securities.

Absent evidence to the contrary, examiners normally should accept the credit union's designations, especially if the examiner considers the external audit adequate and does not take exception. (Contradictory evidence could include a pattern of intermittent sales or transfers of held-to-maturity securities, suggesting that the securities are actually available-for-sale.) The examiner should focus on evaluating the risks in the securities holdings and activities and on the credit union's management of these risks, and should not micro manage the classification of securities under SFAS No. 115. (Refer to SFAS 115 for further information.)

Broker-Dealer Analysis

Following are recommended guidelines for credit unions to analyze and select a broker-dealer:

- **Use only established, well-capitalized, registered broker-dealers.** The board should use established, well-capitalized, and reputable national and regional firms, and should establish minimum capital standards for each broker-dealer. If available, the credit union should consider reports and credit ratings from one or more of the nationally recognized statistical rating organizations (e.g., Moody's, Standard & Poor's, or Fitch.)

  Management should ensure the broker-dealer is either (1) registered with the Securities and Exchange Commission under the Securities Exchange Act of 1934 or (2) is a depository institution whose broker-dealer activities are regulated by a federal regulatory agency. For unregulated firms, the examiner should determine that the credit union only obtains information from the unregulated firms (e.g., a CD finder), but does not send funds through such firms.

  Management should regularly review the financial strength of the broker using the

broker's latest audited financial statements, paying particular attention to the capital and leverage positions, such as notes payable and securities purchased on margin (see Letter to Credit Unions No. 157.)

- **Check references and complaints against the firm and broker.** Management should perform a background and reputation check on broker-dealers with whom the credit union does business (see Letter to Credit Unions, No. 157, dated September 1994.) A background check includes requesting and reviewing three to five references from the salesperson and the firm, and inquiring of other credit unions, chapters, and leagues about the broker-dealer and firm.

  For each firm with which the credit union does or plans to do business, the board should specifically request and obtain a written response confirming or denying if the SEC, the National Association of Securities Dealers (NASD), or a state securities regulator has sanctioned either the firm or its salespeople in the last five years. The board should perform the same due diligence on each salesperson and confirm the responses with the SEC or NASD (www.nasdr.com) and the applicable state securities regulator. The credit union should obtain a broker-dealer registration statement from NASD before doing business with any individual.

  NASD Regulation (NASDR) provides an online Public Disclosure Program. Using the NASDR's Central Registration Depository (CRD) the credit union can access broker-related background information. Each broker-dealer firm and registered representative has a unique CRD number, which it must provide upon request. Credit unions can use the CRD number to reference background information from NASDR.

- **Ascertain information about the knowledge, experience, and performance of the broker.** Management should inquire about the salesperson's knowledge and skills, obtain a resume, and determine what training the firm provides its salespeople. Most reputable firms have schools or require periodic training.

  On a continuing basis, management should analyze the overall performance of the broker (e.g., review the number of times the broker provided the lowest cost offer on securities purchased.) The credit union should not do business with salespeople who do not explain in depth the type of security they are offering for sale. Most reputable firms provide salespeople with research and analysis reports that explain the investment products.

- **Obtain competitive bids and offers**. Credit unions should obtain competitive bids and offers from more than one broker. Before purchasing or selling a security,

management must procure either (1) price quotations on the security from at least two broker-dealers or (2) a price quotation on the security from an industry-recognized information provider (e.g., Bloomberg, Reuters, etc.) This information is not required for new issues either purchased at par or at an original issue discount (e.g., a U.S. Treasury Note purchased at a discount at auction.) To ensure the credit union receives a fair market price, management should consider obtaining three independent quotations before purchasing or selling a security.

If management cannot procure multiple offers from different brokers to sell a security to the credit union, they should determine the liquidity of the investment (e.g., will other brokers provide a bid on the security) and whether the offer represents fair value before committing to purchase it. The lack of multiple bids from brokers to purchase a security from a credit union may indicate an illiquid security (e.g., often, only the originating dealer bids on a privately placed collateralized mortgage obligation (CMO)). The credit union should try to confirm that the sole bid represents fair value. For example, the credit union may request bids on comparable securities (those with substantially similar characteristics), retaining reasonable and appropriate documentation (e.g., dated telephone note with quote from broker or dated *Wall Street Journal* quote on specific comparable security.) Brokers generally do not provide written bids.

- **Prepare a board resolution and list of limitations.** The board must maintain an internal list of board-approved broker-dealers, including a list of limitations on the amount of funds and types of securities that management or staff may place or invest with each firm. In addition, the board should possess a written agreement with each broker-dealer that specifies the type of securities, transactions approved, and the approved amount for each firm and individual broker. The board should acquire and maintain a basic understanding of the business structure of the broker-dealer including the primary emphasis of the firm (e.g., government securities, agency securities, CMOs, retail, etc.)

- **Use a recorded phone line.** Examiners should encourage credit unions with active or very large investment portfolios to maintain a separate, recorded phone line to document trading instructions and retain a record of conversations with the broker-dealer. Before the officials record conversations with a broker-dealer, they should exercise due diligence by addressing relevant legal and contractual issues.

A credit union's reliance on Securities Investor Protection Corp. (SIPC) insurance does not substitute for a thorough review of the broker-dealer. If available, SIPC insurance covers only the first $500,000 of covered securities and cash. Many broker-dealers and

custodians obtain private insurance to cover losses in excess of the SIPC limit. However, record keeping problems, fraud, disputed amounts, or ineligible investments (e.g., repo agreements) may prevent collection in full from the SIPC or private insurer.

Letter to Credit Unions, No. 157, contains additional information on broker-dealer analysis. See also, §703.50 and the investment guidance paper.

Audit

Examiners should review the supervisory committee audit to determine whether the auditor verified investments and if material deficiencies were present in the investment area. The auditor bases the extent of the verification of investments on the audit scope and computed materiality level. Examiners should review the scope and computed materiality level for reasonableness. Verification of investments requires the auditor to either physically inspect the investments or send confirmation letters. If the auditor did not verify investments, the examiner should arrange to have the committee perform the verification within a reasonable period, usually 60 days. Examiners should not make a physical inspection or send verification letters unless they suspect a problem and need the inspection or the verification to support an examiner's finding. Examiners should consult with the supervisory examiner before sending out confirmations.

Safekeeping

Examiners should emphasize to the officials the importance of safekeeping investments with a reputable third party and enforcing necessary internal controls to minimize the possibility of loss. The credit union must maintain a board-approved list of safekeeping facilities. Management must review and document the background of each firm it uses for safekeeping investments. Credit unions must remain wary of broker-selected safekeeping facilities.

Federal credit unions must comply with Part 703; however, state-chartered credit unions should also ensure registration of the safekeeper with the Securities and Exchange Commission or regulation by a federal or state depository institution regulatory agency. Management should regularly review the safekeeper’s most recent audited financial statements to assess its financial strength.

The credit union must retain a written custodial agreement with third parties that act to safekeep the credit union’s investments (§703.60.) As custodians, these third-party institutions safekeep the credit union's securities and will deliver them only after receiving the credit union's instruction.

Under §703.60, the custodial agreement is a contract in which a third party agrees to

exercise ordinary care in protecting the securities held in safekeeping for its customers. Ordinary care, often called reasonable or due care, holds the custodians responsible for losses from their acts or omissions such as willful misconduct, bad faith, or negligence. A custodial agreement must not specify a duty of care less than ordinary (e.g., an agreement is insufficient if it holds the custodian responsible for losses only from gross negligence.) If the custodial agreement specifies no standard of care, credit unions may assume the default of due care under the model Uniform Commercial Code §§8-504-506.

The regulations require a custodial agreement for most securities. The credit union must obtain monthly statements from the custodian to verify its investments and repurchase collateral. The custodial agreement should not restrict or alter the negotiability of any investment. For example, the agreement should not restrict a negotiable CD to safekeeping with a single custodian.

There are two situations that do not require a custodial agreement: (1) investments that the credit union holds (possesses) in physical form (most issuers now issue securities in book-entry form only) and (2) book-entry investments recorded directly in the credit union's name through the Federal Reserve Book-Entry System. However, most credit unions use a custodian to hold their investments recorded in the custodian's name through the Federal Reserve Book-Entry System. Book-entry investments may include Treasury and Agency securities, as well as mortgage derivative products such as agency CMOs. Finally, as with other book-entry or physical securities, professional third-party control minimizes the possibility of loss.

Credit unions should ensure that at least two people approve the transfer of any of its investments. Both delivery versus payment (DVP) transactions and free deliveries (i.e., a transfer of a security without payment) require this dual control measure. Two common uses for free delivery include (1) transfer of securities from a primary custodian to a third-party custodian in a tri-party repurchase agreement and (2) transfer of securities from an old to a new custodian.

When a broker-dealer serves as safekeeper of the credit union's investments, the written custodial agreement should assure the credit union that the broker-dealer has segregated the credit union's securities from the broker-dealer's investments and that the broker-dealer maintains separate records for the credit union's investments. Officials should review the custodial agreement (sometimes part of the account agreement) to determine that it prohibits the broker-dealer from lending the credit union's securities in the marketplace (e.g., hypothecation.) The credit union should carefully review the reputation and financial stability of a broker-dealer serving as custodian.

Officials must verify these custodial provisions. Credit unions can sustain losses in securities held by broker-dealers. For example, a brokerage firm could use a credit union's securities as collateral on its own loans and later enter bankruptcy. A properly executed third-party custodial agreement could prevent losses resulting from a credit union forwarding funds to a broker but the broker failing to purchase the security.

A safekeeping receipt must evidence each investment held by a third-party custodian. The receipt generally contains the following information, as it applies to the type of investment:

- Name and CUSIP (Committee on Uniform Securities Identification Procedures) identification of the security,
- Par value,
- Date of issue,
- Date of maturity and call date (if applicable),
- Coupon or interest rate,
- Coupon or interest payment dates,
- Trade and settlement date, and
- Name of beneficial owner.

The credit union can determine evidence of safekeeping with a broker-dealer by reviewing the monthly broker statement. The last item on the statement, often referred to as “inventory” or “position”, generally lists the securities that the broker-dealer holds for the account.

Regardless of the methods the credit union uses to control its evidence of beneficial ownership of investments or physical investment documents, the credit union must have procedures in place to periodically inspect and reconcile the actual documents, statements, and safekeeping receipts to its records. When the credit union is the beneficial owner of securities held by a custodian, the credit union’s name does not appear on the book-entry system or on a physical security. Thus, the credit union must verify records received from the safekeeper with the credit union’s own records (§703.60.)

The credit union must require the selling broker to settle investment transactions delivery versus payment (DVP.) DVP (also termed “cash on delivery” and “delivery against cash”) provides for the simultaneous transfer of funds and securities, ensuring that the credit union (or its custodial agent) possesses either the securities or funds.

If the credit union requires the selling broker to settle investment transactions at a third-party custodial agent, it may eliminate some of the risk associated with settling and

safekeeping securities. Delivery to a third-party custodian may reduce problems with non-delivery of securities, delivery of the wrong securities, purchase of nonexistent securities, purchase of CDs based on inaccurate or partial disclosure of terms, and other problems.

Records

While all credit unions must maintain adequate investment records, the sophistication of these records will depend on the level of activity and the types of investments involved. For example, a credit union that invests only in a common trust fund account could maintain this account without a subsidiary ledger. However, credit unions that do substantial investment activity or have a substantial portion of their assets in investments should maintain adequate subsidiary ledgers.

The subsidiary ledger contains all transactions involving that security. The credit union should record the following information on each subsidiary investment record, as applicable:

- Name, type, and CUSIP identification;
- Par value and any premium/discounts (purchase price);
- Date of issue;
- Date of maturity and call dates;
- Date of purchase and sale;
- Book value;
- Interest or coupon rate, and floating-rate formula and index;
- Timing of interest rate adjustments;
- Interest rate caps and floors;
- Coupon or registered status;
- Interest payment dates;
- Current fair value (as of each month-end);
- Location or safekeeping custodian;
- Amortization of premiums or accretion of discount, if applicable;
- Current par value (CPV) of pass-through type investments;
- Name of broker, if used for purchase; and
- SFAS 115 classification.

The credit union should also retain and have available for verification the original investment confirmations. The examiner should determine that the credit union maintains current, in balance subsidiary ledgers that provide sufficient information for managing the investment portfolios.

Investment Valuation

Quotes on securities may show both a bid and an ask quote. To determine a security's fair value, examiners should apply the bid quote to the current par value or face value of the security. After determining the fair value, examiners use the book value to compute market appreciation or depreciation.

> **Example**: A credit union owns a U.S. Treasury Bond with a face value of $1,000,000 and a book value of $898,000. The bid is 91.125. Therefore, the fair value of the security is $911,250 ($1,000,000 x .91125.) The market appreciation or depreciation is: $911,250 fair value minus $898,000 book value equals $13,250 appreciation.

In determining the fair value of the investment portfolio, examiners may use data supplied by the institution, if available, as of the examination's effective date. The examiner should determine that the credit union uses the same pricing service consistently from period to period to prevent management from choosing the most favorable valuation at the end of each period. Examiners should refer to SFAS 115, and to the Mutual Funds, Common Trusts, Unit Trusts and Investment Trading sections, respectively, for specific guidance. Footnotes to the credit union's balance sheet should separately disclose differences between the total fair value and book value of the held-to-maturity and available-for-sale investments.

If examiners doubt the accuracy of the data, they should test it to determine the accuracy of the stated fair value and book value. This may include reviewing the broker-dealer's market valuation data, examining the business section of a newspaper, or seeking a third-party review (e.g., corporate credit union, Office of Strategic Program Support and Planning, RCMS, etc.) Material miscalculations or inaccurate disclosures of the fair value of the investment portfolio resulting from weak internal controls will require appropriate correction.

Examiners may complete the Amortizing Investments Review and Certificate Review workpapers in AIRES to assist in the valuation and trend analysis of investments. Examiners must consult their supervisory examiners before requesting the credit union to obtain a third-party review.

Bond Basics

A security called a bond represents a debt obligation of the issuer. The issuer will pay principal and interest to the investor according to the terms of the bond. A Treasury note is a U.S. Government debt obligation with an original maturity of 10 years or less. A Treasury bond has an original maturity greater than 10 years. Debt obligations of the issuer generally refer to note and bond obligations. Credit unions often use the terms "notes" and "bonds" interchangeably when discussing investments.

Principal

The issuer must pay to the investor the principal of a bond, also called the par or face amount. Bonds may have the following characteristics:

- Due at maturity or amortizing. A bullet bond has the entire amount of the principal due at maturity. An amortizing bond has periodically scheduled principal repayments.

- Straight or callable. The issuer of an option free bond (with respect to principal repayments) must pay the principal amount on the scheduled due dates. Conversely, the issuer of a callable bond has the right to accelerate repayment of principal. A callable bond typically refers to a bond callable in total; however, a mortgage-backed security (MBS) typically is callable in part (in addition to the scheduled amortization of principal.) The term "prepayments" refers to partial calls on an MBS.

MBS and CMO factors. Amortization or prepayments reduce the original principal amount of a mortgage-backed security or collateralized mortgage obligation over time. Computing the outstanding face or outstanding principal balance requires use of the portion of the original principal outstanding, shown as a factor in decimal form. For example, a $250,000 original face MBS with a factor of 0.80000000 has a $200,000 outstanding principal balance ($250,000 x 0.80000000.)

Coupon Rate

The borrower periodically pays the coupon rate or the stated rate of interest on a bond. The bond may have the following interest rate characteristics:

- Coupon or zero coupon. Zero coupon bonds, sold at a discount from the par amount due at maturity, do not pay interest periodically. The discount represents future interest earned over the term of the investment.

- Fixed or floating rate. A fixed-rate bond has a coupon determined by the interest rate at the time of issuance. A floating-rate bond has an interest rate index (to which a fixed margin typically is added) that will reset the interest rate periodically according to the terms of the bond. The formula for a floating rate bond should specify the interest rate index and any margin.

- Unrestricted or capped floating rate. An unrestricted floating rate note (bond) has no restriction on the upper limit in the resetting of the interest rate. However, a floating rate note may state a maximum rate of interest, termed a cap (also called a life cap or ceiling.)

Day Count Basis

Calculating a coupon payment amount from a coupon rate requires knowledge of the day count basis of a bond. The day count basis defines the method of counting the days in a month and in a year for the coupon period. The notation to express a day count basis is (days in month)/(days in year.) Following are the four fundamental day counts used for domestic investments:

- Actual/Actual. The number of days in a month (numerator) is the actual number. The number of days in the year (denominator) also is the actual number. Treasury notes use this basis;

- 30/360. The number of days in each month is counted as 30 days, therefore, each year has 360 days (12 x 30.) MBS, many CMOs, and some agency and municipal bonds use this method;

- Actual/360. This method counts the actual number of days in a month, but counts the basis for a year as 360 days. Money market securities, including Treasury bills, typically use this method; and

- Actual/365. This method counts the actual number of days in a month, and counts each year to have 365 days. The quoted rate on a CD may use this computation.

Accrued Interest

Accrued interest is the amount of interest that has accrued on a bond from the prior coupon payment date (or from issuance for most newly issued securities) to the accounting statement date or settlement date. Buyers must pay to sellers any accrued interest, or fraction of the amount payable on the security's next coupon payment date. The Securities Industry Association typically uses the following formula <u>to compute accrued interest</u> on periodic coupon paying investments:

Accrued Interest Principal Amount **x** (Coupon Rate as a decimal/Number of Coupon Periods per Year) **x** (Number of Accrued Days according to the day count basis from beginning of period to settlement date/Number of Days in Interest or Coupon Period.)

Price Quotations

The secondary market (after issuance) typically quotes bonds on a dollar price basis. Quotes for Treasury securities typically reflect a yield basis at the auction.

- Dollar price per $100 par. Bond quotes typically reflect a dollar price per $100 of principal, without accrued interest. A "clean price" does not include accrued interest. For example, a $250,000 Agency note quoted at a price of 102 would cost $255,000

($250,000 x 102/100) plus accrued interest. However, a $250,000 original face MBS at a price of 102 with a factor of 0.80000000 would cost $204,000 ($250,000 x 0.80000000 = $200,000 remaining face; $200,000 x 102/100 = $204,000 cost) plus accrued interest. Coupon bearing securities typically do not use the dirty price quotes (equal to the clean price plus accrued interest.)

- Discount or premium**.** A bond quoted at a price of less than 100 reflects a discount to par, while a bond quoted at a price of greater than 100 reflects a premium.

- Quotations in fractions**.** Some publications and broker-dealers may quote the prices of fixed-income securities in whole dollars and in 32^{nds} of a dollar per $100 dollars par. For example, an offer price of 100-12 makes that security available for purchase at a price of $100 and 12/32 (that is, $100.375) per $100 dollars par, plus accrued interest to the settlement date. Occasionally, a quotation will include a "+" (plus), which is ½ of one 32nd, or 1/64th. The following table converts 32^{nds} to decimal form:

32nd	Decimal	32nd	Decimal	32nd	Decimal	32nd	Decimal
1	0.03125	9	0.28125	17	0.53125	25	0.78125
2	0.06250	10	0.31250	18	0.56250	26	0.81250
3	0.09375	11	0.34375	19	0.59375	27	0.84375
4	0.12500	12	0.37500	20	0.62500	28	0.87500
5	0.15625	13	0.40625	21	0.65625	29	0.90625
6	0.18750	14	0.43750	22	0.68750	30	0.93750
7	0.21875	15	0.46875	23	0.71875	31	0.96875
8	0.25000	16	0.50000	24	0.75000	32	1.00000

Yield Quotations

The yield on an investment is a function of the coupon rate, the purchase price, and the term to maturity. Users should take care to recognize the days basis used for the yield quotation. Common methods to quote yields include:

- Bond-equivalent yield (BEY.) The Securities Industry Association calls this semi-annual compounding yield the universally comparable yield. Quotes for the yield on a security with a term to maturity of greater than one year typically reflect a bond-equivalent basis. BEY is the industry standard for quoting yield.

- Annual percentage yield (APY.) Annual compounding forms the basis for computing APY. Credit unions must disclose this yield to members, but the institutional fixed-income investment market does not use it.

- Money market (or discount) yield**.** Calculating this simple interest return on an investment uses price as the basis (also used for investments with a maturity of less than one year.)

- Discount rate**.** Calculating this simple interest rate of return on an investment uses redemption value (e.g., the face amount of a Treasury bill due at maturity) as the basis (also used for investments with a maturity of less than one year.)

Investment Products

§107(7)(B) of the *FCU Act* authorizes a federal credit union to invest in the obligations of the United States of America, or in securities fully guaranteed as to principal and interest.

US Treasury Securities

U.S. Treasury securities, which are fully guaranteed obligations of the United States government, include bills, notes and bonds currently issued only as book-entry securities in the Federal Reserve book-entry system. Credit unions may purchase Treasury securities directly at Federal Reserve auctions through either a competitive or a noncompetitive bid. They may submit competitive bids on a yield basis for a specified amount of Treasury securities. Treasury accepts the bidders with the lowest yields (i.e., highest prices for the Treasury securities.) The Federal Reserve awards Treasury securities purchased by a noncompetitive bid, generally for up to $5 million face amount, at a price equal to the average of the competitive bids accepted by the Treasury.

Credit unions may also purchase Treasury securities in the secondary market from a securities dealer or financial institution. Purchasing Treasury securities does not require a primary dealer. Large volumes and narrow bid-ask spreads characterize the highly liquid Treasury securities' secondary market.

A safekeeping receipt typically evidences a credit union's Treasury securities. Alternatively, a statement of holdings from the Federal Reserve evidences ownership of Treasury securities held directly by the credit union in the book-entry system.

Treasury Bills

Treasury bills issued by Treasury consist of discount securities auctioned and quoted on a discount rate basis, with an original maturity of 91 days, 182 days, or 52 weeks. Occasionally, Treasury will issue special maturity Treasury bills in the form of cash management or tax anticipation bills. Treasury bills have a face value that reflects the return of a single cash flow (also called a redemption amount) to the investor at maturity. The dollar discount, calculated by multiplying the discount rate (as a decimal) times the face value times the number of days remaining to maturity divided by 360 days (the days

basis), represents the difference between the purchase price and the face value (i.e., the amount of interest the investor receives at maturity.) The dollar purchase price reflects the difference between the face value and the dollar discount.

Comparing the Treasury bill interest rate to a coupon security (e.g., a Treasury note) requires calculation of the Treasury bill's bond-equivalent yield (BEY), a universally comparable semi-annual yield (i.e., a nominal annual yield assuming semi-annual compounding.) Credit unions cannot compare in a meaningful way the discount rate to the BEY on a Treasury note or bond. The discount rate, based on the face value of the investment rather than the dollar purchase price, uses a 360-day, rather than a 365-day basis for its calculation. Alternatively, calculation of the money market yield facilitates comparison of the interest rate on a Treasury bill to another money market instrument.

Treasury Notes and Bonds

Treasury notes and bonds represent coupon-bearing securities. The U.S. Treasury auctions Treasury notes on a BEY basis and quotes them on a price basis in the secondary market. Treasury notes and bonds pay interest semi-annually and return the principal amount (face value) to the investor at maturity. The U.S. Treasury issues Treasury notes with an original maturity of 2, 5, or 10 years and Treasury bonds with an original maturity of 30 years. Occasionally, Treasury will reopen a previously issued security and auction additional amounts.

Treasury Zeros or STRIPS

§703.110(d) prohibits the purchase of a zero coupon investment with a maturity date more than 10 years from the settlement date, unless the credit union is exempt under the Reg Flex provisions of Part 742. Treasury prices a zero-coupon or "stripped" security at a discount to face value before maturity. A "corpus strip" reflects a claim to the principal portion of a Treasury security, as contrasted with a stripped coupon's claim to an interest payment.

STRIPS (Separate Trading of Registered Interest and Principal of Securities) is the U.S. Treasury program that permits separate trading and ownership of the interest and principal payments on 10-year and longer term original maturity Treasury notes and bonds maintained in the book-entry system operated by the Federal Reserve Banks. STRIPS reflect direct obligations of the U.S. Government.

For example, a 10-year, 6 percent coupon, $1,000,000 Treasury note may be separated into 20 different coupon STRIPS (one for each of 20 semi-annual payments of about $30,000 each) and one corpus STRIPS (the $1,000,000 principal due at maturity.) STRIPS also can be reconstituted into the original Treasury note or bond.

Other US Guaranteed Securities

In addition to Treasury securities, the U.S. Government fully guarantees the principal and interest of certain other securities, such as Government National Mortgage Association (GNMA or Ginnie Mae) securities and Government of Israel notes.

Federal Agency Securities

In the bond market, the term "federal agency securities" generally applies to two different types of securities: (1) a security issued by a Government corporation (wholly or partially owned by the Government), usually with an unconditional guarantee of the U.S. Government; and (2) a security issued by a government sponsored enterprise (GSE), often explicitly guaranteed only by the issuer.

Permissible investments for federal credit unions include the obligations, participations or other instruments issued by federal agencies as authorized in §107(7)(E) of the *FCU Act*, wholly-owned Government corporations designated in §101 of the Government Corporation Control Act (31 U.S.C. §9101(3)), and other securities as authorized in §107(7)(E) and §107(7)(F) of the *FCU Act*. Most wholly owned Government corporations no longer issue their own securities.

Government Corporations

The Federal Financing Corporation generally provides funds to Government corporations and borrows those funds from the Department of the Treasury that, in turn, issues Treasury securities. Recently issued securities of Government National Mortgage Association, Small Business Administration, and Tennessee Valley Authority commonly fall within this category.

Wholly owned Government corporations include:

- Government National Mortgage Association (GNMA or Ginnie Mae); and
- Tennessee Valley Authority (TVA.) The full faith and credit of the US government do not back these Tennessee Valley Authority securities.

Entities formed to assist with problems in the savings and loan industry include:

- Financing Corporation (FICO);
- Resolution Trust Corporation (RTC); and
- Resolution Finance Corporation (RefCorp.)

These mixed-ownership Government corporations have issued, directly or indirectly, certain securities in which federal credit unions may invest including certain mortgage-backed or mortgage-collateralized securities.

Government Sponsored Enterprises

Government Sponsored Enterprises (GSEs) are privately owned, Congressionally chartered corporations. The government establishes a GSE to provide funding to a sector of the economy otherwise underserved by purely private financial intermediaries. Because GSEs play an important role in sectors of the economy, GSEs are instrumentalities of the U.S. Government for specific purposes. SEC registration requirements exempt GSE debt obligations. However, GSEs do not carry an explicit guarantee of the U.S. Government.

GSEs that issue securities include:

- Federal National Mortgage Association (FNMA or Fannie Mae);
- Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac);
- Farm Credit System (including Federal Farm Credit Bank (FFCB) and Farm Credit System Financial Assistance Corporation (FACO));
- Federal Home Loan Bank System (FHLB);
- Federal Agricultural Mortgage Corporation (FAMC or Farmer Mac); and
- Student Loan Marketing Association (SLMA or Sallie Mae.) SLMA formed a holding company for the purpose of giving up its GSE status. Securities issued by SLMA with final maturities not to extend beyond September 30, 2008 remain permissible investments for federal credit unions. However, federal credit unions may not invest in securities issued by SLM Holding Corporation.

Permissible Investments for Federal Credit Unions

Issuer or Originator	Security Backed by US Government	Permissible for Federal Natural Person Credit Union - Provision of *FCU Act* (or other law)
FNMA (Fannie Mae)	NO	YES – 107(7)(E)
FHLMC (Freddie Mac)	NO	YES – 107(7)(E)
FFCB (Farm Credit)	NO	YES – 107(7)(E)
FACO	YES	YES – 107(7)(B)
FHLB	NO	YES – 107(7)(E)
FAMC (Farmer Mac)	NO	YES - 107(7)(E) (and 12 U.S.C. 2279aa-12(c))
SLMA (Sallie Mae)	NO	YES – 107(7)(E)
FICO	NO (principal backed by zero-coupon Treasuries)	YES - 107(7)(E) (and 12 U.S.C. 1441(e)(6))
RTC	NO	Certain trusts are permissible mortgage-related security investments
RefCorp	NO	YES - other agency 107(7)(E)

Obligations

Agency obligations include short-term notes, long-term debenture bonds, and structured notes, described as follows:

- Short-term notes - generally discount securities (similar to Treasury bills) with a single cash flow at maturity;
- Debenture bonds – also called consolidated bonds when issued by Farm Credit generally pay interest semi-annually
- Structured notes - typically contain call provisions or other embedded derivatives; credit unions that do not understand the risks of the embedded derivatives should not invest in these securities.

Participations

Participations differ from debenture bonds in that specific assets, typically mortgage loans, back participation bonds. Generally, the U.S. Government (for Ginnie Mae) or a GSE (for Fannie Mae and Freddie Mac) guarantee these securities.

One loan or a pool of loans may back participation certificates. To reduce prepayment risk on securities purchased at a premium, management should know the approximate number of loans in the participation pool and, if geographic diversification warrants, their

location. For the more recent issues, the Bloomberg screens, offering circulars, or other external means provide characteristics of the participation pools.

Management should thoroughly analyze the risk of uncertain cash flows associated with mortgage pass-through certificates. As market interest rates rise, prepayments generally slow down. As rates move up and the repricing of investment cash flow diminishes, members increase pressure for higher dividend rates. Likewise, prepayments generally increase as rates move downward. If rates decrease, the credit union must then reinvest excess dollars at lower rates, further reducing asset yields. As such, standard prepayment models (e.g., those available through Bloomberg) often help project cash flow for mortgage pass-through securities. (For further guidance on standard prepayment models, refer to the section on CMOs in the Investment Guidance Papers located in the NCUA E-Library.)

Participation certificates may also consist of variable- or fixed-rate loans. From an asset-liability standpoint, management should know the correlation between the variable rate formula (e.g., the index plus the margin) used to determine the loans' interest rate and the credit union's cost of funds.

Usually, the participation certificate holder receives monthly payments of principal and interest directly from the servicer of the loan who, in turn, received those payments from the borrower, resulting in a "pass-through" security. A "modified pass-through" means that the agency guaranteeing the security ensures the timely payment of principal and interest. Illustration 12-A, a secondary market flowchart for modified pass-through securities.

Basic securities are of two types:

- **Pass-Throughs.** Investors share in cash flow from the underlying mortgages on a "pro-rata" basis. Monthly payments and prepayments of principal and interest are divided among the investors according to the relative size of their investment.
- **CMO/REMIC.** Investors share in cash flows on a "prioritized" basis by purchasing into a "tranche" or class. The prospectus provides details of when the investor will receive interest, principal, and/or prepayments.

Secondary Participations

Secondary participations usually do not have a timely payment guarantee. Insured student loans (other than those primarily guaranteed by a state or private agency), Farmers Home Administration (FmHA) Business and Industrial Loans, and the guaranteed portion of loans guaranteed by the SBA fall into this category.

'

Secondary Market Flow Chart

#1	$100k <----- ' -----> Note	#2	$100k <----- -----> Note	#3	$100k <----- -----> Security	' #4

#1 Individual wants $100,000 to purchase or refinance a principal residence and usually requests a long-term fixed rate (high level of IRR.)

#2 Credit union wants to loan money, charge points and fees, and "service" the debt. If the credit union does not wish to assume the reduced liquidity or increased IRR associated with mortgage lending, it structures the loan to qualify for the secondary market. The credit union then has the option of selling the loan immediately or at a later date, thus enabling it to make additional loans.

#3 Intermediary (e.g., GNMA, FHLMC, and FHA) established to provide a ready source of housing funds. These agencies set secondary market standards based on historical records to ensure high quality loan underwriting and documentation, which allow the agency to "guarantee" loan principal and interest payments. The intermediary issues to individual investors certificates or securities collateralized (in whole or in part) by the mortgages purchased from the credit union.

#4 Individual investors willing to buy a security collateralized by the mortgages. They receive a guarantee of monthly principal and interest payments and a higher yield than they would receive if they invested in a Treasury security with a similar maturity. The investors, in turn, assume interest rate and prepayment risks resulting from uncertainty as to the repayment period of the principal and interest from the collateralized mortgages in the pool. For example, if individual homeowners refinance or move, they pay off the entire loan early rather than over their original mortgage periods (usually 15 or 30 years.)

Illustration 12-A

Credit unions holding secondary participations should file all appropriate forms with the insuring agency and retain written assurance that the secondary participation loans meet all requirements in the event that the borrower defaults and the credit union must file a claim. Officials should understand the credit union's collection responsibilities under the insuring clauses that support the investments in question.

The credit union should ensure that participation certificates and other secondary participations meet the requirements of §107(7)(E) or §107(7)(F) of the *FCU Act*, and that no obstructions exist that might invalidate the federal guarantee.

GNMAs

A pool of mortgages insured or guaranteed by the Federal Housing Administration (FHA), the FmHA, or the Veterans Administration (VA) backs a GNMA. GNMA guarantees the timely payment of principal and interest to the security holders. The credit union normally receives payment on the fifteenth of each month for GNMA I, or on the

twentieth for GNMA II. This payment includes the scheduled principal payment, any prepayment of principal on the security, and coupon interest for the prior month.

Because GNMAs have the principal repayment feature, the credit union must know the pool factor to compute the principal outstanding. The Bond Market Association publishes a schedule for the factors (Prepayment Announcements.) For example, GNMA I factors are announced about the fifth business day of the month, and GNMA II factors a business day later.

The factor for a GNMA represents the amount of principal that remains outstanding as of the end of the previous month. When reconciling safekeeping statements, examiners should note that statements may show the factor for the current month, and report only the payment amounts for principal and interest from the previous month, not those scheduled for receipt in the current month.

Settlement on GNMA trades occurs once each month, according to a schedule published by The Bond Market Association. For example, most 30-year GNMA I securities have a settlement date of about the sixteenth business day of the month. To settle on the current month's settlement date, the credit union must make and report a transaction on or before the notice date, which is 48 hours before the settlement date.

A GNMA's principal balance as of the end of the previous month provides the basis for the settlement amount. Thus, while a transaction sets the dollar price per $100 of outstanding principal, the credit union cannot compute the actual dollar amount due at settlement until it knows the pool factor for computing the outstanding principal.

A credit union should accurately record principal repayments and interest payments. Staff should properly reflect the security's outstanding balance by reviewing the statements received from either the servicer of the GNMA pool or the credit union's broker.

GNMA issues GNMA securities in book-entry form in the electronic book entry system of the Mortgage-Backed Security Division of the Depository Trust Company (DTC.)[1]

Each month, credit unions registered as owners of GNMAs receive an Issuers Monthly Remittance Advice. This form usually accompanies the monthly payment and identifies

[1] Since December 11, 1990, investors holding older physical-form GNMA securities may convert them to book-entry form, with the exception of GNMA Serial Notes. Since December 1986, non-eligible securities and book-entry eligible securities that were not delivered according to good delivery guidelines remain in physical form.

the amount of principal repayment, interest income, and the outstanding balance of the security. The examiner may verify these figures with those on the credit union's books.

Most credit unions hold GNMA securities through a custodian that maintains a chain of custody through a participant in DTC. The credit union receives a statement from its custodian. Information contained on these statements may vary slightly from custodian to custodian. Examiners and credit union staff can verify the principal repayment, interest income, and the security's current par value from the custodian's statements against the figures in the credit union's books.

If a custodian's statement does not provide the current par value of the security, the examiner may compute the balance as follows:

- Obtain the original par value of the security from the trade sheet (if available) or from the subsidiary ledgers;
- Obtain the GNMA pool factor. (The pool factor represents the percentage of principal still outstanding.);
- Multiply the original par value by the factor to determine the current par value (remaining principal balance); and
- Verify the computed value against the figures in the credit union's records.

Example: A credit union purchased a GNMA modified pass-through security with an original par value of $1,007,008.33. The GNMA pool factor is .99703096.

Original par value	$1,007,008.33
GNMA pool factor	.99703096
Current par value (CPV)	$1,004,018.48

To determine reasonableness of the fair value of a recently issued GNMA, the examiner may look up the bid price for the stated interest rate and multiply the bid price by the outstanding principal balance of the investment to determine the fair value. A published bid price for a recently issued GNMA typically will not reflect fair value for a seasoned GNMA, that is, for a GNMA security with a shorter remaining maturity. (See the Mortgage Valuation workbook in AIRES for indication values for mortgage related securities.)

SBA Guaranteed Loans

Fixed-rate Small Business Association (SBA) guaranteed loans have appealed to some credit unions because of their relatively high yields. SBA also has a variable-rate participation loan, in which the loan rate generally adjusts quarterly and moves with the prime rate, thus reducing the IRR of the security.

However, the lack of an active secondary market for these loans limits their marketability, making them more suitable as a long-term investment than as a liquid asset. Generally, SBA single loans contain more risk than SBA loan pools. Likewise, SBA loan pools that have a small number of loans carry more risk than do pools with larger numbers of SBA loans. In other words, the larger the number of loans in the pool, the more predictable is the pool's performance and the better its marketability.

SBA loans, whether fixed or variable rate, do not have a consistent average life and SBA can call them for immediate repayment, which could result in a loss if the credit union purchased the SBA at a premium. In addition, the "thin market" (i.e., not an actively traded secondary market and a limited number of brokers making a primary market in SBAs) restricts marketability of these instruments.

> **Example**: A credit union purchased a $100,000, 10 percent, 5-year SBA loan at 105. After one year, the balance of the loan was $80,000 and the unamortized premium was $4,000. The borrower repaid the loan in full at this point. Since SBA guarantees repayment only at par, SBA would not reimburse the credit union for the remaining $4,000 unamortized premium and the credit union must absorb the loss during the current accounting period.

Credit unions should be aware of the dangers of purchasing SBA loans and other secondary participations at high premiums. However, the decision of whether or not to purchase SBAs remains with the officials.

Zero Coupon Bonds

As with Treasury securities, which can be stripped into zero coupon securities, agencies (e.g., TVA) and other financial institutions can offer zero coupon debt obligations.

The price of a zero coupon security exhibits more sensitivity to changes in interest rates than does the price of a similar maturity coupon bearing bond. In fact, prices of longer-term, zero coupon securities can react strongly to changes in interest rates. This price volatility can attract credit unions wishing to speculate in trading of zero coupon securities. As such, a credit union's investment in a zero coupon security may be legal, but not appropriate from an asset-liability standpoint.

A federal credit union may not purchase a zero coupon investment with a remaining maturity greater than 10 years from the settlement date. A credit union may "grandfather"

a zero coupon bond purchased before December 2, 1991, unless it poses a safety and soundness concern. If examiners determine that the investment poses a significant threat to the continued sound operation of the credit union, they should contact their supervisory examiner before further assessing the situation.

Examiners should determine that the credit union properly records the zero coupon securities. Management determines the present value of the single cash flow using the purchase interest rate, typically a bond-equivalent yield. Accounting for these securities requires accreting the discount using the interest method (also termed scientific or level yield.) Unlike the straight-line method, the interest method results in a lesser amount of income earned in early periods than in later periods.

Examiners should also ascertain whether the credit union purchased these securities for trading purposes. If the credit union trades these securities, the examiner should consult the supervisory examiner. The examiner should review the credit union's trading policies, operating procedures, and level of overall risk in the investment portfolio (also see the Investment Trading section.)

SMBS IOs and POs

Stripped mortgage backed securities (SMBS) or SPLITS, more commonly referred to as interest only securities (IOs) and principal only securities (POs), resemble zero coupon type instruments. However, they possess the additional characteristic of uncertain cash flow and the resulting uncertain returns. The issuer strips the principal and interest payments from the underlying mortgage-backed securities and SPLITS them into separate investments. Investors in a PO receive a pro rata portion of the principal payments on the underlying mortgages, while investors in an IO receive a pro rata portion of the interest payments on the underlying mortgages.

§703.110(c) prohibits the purchase of stripped mortgage backed securities (SMBS), residual interests in collateralized mortgage obligations (CMOs) and real estate mortgage investment conduits (REMICs), and mortgage servicing rights. Purchase of SMBS solely for reducing IRR is no longer permitted for new purchases.[2]

NCUA grandfathered investments in SMBS acquired before January 1, 1998, unless they posed a safety and soundness concern (see §703.130 for further guidance.) Credit unions holding grandfathered, stripped mortgage-backed securities to reduce IRR in accordance with NCUA's Rules and Regulations must report the security as a trading asset at fair

[2] Before January 1, 1998 but after December 1, 1991, NCUA's Rules and Regulations permitted credit unions to purchase SMBS solely for reducing IRR.

value through income or as an available-for-sale asset at fair value through equity until its disposition.

Credit unions that purchased SMBS before December 2, 1991, should:

- Carry them at amortized cost if the credit union has both the intent and the ability to hold the SMBS to maturity. Amortized cost is original cost (present value of future cash flows) systematically adjusted to the amount that the credit union expects to realize through the maturity date;
- Use the interest method of amortization or accretion to record interest income over the life of the investment unless the straight-line method results in a materially equivalent amount;
- Retain a copy of the prospectus; and
- Provide reports and analysis documenting the reduction in risk at the time of purchase (since credit unions may only hold SMBS to reduce IRR) and periodically thereafter.

As with all mortgage-backed securities, credit unions may need to periodically adjust the carrying value of the SMBS through current period income to reflect significant changes in the prepayment rates of the underlying pool of mortgages. Effective yield calculations reflect a security's purchase price relative to expected future periodic cash flows, anticipating estimated mortgage pay-down speeds over the life of the security.

As the underlying mortgages pay down significantly faster or slower than originally anticipated, the carrying value of the SMBS may require adjusting. This adjustment involves recalculating the effective yield used in the amortization to reflect an effective yield based on actual payments to date and anticipated future payments. As a result of the adjustment, the net investment in the loans reflects the amount that would have existed had application of the "revised" effective yield occurred since the acquisition of the loans. The adjustment to the new balance involves debiting or crediting the investment in loans with a corresponding charge or credit to interest income.

When reviewing SMBS, examiners should do the following:

- Determine that the officials understand the risk associated with SMBS (especially IOs) as outlined in the prospectus;
- Review for reasonableness the accounting treatment and its basis.

Collateralized Mortgage Obligation

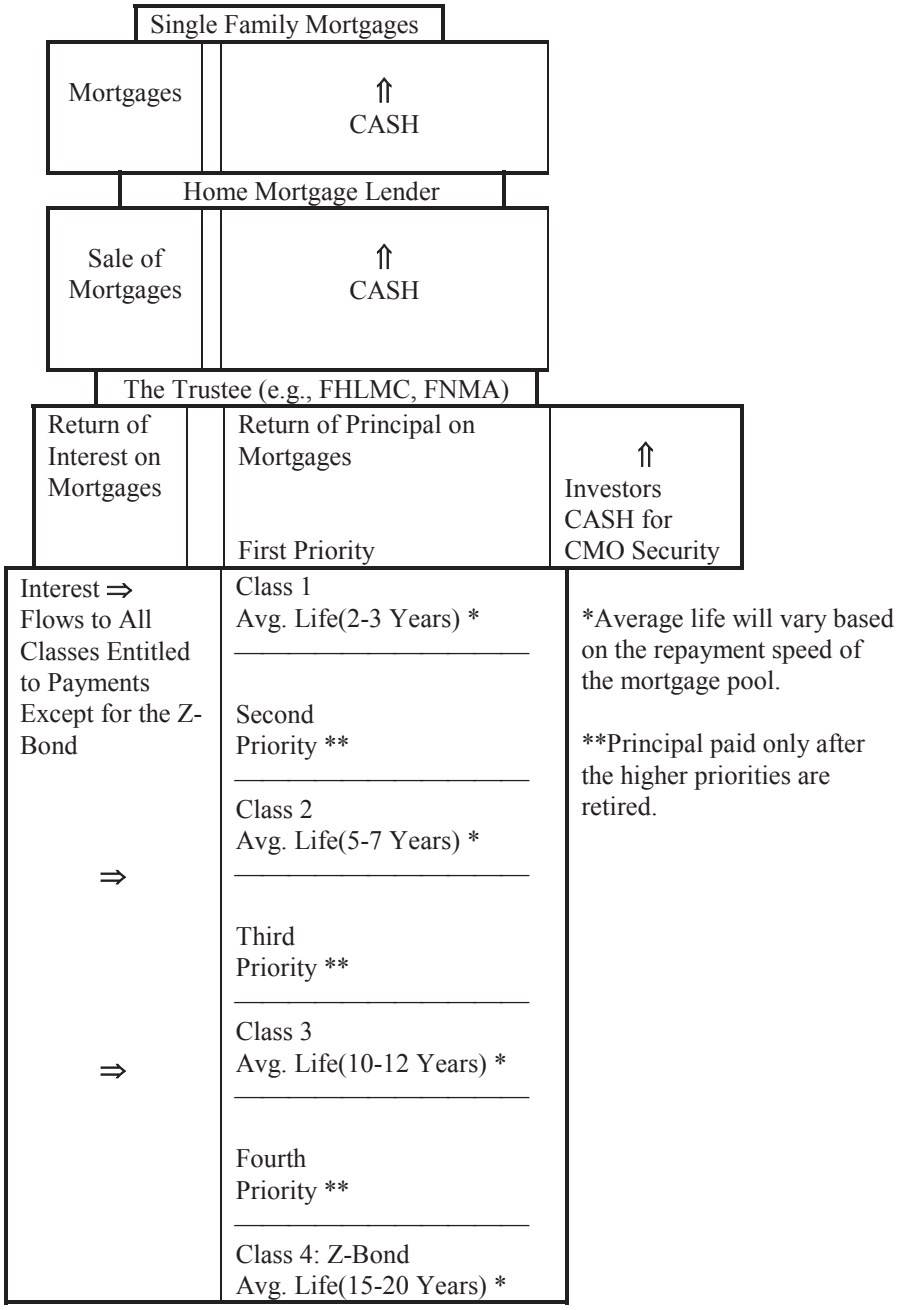

Illustration 12-B

CMOs

Collateralized mortgage obligations (CMOs) are multi-class pass-through bonds; either general obligations of the issuer backed by mortgage collateral or limited obligations where the bondholders rely on the pledged collateral for payment. Each bond class, or tranche, has a stated maturity date and a fixed coupon or variable rate. The cash flows generated by the collateral relate to the cash flows of the bonds. After making interest payments, all available cash goes to repay principal on the "fastest" pay tranches. Principal payments go to one or more classes at a time, based on an order of priority determined at the bond issue date. Illustration 12-B shows a CMO where principal payments go to one class at a time.

In a simple sequential pay structure, following retirement of the first class, the next tranche in the sequence becomes the exclusive recipient of principal payments until its retirement. In more complex structures, the first class may be some form of "support tranche," created to protect the planned amortization classes (PACs) and target amortization classes (TACs) of the total offering. The support tranche will absorb any unanticipated cash flows with a paydown in principal, and will extend their maturities when prepayment speeds diminish.

The potential for increased certainty of cash flow patterns, faster return of principal over the mortgage pass-through type securities, and attractive yields have made CMOs popular investments. If their structure sufficiently protects them from prepayment and extension risk, CMOs can appropriately enhance yield for a credit union that thoroughly understands the product. However, a credit union must closely analyze a CMOs' characteristics before investing.

§107(7)(E) and §107(15) of the *FCU Act* authorize credit unions to invest in collateralized mortgage obligations (CMOs) issued by FHLMC, FNMA, and GNMA, and permissible private issuers. CMOs issued by FHLMC or FNMA carry little or no credit risk. Groups that offer privately issued CMOs include securities firms, savings and loans, mortgage bankers, home builders, and life insurance companies. Most privately issued CMOs are highly rated, however, a credit union that anticipates buying a privately issued CMO should ensure that the CMO's rating falls within one of the two highest categories by at least one nationally-recognized statistical rating organization.

CMOs can contain significant liquidity and IRR including the following:

- Unanticipated principal prepayments on the collateral could result in the issuer retiring the bonds substantially earlier than their final maturity date;

- In a declining interest rate environment, credit unions that reinvest excess dollars at lower rates usually experience reduced yields;
- If the credit union purchased the instrument at a premium, the effective rate of return decreases as prepayments increase in a declining rate environment; and
- As interest rates move upward, cash flow could decrease significantly and reduce the amount of funds available to reprice at the higher rates.

Complex CMO investment instruments require that credit union investors understand the potential cash flows and related yields. For example, a CMO issue may include numerous tranches ranging from PACs (I, II, and III) to TACs to very accurately defined maturities (VADMs) to Z-Bonds to companion or other support classes. Furthermore, the average life and final maturity of a CMO depends upon the payment priority of the CMO within the issue's deal structure, and often creates interdependencies with other classes within the same CMO issue. Examples of typical classes within a CMO issue and related risks include:

- **Planned amortization class (PAC.)** Generally, the PAC class of a typical CMO contains less risk and has a well-defined tranche that receives priority over other classes within the issue. While PAC CMOs exhibit less uncertainty in cash flow pattern, the certainty of its cash flow depends on a "range" (or "band" or "collar") of prepayment speeds. However, cash flow patterns could significantly change if the speed of the issue moves outside the PAC range.

  A CMO issue may include one or more PACs, often referred to as PAC I, PAC II, or even PAC III. The first PAC may have a wider PAC band or level of protection than other PACs within the CMO issue, thus covering a wider range of prepayment speeds.

- **Very accurately defined maturity (VADM.)** The VADM class may contain the least risk of the various classes. VADMs tend to have relatively short stated final maturities, and typically have PAC bands covering upwards from "0" percent prepayment speed assumptions (PSA.) The higher the PSA, the shorter the time in which the credit union anticipates the return of its principal dollars. For example, a "0" PSA means no anticipated prepayments within the mortgage pool (an unlikely event.) A PSA of 100 means a repayment rate of 6 percent per year. A PSA of 200 means a repayment rate of 12 percent per year.

  When interest rates rise, members generally repay their mortgages at a slower rate causing PSA rates to fall. The reverse is true in a declining interest rate environment. From a cash flow standpoint, the VADM may have a relatively short repayment window. Thus, the wide "band" coverage of a VADM, combined with the short and

relatively stable stated maturities, makes this class a low risk category in contrast to others.

- **Targeted amortization class (TAC.)** The market typically refers to TACs as "half PACs". They are slightly more volatile than PACs or VADMs, but more stable than a Z-Bond or other support classes. TACs offer some protection against prepayment risk (falling interest rate environment), but not against extension risk (rising interest rate market.)

- **Companion or support class.** The companion or support classes, one of the more volatile classes within a CMO issue, receive principal payments only if other, higher priority classes (e.g., PACs, TAC, etc.) have received their scheduled payments. This may require the issuer to redirect cash flows within the pool to other higher priorities. As a result, the predictability of cash flow patterns often remains highly uncertain. A credit union investing in companion or support classes must fully understand the complexity of the CMO issue, the interrelationships within the CMO, and their likely effect on future cash flow projections.

- **Z-Bonds.** An accrual bond or Z-bond tranche does not receive any cash payments of principal or interest before retirement of all tranches preceding it. Many CMO issues include one or more accrual bond tranches. In effect, an accrual bond is a deferred interest obligation with a varying payment date, resembling a zero coupon bond before the retirement of the preceding tranches. With its long average life, the Z-Bond often has high price sensitivity to changes in interest rates. The Z-Bond tranche receives repayments last, which makes it one of the riskiest of the various classes.

REMIC

Generally, a real estate mortgage investment conduit (REMIC) is the tax-preferred method of issuing CMOs. To qualify as a REMIC, the interests in the REMIC fall within one or more classes of "regular" interests and a single class of "residual" interest. Regular interests are the classes of a CMO issue. The residual interest consists of the excess interest and reinvestment earnings that exist as a result of the differential between the income flow from the underlying mortgages and the income outflow to the regular interest holders.

IRPS 98-02

Examiners should ensure that credit union officials understand the sound principles and practices provided by IRPS-98-02, which recommends that credit unions having material positions in complex securities such as CMOs perform reasonable analysis both at time of purchase and periodically thereafter. After October 1, 1998, credit unions <u>need not obtain</u>

the FFIEC high-risk securities test (HRST) for CMOs and real estate mortgage investment conduits (REMICs) in natural person credit unions.

IRPS 98-02 recommends analyses similar to that which underlies the HRST for credit unions having material positions in complex securities. The following three tests serve as a benchmark for a federal credit union's analysis:

- The average life sensitivity test - tests the average life of the security, assuming an immediate shift in the yield curve of plus 300 basis points, and a decline on the downside (-300 basis points);

- The average life test - reviews the CMO's expected average life for base case exposure; and

- The price sensitivity test - tests the estimated change in the CMO's price due to an immediate and sustained parallel shift in the yield curve of plus or minus 300 basis points.

Assumptions for the analysis include market interest rates and prepayment speeds at the time of valuation, thus enabling the credit union to comply with the IRPS 98-02 requirement that it knows the value and price sensitivity of its investments. The credit union must maintain, and have available for examiner review, documentation supporting the analysis (§703.40.)

At a minimum, the credit union should obtain a prospectus (when available) and closely analyze the characteristics of the CMO issue using standard industry calculators (e.g., Bloomberg, etc.) before purchasing the security. Projecting future cash flows of CMOs under various interest rate conditions is a complex task; therefore, NCUA recommends using an acceptable standard prepayment model to analyze IRR under various prepayment assumptions. NCUA Letter No. 139 encourages credit unions to obtain prepayment forecasts from at least three different dealers before purchase.

An unreasonable PSA can produce inaccurate test results. A broker could manipulate the prepayment assumptions to make a CMO appear less risky (see example in the addendum.) Thus, the examiner should review the "source" of the prepayment assumptions for consistency. The industry uses a wide variety of "sources" for prepayment assumptions including Andrew Davidson, CMO Passport, First Boston, UBS, DLJ, Paine Weber, JP Morgan, Bear Stearns, and Median, which is an average of the dealer estimates.

The *Investment Guidance Paper* for March 1997, Section D, Exhibits 1 to 17, includes an example and description of the HRST and other important Bloomberg screens. Bloomberg continues to support this screen as it provides detailed analytics for CMO/REMIC securities. The "Assumption and Source" area for the test specifies the PSA used in the analysis.

Examiners should watch for credit unions that rely on a "CUSTOM" prepayment model source, a customized set of prepayment assumptions. Unless management can fully support the assumptions used in a "CUSTOM" prepayment model, examiners should request additional tests using industry standards. Examiners may readily accept some "CUSTOM" prepayment models. For example, a brokerage firm may offer a "CUSTOM" prepayment speed derived from the median, average, or most conservative estimate from all of the models available (Bloomberg, etc.)

Stress analysis outcomes, based on inconsistent prepayment assumptions, can vary from model to model. Credit unions can comply with the IRPS by analyzing material positions in a CMO or REMIC using a single model; however, a conservative approach would rely on at least three different models. The credit union should ensure that the analysis of securities is reasonably within its limits.

Occasionally a CMO or REMIC could acceptably withstand a 300 basis point change, but present higher risk at some lesser shift in the yield curve. The credit union should understand the risk for all yield curve shifts, up to and including a 300 basis point shift. Acceptable testing at 100, 200 and 300 basis point shifts should sufficiently address these concerns.

Management should also consider the potential for decline in fair values of the investment portfolio over a variety of interest rate cycles and the likely effect on net worth. The "price sensitivity" analysis tool projects the potential effect on a CMO's fair value in various interest rate cycles.

Officials should demonstrate the CMO’s suitability for the credit union from an ALM standpoint. While the CMO may be legal, its anticipated cash flow patterns or potential maturity in relationship to the share structure may render it unsuitable for the credit union. For example, a credit union investing a significant portion of its assets in CMO tranches with long average lives could raise safety and soundness concerns if its share base is short-term.

The credit union remains responsible for obtaining analysis information. However, the examiner may need to obtain an analysis through the Office of Strategic Program Support and Planning or the regional office under certain conditions:

- The examiner suspects the reasonableness of the broker's assumptions or other variables (e.g., PSA); or

- The credit union cannot get analysis information and the CMO could substantially affect the credit union's financial health.

Examiners should call the Investment Hotline (800-755-5999) or their RCMS to discuss CMO questions. Examiners may seek the orderly disposal of any CMO or REMIC if the investment poses a significant threat to the continued sound operation of the federal credit union under IRPS 98-02. Before requesting an onsite analysis or recommending divestiture, the examiner should discuss the credit union and its circumstances with the supervisory examiner and follow regional procedures.

Divestiture of Securities

Responsibility for assessing balance sheet risk lies with the credit union officials. If the examiner's analysis determines the credit union has a significant position in high-risk securities (e.g., CMOs, REMICs, or other complex securities that have excessive risk) or inconsistency with the credit union's investment, liquidity or asset-liability policies, the examiner may review management's analysis and determine whether the credit union can manage the risk of holding the high-risk CMOs or complex securities.

Some of the factors for examiners to consider in evaluating whether a credit union may safely hold high-risk investments include:

- Ability of the officials to explain the instrument's characteristics and risks to the examiner;

- Ability of the officials to obtain and adequately evaluate the instrument's market pricing, cash flows and test modeling;

- Ability of the officials to define, explain and document how the high-risk investments fit into the credit union's ALM strategy; and

- The effect that either holding or selling the high-risk bonds will have on earnings, liquidity and net worth in different interest rate environments.

After obtaining the concurrence of the supervisory examiner and regional office, examiners may seek divestiture if they believe continued ownership of high-risk securities represents an undue risk to the credit union. This risk can arise from the following:

- The size of a credit union's holdings of high-risk securities in relation to its capital and earnings;
- Management's inability to demonstrate an understanding of the nature of the risks inherent in the securities;
- The absence of internal monitoring systems and other internal controls to appropriately measure the market and IRR of these securities; or
- Management's inability to manage its overall IRR.

If the region considers the credit union's continued holding of the high-risk securities a safety and soundness concern, both the examiner and supervisory examiner will meet with the officials to reach agreement for divesting the securities or developing an acceptable plan to mitigate the risk. If they cannot reach an agreement with the officials, the examiner will prepare a preliminary warning letter or recommend other administrative action, following regional procedures. Examiners will document the agreements reached in the report. They also should follow-up with the credit union as necessary to ensure compliance with the agreements.

Federally insured state-chartered credit unions holding high risk CMOs or REMICs must record unrealized gains or losses under SFAS 115 (see §741.219); however, they need not establish a special reserve for non-conforming investments. Following regional working agreements with the SSA, examiners will discuss and coordinate divestiture of high risk CMOs that present safety and soundness concerns in state-chartered credit unions with the appropriate state regulator.

Residual Interests

A federal credit union may not purchase a residual interest in a CMO or REMIC. Management should provide reports and data to the examiner and the board on how it proposes to reduce IRR.

Fair Values

The credit union must determine the fair values of the securities at least monthly, in accordance with §703.90, unless the credit union is exempt under the RegFlex provisions of Part 742.

Investment in Mortgage Notes

§107(15)(A) of the *FCU Act* permits credit unions to purchase certain mortgage loans. A federal credit union may make these investments only if it has an ongoing program of making real estate-secured loans and needs comparable loans to complete the packaging of a pool of loans for sale or pledge on the secondary market (see §701.23.) Examiners may also refer to NCUA Letter to Credit Unions, No. 96, dated March 1988.

Mutual Funds, Common Trusts, Unit Trusts

Mutual funds. A mutual fund is an open-end investment company registered with the SEC to invest money from shareholders. A prospectus discloses the permissible investments and investment transactions for the fund. A money market mutual fund complies with SEC regulations limiting investments generally to short-term instruments.

The net asset value (NAV) represents the value of a share in a mutual fund. The financial sections of a number of local newspapers, the *Wall Street Journal*, or online services report NAVs for mutual fund shares. Money market funds typically maintain a stable NAV of $1 per share.

The value of a credit union's investment in a mutual fund equals the number of shares it holds (found on the monthly statements of account activity provided by the trustee) multiplied by the NAV. Credit unions may redeem mutual fund shares with the open-end investment company for the NAV.

Each dividend period, the credit union must adjust its investment in mutual funds and common trusts to fair value. Credit unions must classify mutual funds having readily determinable fair values as either trading (if purchased with the intent of sale in the near term) or available-for-sale (if other than trading.) They cannot classify mutual funds as held-to-maturity (amortized cost) and should not carry mutual funds at the lower of cost or market, but at fair value, adjusted through income (if trading) or through equity (if available-for-sale.)

Common trust fund. A common trust fund is a collective investment fund maintained by a national bank (12 CFR Part 9.) A common trust fund that complies with Office of the Comptroller of the Currency (OCC) regulations limiting investments generally to short-term instruments is called a short-term investment fund ("STIF.")

OCC regulations requires disclosure of the value of a credit union's pro-rata interest in a common trust fund at least once every three months if the fund's assets are readily marketable. However, investors may contract for more frequent valuations. OCC regulations allows for STIFs valuation on a cost basis.

Legality of Fund

Credit unions must implement adequate procedures for determining each fund's legality. The examiner should review the following:

- The credit union's procedures:
  - To ensure they meet the needs of the credit union;
  - To ascertain that staff reconciles the book balances with the statement of account each month; and
  - To determine that the records are in balance; and

- The prospectus for each mutual fund investment:
  - To determine the investment's permissibility (i.e., that the fund invests or is authorized to invest only in investments permitted by the *FCU Act* and *NCUA Rules and Regulations*), and
  - The investment meets other requirements.

A number of mutual funds sometimes use hedging strategies to increase yield. Federal credit unions may not, however, use common techniques such as writing call options and futures contracts. Fund managers' use of such techniques would make the fund illegal.

Characteristics and Risks

The examiner should determine that management understands the nature of the investment in mutual funds. While a mutual fund investment has the same maturity as the weighted average maturity of the underlying investments, the NCUA 5300 (call report) and AIRES permit classification based on the maximum weighted average life disclosed in the prospectus. If the prospectus does not disclose the weighted average life, the credit union may use the three to ten year column. Examiners should take exception if the credit union does not adhere to its investment policies and internal asset-liability strategy regarding these investments.

Yield enhancement often motivates investment in long-term instruments, particularly in times of falling short-term rates. Examiners should explain to the officials the unsoundness of this practice unless the maturities and other characteristics of the investments coincide with the credit union's asset-liability strategy and liquidity expectations.

Investments in mutual funds can lose principal; therefore, examiners should ensure that the officials understand the risks and adopt limits by investment type that consider both the credit union's capital structure and asset size. Significant variance of mutual funds' net asset values over a range of interest rate environments may necessitate establishment

of minimal stop-loss guidelines. An adequate monitoring system should minimize future investment losses.

Examiners should also determine that management considered the mutual fund's suitability from an asset-liability standpoint. For example, several of the mutual fund net asset values may move inversely to market interest rate changes or may significantly lag the market. Credit unions with short-term and highly interest rate-sensitive share bases may find investments in mutual funds inappropriate.

Fees

Examiners should watch for marketing techniques that do not give a complete and accurate picture of a mutual fund. Even though the SEC requires certain disclosures, a credit union may incur significant costs to obtain, maintain, or divest an investment in a fund:

- Credit unions may incur front-end and back-end load fees, which are, in essence, sales commissions. The credit union must pay front-end load fees at the time of purchase. It pays back-end load fees if it redeems shares before holding periods specified in the prospectus.

- Credit unions may incur management and "12(b)-1" fees (back-end fees), which the mutual fund assesses shareholders for some of the promotional expenses. The mutual fund must specifically register the fee with the SEC and must disclose the levying of such charges. Such fees can reduce the actual return by 100 basis points or more.

Complex issues arise over the appropriateness and suitability of investments in mutual funds or other long-term investments. Management varies significantly in its understanding of these issues and in the sophistication of investment practices. Examiners should consult with their supervisory examiners if problems exist.

Unit Investment Trusts

A closed-end investment company called a Unit Investment Trust (UIT) repays principal and interest monthly as the underlying securities are repaid. At the trust's maturity date, UIT managers sell underlying investments, and return funds to investors. The cash flow from a UIT investment often resembles both a direct purchase of a GNMA and a mutual fund.

The examiner should determine the credit union properly reduces its investment balance and records interest income in a manner similar to a direct GNMA purchase. However, the "units" represent ownership, not the Agency obligation. Therefore, the fair value

approach must account for the value of the investment. The UIT's market price determines its value; the closed-end investment company does not redeem UITs.

CUSOs

NCUA Rules and Regulations §712.2 specifies that a federal credit union may invest in shares, stocks or obligations of credit union service organizations (CUSOs) in amounts not exceeding, in the aggregate, one percent of the credit union's paid-in and unimpaired capital and surplus (total of all shares and undivided earnings plus net income or minus net losses to date) as of its last calendar year-end financial report. The same section authorizes credit unions to make loans to CUSOs in amounts not exceeding, in the aggregate, one percent of its paid-in and unimpaired capital and surplus as of its last year-end financial report.

Credit unions frequently establish CUSOs to provide additional services to members or to other credit unions. Poorly structured or poorly managed CUSOs can become expensive liabilities and harm the credit union's financial condition. Therefore, during the examination, examiners may review the credit union's investment in CUSOs. The CUSO chapter discusses examination procedures for CUSOs.

For purposes of measuring a credit union's investment in and loans to a CUSO in financial statements, credit unions must follow generally accepted accounting principles (GAAP.) GAAP requires one of three measurement options (cost method, equity method, or consolidated financial statements) depending on the degree of ownership a credit union has in a CUSO.

Federal Funds

Federal funds are the excess reserves one bank has available to lend to another bank enabling it to meet its cash reserve requirements. Federal funds usually have a maturity of only one business day, although credit unions may negotiate term federal funds for a longer period. The federal funds rate represents the rate that the lending banks charge the borrowing banks for the use of the funds.

Compared to other money market rates, the federal funds rate is volatile. Investors closely watch the funds rate as an indicator of the money market, monetary policy, and general economic conditions because the federal funds market operates at the center of the money market and the commercial bank system.

§703.100 authorizes the sale of federal funds to any financial institution defined in §107(8) of the *FCU Act* under the deposit authority contained in that section.

Credit Risk

Federal funds are not insured; therefore, the credit union must review the bank's financial condition and set appropriate policy limits. The policy must address how the credit union will manage the credit risk of federal funds sold. (See §703.30(e)).

Besides selling Federal funds to a bank, a credit union can purchase Federal funds from the bank. Purchasing of funds constitutes a borrowing transaction by the credit union subject to the borrowing limitations of §107(9) of the *FCU Act*.

The examiner should pay particular attention to the method the credit union uses to transfer funds and record funds' transfers, especially the related income or expense. The examiner should review internal control procedures for placing funds, recording transactions, and reconciling transactions to the confirmation or statement.

Corporate Credit Unions

§107(7)(G) of the *FCU Act* authorizes credit unions to invest in shares, deposits, and certificates in corporate credit unions. However, credit unions may not invest in a corporate credit union that does not operate in compliance with Part 704 of the *NCUA Rules and Regulations*.

As with its other investments, NCUA expects management to establish a process for evaluating the corporate's investments and operations, and to incorporate the amounts and maturities of all authorized investments in corporates into their written investment policies.

Corporate credit unions offer daily balance share accounts that earn dividends comparable to market rates offered by other financial institutions. Many credit unions use this account for short-term investing because of the daily dividend feature. Most corporates also offer accounts for clearing share drafts, ATM transactions, money orders, ACH items, and credit card activity.

Corporate credit unions may offer two capital accounts, which NCUSIF does not insure: membership capital (MC) and paid-in capital (PIC), both member and nonmember. Both accounts have a degree of permanence. MCs have a minimum withdrawal notice of three years. PICs are callable at the corporate's option and have an initial maturity of at least twenty years. Credit unions must accept the risk of these uninsured accounts; therefore, credit unions investing in these accounts must perform the same due diligence as they perform for other at risk investments. Examiners should review the due diligence procedures.

Credit unions have available more diverse investment products, including those offered by corporates. In addition to daily balance share accounts and certificates accounts, some corporates offer structured investment products that mimic CMOs and other complex investments. The examiner should determine that the credit union consistently adheres to its ALM structure when investing in corporate credit union investments, as well as other investments. Examiners should also assure themselves that the directors and management understand the risks of the investment instruments.

Most corporate credit unions issue monthly or even weekly statements. The voluminous activity in these clearing accounts may require the examiner to determine that the credit union fully reconciles all transaction accounts at least monthly, regardless of the month-end balance. Examiners should note the lack of prompt reconcilements or continually carrying over outstanding items from one month to the next as an area of concern. The credit union can lose control over these high activity accounts if it does not implement adequate reconcilement procedures.

Most corporates also offer high-yielding, short-term CDs (30 days.) Many credit unions continuously roll over these accounts or purchase new ones. Corporates have reduced the paperwork burden by using electronic transfers instead of paper certificates; however, credit unions must reconcile their CD activity.

Other Credit Unions

§107(7)(H) of the *FCU Act* authorizes credit unions to invest in shares, deposits and certificates of federally insured credit unions. As with other institutional accounts, the examiner may find it necessary to review the credit union's process for evaluating the credit risk associated with such investments.

Other Shares, Deposits, and Certificates

§§107(7)(D) and 107(8) of the *FCU Act* authorize credit unions to invest in shares, deposits, and certificates in financial institutions other than credit unions.

Thrift Shares and Bank Deposits

Credit unions may invest in passbooks, certificates, or book entry confirmation receipts issued by federally insured thrifts, building and loan associations, and banks (and non-federally insured banks located in the state in which the credit union does business.) Credit unions must retain documentation of these investments.

§703.30 gives the board responsibility for determining the amount and the specific institutions in which a credit union may invest. If the credit union invests over the insured limit, the board should specify limits on the amounts the credit union may invest with

each institution. Management often supports the limits with a credit evaluation that identifies specific financial criteria, such as capital requirements and earnings trends. Credit unions with large CD portfolios should obtain the institution's docket number (FDIC's equivalent to NCUA's charter number) to determine compliance with the credit union's exposure limit at each institution. FDIC's website (www.fdic.gov) can provide the docket number.

Credit unions, the officials, or employees sometimes receive cash bonuses or merchandise premiums from the institution for new investments or increases in investments. §703.120 prohibits credit union officials from accepting these bonuses or premiums on their own behalf. If examiners suspect the credit union earned a bonus dividend or premium but find no accounting for it, they should notify their supervisory examiner, send a positive confirmation letter to the institution concerned, and report the facts in the confidential section.

Time Certificates of Deposit

Credit unions may purchase certificates of deposit (CDs) either directly from the issuing institution or through a broker-dealer. If purchased from the issuing institution, all transactions take place directly with the issuer. The credit union opens an account directly with the issuer, transfers the funds, and receives documentation acknowledging the investment.

Credit unions may use the service of a CD finder or an electronic CD finder program that is not registered by the Securities and Exchange Commission (SEC) or regulated by a federal or state depository institution regulatory agency. However, in this situation, the credit union must transfer the funds directly to the issuing institution.

Generally, credit unions purchase non-negotiable CDs. If the credit union uses a broker-dealer for CD purchases, it must exercise due diligence to protect itself against potential loss. At a minimum, the credit union should:

- Deal with reputable broker-dealers;
- Evaluate the risk;
- Enter into a written contract; and
- Use a custodial agreement.

Brokered CDs. Brokered CDs are sometimes a portion of a master CD that the broker-dealer purchases from a federally insured institution. If so, a third-party custodian holds the investment and sends the credit union a depository receipt evidencing ownership. The insured issuing institution must document the fiduciary relationship with the broker-

dealer and evidence insurability for individual investors of the pool. The requirements for FDIC pass-through insurance are outlined in 12 CFR §330.

When a custodian is safekeeper of a CD, typically the books of the CD issuer will show the custodian "titled" (as owner) on the certificate as "nominee for others," while the books of the custodian show the investor (i.e., credit union) as "beneficial owner" of the CD. This process (or string) of ownership is called the "chain of custody." A chain of custody can involve many participants or just a few, as described in the example.

Credit unions rely on accurate record keeping by CD issuers, brokers, and custodians to perfect their beneficial ownership interest. Credit unions must receive adequate documentation to evidence their beneficial ownership interest. Documentation includes CD confirmations, safekeeping receipts, periodic statements, and other correspondence that reaffirm the chain of custody between the CD issuer, the safekeeper, and the credit union.

Due Diligence for Brokered Funds. Credit union management should perform due diligence by:

- Performing a background check on the brokerage firm, broker-dealer, and the safekeeper (custodian), documenting their financial standing;

- Ensuring the firm and broker-dealer are registered with the SEC, and that the safekeeper is registered with the SEC or regulated by a federal or state depository institution regulatory agency;

- Executing a written custodial agreement before performing any transaction. Management must understand the customer account agreement and disclosure statement (including the fine print) provided by the broker before completing the transaction. The agreement should specify the custodian will, at a minimum, exercise ordinary and reasonable due care to protect credit union assets under custody;

- Obtaining a written fee structure documenting broker and custodial services;

- Obtaining the name of the financial institution where the funds were deposited and ensuring that it is federally insured, which may require contacting FDIC (www.consumer@FDIC.gov) or NCUA (www.pacamail@ncua.gov).

- Obtaining a copy of the certificate showing the principal balance, rate, maturity, etc., or obtaining a copy of the monthly customer account statement to document the terms of the CD;

- Documenting the chain of custody to ensure proper listing of the credit union as a beneficial owner. This can be verified by requesting a copy of the exact title of the CD from the broker and/or safekeeper, as issued by the financial institution. For example, the title on the CD should read, "XYZ Safekeeper as Nominee for Others." Such language appearing on the account record of the issuer indicates the custodian is acting as an agent on behalf of the credit union and for other depositors;

- Ensuring proper recording of the credit union on the books of the safekeeper. This can be verified from safekeeping receipts, monthly statements, and other correspondence with the custodian; and

- Receiving confirmations and safekeeping receipts for CD transactions on a timely and consistent basis. Credit unions should ensure consistent information appears on confirmation and safekeeping receipts (e.g., investor name, principal balance, rate, maturity). Credit unions should obtain and reconcile monthly statements of CDs held in safekeeping.

Generally, CD purchase confirmations include the following information:

- Name of the beneficial owner;
- Name of the issuer, identification number of the CD, and docket number of the institution;
- Trade and settlement dates;
- Issue date;
- Maturity date;
- Coupon or interest rate and payment dates;
- Variable index, reset frequency, and payment dates;
- Call date or step-up dates, if applicable;
- Broker (safekeeping) fees or commissions; and
- Yield calculations using bond equivalent yield and annual percentage yield (not just simple interest).

Safekeeping receipts generally include the following information:

- Description of the investment;
- Name of issuing and selling broker-dealer;

- Face amount (par value);
- Price paid;
- Date of issue;
- Maturity date and call date, if any;
- Coupon or interest rate;
- Trade and settlement dates; and
- Name of the beneficial owner.

Credit unions must fully address and document insurability in pooling arrangements. They can not depend solely on the broker to analyze the soundness and insurability of issuing institutions, nor rely on the deposit insurance coverage as the only basis for the deposit.

Written investment policies must address criteria and the financial analysis necessary to ensure sound investment practices. If federal deposit insurance does not cover all, or a portion of a deposit, the credit union should analyze the credit quality of the institution before making the deposit. Management may contract with a rating service to assist with this analysis.

Negotiable CDs. Federal credit unions may sell negotiable CDs to third parties before maturity, subject to the appropriate regulations governing the issuing institution. Conversely, a credit union could purchase a CD of an eligible institution in the secondary market. If the credit union purchased the CD at a premium (e.g., the purchase price exceeded the original (or accredited) issuer price), federal deposit insurance does not cover the amount of the premium. Thus, any premium remaining on the credit union's books of an institution that failed before the CD's maturity date may require write off.

Loss of premium also could occur with longer-term investments (e.g., zero coupon CDs) that some credit unions purchased in the secondary market at a significant premium. The credit unions would also face reinvestment risks.

A credit union does not need to physically hold even a negotiable CD for safekeeping. However, a security dealer holding negotiable CDs or "bearer" securities poses risks:

- The security dealer can wrongfully transfer the instruments to a third party. A third party purchasing these instruments for value, in good faith, and without notice of any adverse claim, becomes a "bona fide purchaser" under the Uniform Commercial Code and can retain possession of the instruments.

- The security dealer could declare bankruptcy or insolvency. The credit union could "trace" and claim its securities or CDs by proving ownership of specific instruments. However, negotiable CDs registered in street name, rather than in the credit union's name, makes recourse more difficult, if not impossible. The key here is for the officials to (1) know their safekeeping custodian, (2) document the financial standing of the safekeeping custodian, and (3) ensure proper recordkeeping by reconciling monthly safekeeping reports.

- If the credit union experiences the loss of a negotiable CD or security due to a dealer's misappropriation or bankruptcy, surety will most likely not reimburse for the loss because surety does not consider the security dealer to be a credit union employee.

Credit unions should balance these risks against the advantages of having a security dealer hold negotiable CDs and securities in bearer form for safekeeping; namely, the credit union will have liquid investments that they can immediately redeem.

Deposit Notes

Credit unions may invest in deposit note issues by a §107(8) institution (e.g., a national bank.) Deposit notes are unsecured obligations of §107(8) institutions. Federal deposit insurance (to $100,000) covers a deposit note if the following exist:

- The bank, instrument, or offering circular states that the obligation is a deposit;
- The bank's call report reports it as a deposit; and
- The bank pays the FDIC insurance premium.

The issuing bank should state in writing the eligibility requirements in an offering circular or contract.

Bank Notes

A bank note is an unsecured and uninsured obligation of the issuing bank. Credit unions may invest in bank notes issued by §107(8) institutions with maturities less than five years. (NCUA's Office of General Counsel has deemed them permissible as deposits under Regulation D.) However, credit unions may not invest in debt obligations of a bank holding company.

The credit union should closely review and document the financial status of the issuer of any bank note and any deposit note with an uninsured portion. As with CDs, a broker-dealer may invest a pool of funds in a §107(8) institution's deposit note. The risks previously specified for CD pooling apply equally to deposit notes.

Eurodollar Deposits

A Eurodollar deposit is a dollar-denominated deposit in either a foreign branch or a foreign subsidiary of a United States bank, or in a foreign bank located outside the United States. Credit unions may invest only in foreign branches of parent U.S. depository institutions and only if the parent U.S. depository institution meets the requirements of §107(8) of the *FCU Act*. Federal deposit insurance does not cover Eurodollar certificate of deposits.

Yankee Deposits

A Yankee Dollar deposit is a dollar-denominated deposit in a United States branch or subsidiary of a foreign financial institution. Credit unions may invest in these institutions pursuant to §107(8) of the *FCU Act* if the branch or subsidiary has federal deposit insurance or operates in accordance with the laws of a state in which the federal credit union does business.

Bankers' Acceptances

Federal deposit insurance does not cover time drafts drawn on a bank called bankers' acceptances. §703.100 authorizes investments in bankers' acceptances issued by §107(8) institutions. Bankers' acceptances represent irrevocable obligations of the bank that arise in a variety of ways, but generally, corporate customers of the bank use them initially to "pay" for goods and services. Often, recipients of banker's acceptances discount and trade them as money market instruments.

Mutual Savings Banks, State Banks, Trust Companies

Credit unions may make deposits or investments in shares or accounts of mutual savings banks, state banks and trust companies located in the state in which the credit union does business, or in financial institutions insured by the FDIC. Financial institutions located in the state where the credit union does business qualify as depositories even though they do not carry federal deposit insurance.

The credit union's board of directors must accept responsibility for selecting the mutual savings banks, state banks, and trust companies, and for determining the amount they will invest in each. Examiners may decide to discuss the advantages of placing funds in insured institutions. However, they should not take exception if the credit union invests in non-insured institutions in the state where the credit union does business, assuming that reasonable limits as to the amounts invested with each institution govern these investments. As with other uninsured investments, the credit union must fully analyze the credit quality of the institution. (See, §703.30(e)).

Loans to Other Credit Unions

Credit unions record loans to nonmember credit unions separately from loans made to their members. They must comply with the limitations and restrictions (not to exceed 25 percent of paid-in and unimpaired capital and surplus) set forth in §107(7) of the *FCU Act*.

The board, the executive committee, or the credit union's investment committee must properly authorize loans to nonmember credit unions. The aggregate of these loans may not exceed the legal limit, and a signed note must evidence the loan ((§107(7) of the *FCU Act.*) When the credit union has not met these requirements, the examiner should inform the officials, reach appropriate agreements, and comment in the examination report.

State and Municipal Obligations

Credit unions may invest in state and municipal securities authorized in §107(7)(k) of the *FCU Act*. Most municipal (muni) bonds receive a credit rating from a rating service (a nationally recognized statistical rating organization.) *NCUA Rules and Regulations* §703.100(f) permits investment only in those muni bonds rated in the top four ratings categories (e.g., BBB, A, AA, or AAA.) When evaluating credit risk, examiners should review bond ratings assigned to munis in the portfolio. Further, §107(7)(k) limits obligations of any one issuer, except general obligations of the issuer, to no greater than 10 percent of the credit union's unimpaired capital and surplus. This means revenue bonds, even when insured, are subject to the percent limit.

States and municipalities generally issue their obligations at lower interest rates because of the unique tax advantage to security holders. Since credit unions do not pay income taxes, there is no offset to the lower yield and, therefore, no financial advantage to investing in these tax-exempt securities. Taxable revenue bonds have no tax exemption, but generally carry greater credit risk than do general obligation bonds.

Repurchase Transactions

In a repurchase transaction the credit union agrees to purchase a security from a counterparty and to resell the same or an identical security to that counterparty at a specified future date and at a specified price. §703.100(i) authorizes credit unions to enter into repurchase transactions within the following limitations:

- The repurchase securities consist of permissible investments for a federal credit union;
- The credit union receives a daily assessment of the market value of the repurchase securities, including accrued interest, and maintains an adequate margin that reflects a risk assessment of the repurchase securities and the term of the transaction; and

- The credit union has entered into signed contracts with all approved counter parties.

The examiner may review the credit union's file to determine that it contains a written custodial agreement as well as copies of the safekeeping receipts. The Federal Reserve Book Entry System could record the credit union as the owner of the security. As with physical securities, third-party control further minimizes custodial risks.

The credit union entering into the repurchase transaction usually requires collateral with a security value in excess of the amount of cash delivered, an amount often called the "haircut." For example, for $1,000,000 in cash, the credit union may require securities valued at $1,020,000 to collateralize the transaction. This "haircut" generally ranges from two to five percent and protects the cash participant's collateral position if fair values change. The credit union must monitor the collateral's market value. If the value decreases relative to the cash outstanding, the credit union should request a margin call and require the securities lender to provide additional collateral. Responsibility for repaying the funds ultimately rests with the counter party to the transaction, making that party's reputation (ability to pay) important to others in the transaction. FDIC insurance does not cover repurchase agreements and a secondary market for repurchase agreements does not exist.

Commitments to Purchase or Sell Securities

Under §703.100, credit unions may not invest in forward commitments to purchase or sell a security. Commitments to purchase or sell securities (forward commitments) represent contingent liabilities.

§703.100 permits the purchase or sale of a security as long as the delivery of the security is by regular-way settlement. Regular-way settlement means delivery of a security from a seller to a buyer within the time frame that the securities industry has established for that type of security.

For example, regular-way settlement of mortgage-backed securities occurs once a month according to a schedule of The Bond Market Association (PSA) settlement dates. While a regular-way settlement in a mortgage-backed security transaction is pending, the credit union should account for the transaction in accordance with GAAP.

Standby Commitment

Generally, a standby commitment consists of an agreement to purchase or sell a security at a future date, whereby the purchaser must accept delivery of the security at the seller s option. To induce the purchaser to buy at the seller's option, the seller pays a non-

refundable option premium called a "commitment fee." If the market price of the security on settlement date has increased, the seller would not exercise the option, but would sell the security elsewhere. The purchaser would then recognize the commitment fee as income.

Examiners should review documentation required by §701.21(i) for long positions in financial put option contracts. §703.110(a) prohibits all financial derivatives, except as provided under §701.21(i) for the purchase of certain financial put option contracts (also called standby commitments) to manage risk of loss through a decrease in value of its commitments to originate real estate loans.

Cash Forward Agreement

A cash forward agreement represents a firm commitment for a purchaser to buy and a seller to sell an agreed-upon security on a specified settlement date. A commitment fee does not pass from the seller to the purchaser. A cash forward agreement extends beyond the term of a regular-way settlement; therefore, a federal credit union may not enter into a cash forward agreement for a security.

Short Sale

A short sale is a forward commitment to sell a security that the seller does not own. Short sales sellers speculate that market prices will decline before the settlement date. Thus, they can purchase a less expensive security to meet the commitment to sell and realize a gain. If, however, the market price increases, the seller incurs a loss in meeting the commitment. §703.110 prohibits a federal credit union from engaging in short sales.

Pair-Off Transactions

A pair-off transaction matches or nets the commitments to purchase and to sell securities. Participants in pair-off transactions often do not take delivery of the security purchased, but speculate that the market price will increase before settlement date resulting in a gain from its sale. Many times, participants make the commitment to sell and the commitment to purchase on the same day. §703.100(l) specifies requirements for a credit union to trade securities including when-issued trading and pair-off transactions. Credit unions must record these transactions at fair value on the trade date.

Reverse Repurchase Transactions

A reverse repurchase transaction (reverse repo) is a transaction by a credit union in which the credit union agrees to sell a security to a counter party and to repurchase the same or an identical security from that counter party at a specified future date and at a specified price. In effect, the credit union incurs a borrowing collateralized by a marketable security.

Credit unions may use funds generated by a reverse repo to (1) meet liquidity needs, such as share or loan demands, or (2) purchase other securities with a yield higher than the borrowing rate of the reverse repo (often called a spread trade or "arbitrage.") When engaging in the latter, the credit union must comply with statutory limitations. Any security purchased with the funds obtained from the transaction or the securities collateralizing the transaction must have a maturity date not later than the maturity date for the reverse repo transaction and be permissible investments under Part 703. A reverse repo transaction is a borrowing transaction subject to the aggregate borrowing limit of 50 percent of a credit union's unimpaired capital and surplus specified in §107(9) of the *FCU Act*.

> **Example**: A credit union owns a $1,000,000 Treasury security with a 7 percent coupon rate, valued at par. The credit union enters into a reverse repo, borrowing $1 million, collateralized by the Treasury security, at 5.5 percent for 90 days. The credit union also purchases a 90-day time certificate paying 6.0 percent, also maturing in 90 days. Thus, the credit union earns a 0.5 percent spread (the difference between the cost of the funds borrowed, 5.5 percent, and the income earned, 6.0 percent.)

If the examiner finds a credit union entering into reverse repo transactions with the intent of earning a positive spread by reinvesting the funds, the examiner should determine if the credit union actually realizes a positive earnings spread.

The credit union must retain signed contracts with all approved counter parties. Examiners should encourage master contracts (i.e., The Bond Market Association (formerly called PSA) Agreements) covering the dates and responsibilities of each party. Confirmations under the master contract constitute evidence of individual reverse repo transactions. A trade sheet, rather than written agreements between a broker and the credit union, does not constitute acceptable evidence.

Since reverse repos represent borrowings by the credit union, credit unions must record them as notes payable and the board of directors or executive committee should approve them. The investment committee cannot authorize borrowing through a reverse repo.

The credit union must properly record reverse repos, the income applicable to the related investment, and the interest on the notes payable. GAAP provides guidance on the proper accounting treatment for repurchase transactions (SFAS No. 125 and 140.)

For examination analysis and CAMEL-rating purposes, examiners must use GAAP determined total assets. Examiners should note that the existence of reverse repos can (1) cause material changes in the asset size of the credit union, (2) affect any ratio that uses

average assets or total assets, and (3) distort the trends and ratios of the most recent Financial Performance Report (FPR.)

During the period (usually a short duration of 90 to 120 days) of spread transactions, reverse repos will increase total assets by the committed amount. The investment, which may be material, remains on the credit union's books while, at the same time, the credit union establishes a notes payable account and an asset account for the amount of the transaction. At the end of the transaction term, the credit union will reduce the liability account and the asset account accordingly, while the investment account remains unchanged.

As an alternative, credit unions may engage in securities lending transactions (i.e., “bonds borrowed” agreements.) These generally consist of very short-term lending activities in which the credit union releases control of investment grade securities in exchange for a promise for repayment, and receives a fee for the related risks. In some cases, the credit union must record a securities lending transaction in its financial statement, similar to a reverse repurchase transaction, as a notes receivable and a securities lending (“bonds borrowed”) credit.

The examiner should ensure that the credit union adequately discloses any securities lending (“bonds borrowed’) transactions. In addition, credit union officials should review the borrower's financial condition.

Adjusted Trading

§703.110(b) prohibits credit unions from engaging in adjusted trading. Adjusted trading also may violate applicable statutory provisions because it does not (1) meet "full and fair disclosure" requirements, (2) record losses in a timely manner, or (3) fairly present the financial condition to members, creditors, and the regulator.

When reviewing investments, the examiner should look for indications that the credit union purchased or sold securities at other than “at market” prices, which could evidence adjusted trading. The examiner should test several purchases or sales if indications exist that a security transaction was not at market. Examiners can verify sales prices using the *Wall Street Journal* or another reliable paper as of the sales date, or by contacting a broker-dealer.

The examiner should analyze problems noted. In the past, problems in adjusted trading occurred with broker-dealers who were not regional or who did not have a reputation for knowing their customers.

The two most common methods of adjusted trading are:

- **Adjusted trading or overtrading.** When market prices decline, credit unions may face investment losses if (1) they must sell their securities or (2) must meet commitments to purchase securities without having available funds to do so. To avoid these losses, a credit union might enter into an agreement with its broker to transfer or to hide the loss in another transaction. Such an adjusted trade violates *NCUA Rules and Regulations*.

  Example: The credit union owns Investment A with a book value of 97 and a market value of 95. The broker owns Investment B with a fair value of 91. Needing funds, the credit union decides to sell Security A, but does not wish to incur the loss of two points. The broker agrees to purchase the investment at book value; however, in return, the credit union agrees to purchase Security B using a forward commitment for 93; or two points over market. The credit union is speculating that the fair value of Security B will increase by the settlement date. If that happened, the credit union would sustain no loss and would not record the transaction.

- **Fee trading.** Fee trading, or reposition trading, represents a form of adjusted trading. Fee trading uses similar mechanics except the credit union pays a fee or "up front" money to the broker. Using the example above, the broker would purchase Security A at 97, but would require the credit union to forward a two-point fee. The fee ensures the credit union's purchase of Security B on settlement date. When the credit union purchases Security B, the broker returns the fee.

  If the investment review discloses possible adjusted trading, the examiner should contact the supervisory examiner. In any case, the examiner should exercise additional scrutiny should there appear to be indications of adjusted trading.

Impermissible or Unsuitable Investments

The examiner may find that a credit union has investments not permitted by statutes or regulations. Examples include investments in commercial paper, a stock-based mutual fund, or loans to other credit unions in excess of the legal limit. The credit union should liquidate the investments as soon as possible. If the divestiture most likely will result in a material loss, the examiner should consider the investment's maturity and safety, as well as its effect on the credit union's financial condition. When examiners find impermissible investments, they should contact their supervisory examiner. Credit unions must also notify the surety company of the illegal investment.

In most cases, the examiner and officials can resolve the problem during the examination. If not, the examiner should address it with the officials and, if material, in the

examination report. Examiners should reserve administrative action only for extreme cases where other supervisory efforts fail.

If the examiner determines that the credit union holds permissible, but not suitable, investments for the credit union's balance sheet, the examiner should contact the supervisory examiner before requiring the write-down or sale of the investments.

Investment Trading

The goal of trading securities is to take short-term trading profits from an increase in fair value. Investors may earn sizable trading gains as interest rates decline; however, rate increases typically result in losses.

NCUA Rules and Regulations §703.30(k) sets forth policy requirements and §703.100(l) sets forth other requirements for a federal credit union to trade securities. Credit unions should know the market risks associated with trading, and adopt policies and procedures to limit risk to an acceptable level. The board of directors must approve a written trading security policy that includes, at a minimum, the provisions listed in this section. Credit unions must maintain consistency with GAAP guidance in accounting for trading securities.

The examiner should review the credit union's investment activity and determine if the credit union is trading. This analysis should include a review of the following:

- The broker's monthly statement to determine proper booking of all activity;
- The month-end safekeeping statement and transaction reports;
- The source documents, such as the broker confirmations, to adequately analyze trading activity; and
- The cash and corporate credit union account transactions to determine the existence of large security purchases or sales.

Credit unions involved in trading must have adequate reserves to absorb potential trading losses and should establish loss parameters based on the level of reserves. If unsafe and unsound trading policies or procedures exist, the examiner should consult with the supervisory examiner to develop a plan for resolving the problems.

Before a credit union's board engages in trading securities, they must develop and adopt a written securities trading policy that at a minimum specifies the following:

- Internal controls, including appropriate segregation of duties;
- Individuals who have purchase and sale authority;

- Trading account size limits;
- Allocation of credit union's cash flow to trading accounts;
- Stop loss or sale provisions;
- Dollar limits for the purchasing of specific types, quantities, and maturities;
- Limits on the length of time an investment may remain in the trading account;
- Monthly reports for the board of all purchase and sale transactions, and the resulting individual transaction gain or loss (credit unions should report purchases and sales to trade date); and
- A requirement for recording at fair value on the trade date any security purchased for trading purposes.

See the Classification of Securities SFAS 115 section for transfers to or from the trading category.

Workpapers and References

- Workpapers
  - Critical Input tab
  - Statement of Income
  - Review Considerations
  - ALM Tab
  - Solvency Evaluation
  - Investment Trend
  - Investment Maturity
  - Investment Classification
  - Investment Controls Questionnaire
  - Credit Union Service Organization Controls Questionnaire
  - Certificate Review
  - Amortizing Investment
- References
  - *Federal Credit Union Act*
    - §§§107(7), 107(8), 107(9), and 107(15) - Powers
    - §§304 and 305, Central Liquidity Facility
  - *NCUA Rules and Regulations*
    - §701.21(i), Put Options in Managing Increased Interest-Rate Risk for Real Estate Loans Produced for Sale on the Secondary Market
    - §712, Credit Union Service Organizations
    - Part 703 - Investment and Deposit Activities
    - Part 725 - Central Liquidity Facility
  - *Federal Credit Union Bylaws*
  - Accounting Bulletin 94-1

- SFAS 107
- SFAS 115
- SFAS 125
- SFAS 133
- SFAS 140 - Administrator's Letter No. 29, dated 4/17/79; Custodial/Safekeeping Accounts
- NCUA Letter No. 57, dated 6/24/81, Investment Risk
- NCUA Letter No. 79, dated 5/29/85, Mutual Funds
- NCUA Letter No. 130, dated February 1992, Risks of Long-Term Investments - Mortgage Derivative Products
- NCUA Letter No. 139, dated September 1992, Collateralized Mortgage Obligations
- NCUA Letter No. 146, dated August 1993, New Investment Products
- NCUA Letter No. 155, dated April 1994, Permissible Investments for Mutual Funds
- NCUA Letter No. 157, dated September 1994, Broker Selection, Security Safekeeping
- NCUA Letter No. 169, dated April 1995, Divestiture of CMOs and REMICs
- NCUA Letter No. 00-CU-05, dated September 2000, Investments in Brokered Certificates of Deposits
- IRPS 98-02, dated 1998, Supervisory Policy Statement on Securities Activities and End-User Derivatives Activities
- NCUA Investment Report No. 1, dated 1/31/89, Mortgage Pass-Through Securities
- NCUA Investment Report No. 2, dated 4/10/89, Broker Selection
- NCUA Investment Report No. 3, dated 7/19/89, Collateralized Mortgage Obligations (CMOs)
- NCUA Investment Report No. 4, dated 12/1/89, Stripped Mortgage-Backed Securities
- NCUA Investment Report No. 5, dated 4/1/90, Short-Term Investments for Federal Credit Unions
- NCUA Investment Report No. 6, dated 9/1/90, Treasury-Backed Stripped Securities
- NCUA Investment Report No. 7, dated February 1991, Deposit Notes
- NCUA Investment Report No. 8, dated July 1992, The New Investment Regulation

- NCUA Investment Hotline - 1-800-755-5999 (703-518-6620 Washington, DC area)
- Investment Guidance Paper(s), Developed by OSPSP and RCMS Staff
- Using the Regional Investment Specialist, dated February 1999

GLOSSARY OF INVESTMENT TERMS - APPENDIX 12A

This section contains definitions of financial terms commonly used in investments and asset-liability management. Standard dictionaries do not contain the definitions of many words and phrases used throughout the investment industry; therefore, this glossary was compiled to assist the examiner in understanding specialized industry-specific words.

Accretion of a Discount: the accounting recognition of earnings on a discount bond in anticipation of receipt of par at maturity.

Accrued Interest: the amount of coupon interest accumulated on a security between coupon payment dates, or between issuance and the first coupon payment date. The purchaser of the bond pays to the seller the market price plus accrued interest. Accrued interest is calculated using the accrued interest (day count) type for the security.

Accrued Interest Types: the day count used to calculate the accrued interest and the coupon period. A day count type is displayed as DD/YYY, where DD denotes the number of days per month elapsed in the coupon period and YYY denotes the number of days per year (for calculating the coupon period). The day count does not include the settlement day. Common day count types include:
- ACT/ACT: actual days for month and year (365 or 366 days).
- 30/ACT: each month has 30 days and the year has 365 or 366 days.
- 30/360: each month contains 30 days and a year has 360 days.
- 30/365: each month has 30 days and a year has 365 days.

Actuals: the physical or cash commodity, as distinguished from a commodity futures contract or derivative contract which has a value based upon an underlying commodity or index. Forward contracts with an immediate delivery date are called spot contracts. Actuals are also called spot commodities or cash commodities.

Adjusted Trading: a prohibited method of deferring or hiding a loss on the sale of a security. Generally, a security is sold at its book value, which is above the market value, and another security is purchased (or a commitment is made to purchase another security) at a price that also is above the market value.

Advance Commitment (Conditional): a written promise to make an investment at some time in the future if specified conditions are met.

Agent: a person or firm authorized by another (called a principal) to act on his/her behalf. An agent in an investment transaction does not own the security, but instead, represents the employer's interests and is subject to control by the employer. Purchase confirmations should state whether the broker acted as agent (representing the credit union) or as principal (acting at arms length from the credit union). See "Principal".

Amortization: a reduction in an investment due to periodic payments of part of the principal before final maturity, usually made in accordance with a predetermined schedule of installment payments. Compare "Prepayment".

Arbitrage: the simultaneous purchase in one market and sale in another of an investment. The arbitrageur hopes to profit from the price differences between different markets. Arbitrage has been used in the credit union industry to describe a position in a security that is funded by a reverse repurchase agreement (see, "Carry", "Positive Carry", "Negative Carry"); however, there is price risk in such a position when the term

of the borrowing is shorter than the maturity of the investment. There may also be credit risk in such a position if the investment is not issued or guaranteed by the U.S. Government.

Ask Price: the lowest declared price at which a seller is willing to sell a security at a particular time. Opposite of "Bid". Same as "Offer".

Asset-Backed Security (ABS): a security that is collateralized, typically, by loans, leases, unsecured receivables, or installment contracts on personal property. Asset-backed securities are not permissible investments for federally chartered natural person credit unions.

Assignment: the transfer of ownership of a right or a contract from one party, the assignor, to another, the assignee.

At-the-Money: describes an option when the current trading price of the underlying security is the same as the option's strike price.

At Market: the going bid price of a security at any given time.

Auction: a competitive process by which an issuer sells its securities, rather than selling at a negotiated, or non-competitive, price.

Auction Stop Out: the lowest or cheapest price (corresponding to the highest yield) at which securities are awarded in a multi-price auction. The Treasury Department has used one-price auctions for two- and five-year Treasury Notes, resulting in the award of securities to each winning bidder at the stop-out yield (the highest yield).

Average Life: the weighted average time to principal repayment. It is useful to describe the life of an instrument as an approximation of a single maturity.

Backup Bid: see "Take Out Bid".

Bad Delivery: a delivery of securities that does not fulfill the requirements for good delivery.

Bailment for Hire: a obsolete name used for a custodial (or safekeeping) agreement between a custodian (or safekeeping institution) and its customer (or the beneficial owner of the security).

Balloon: a final payment at maturity on a security (or loan) that is much greater than the previous payments. For example, a 7-year balloon loan is amortized on a 30-year schedule to make the payments affordable, but has a large payment of the remaining principal balance (balloon) due at the end of the 7 years. A balloon feature is usually associated with real estate loans and mortgage-backed securities.

Band: see "PAC" (Planned Amortization Class).

Banker's Acceptance: a time draft or bill of exchange accepted by a bank. It represents an irrevocable obligation of the accepting bank to guarantee payment of the draft at maturity at the face value. These instruments are uninsured and are sold at a discount from face value prior to maturity.

Bank Deposit: an account with a bank, including a checking, time, interest or savings account. Bank deposits with certain institutions are authorized in the Federal Credit Union Act. Some deposits are insured up to $100,000, while other deposits are not insured. For example, Federal funds, banker's acceptances and certain bank notes have been determined by general counsel to be bank deposits under the FCU Act and thus to be permissible, but not insured, investments.

Bank Note: an unsecured and uninsured obligation of the issuing bank. General counsel has determined that bank notes with maturities less than five years are deposits under Regulation D and thus are permissible investments.

Basis: 1) a price expressed in terms of yield-to-maturity or annual rate of return, or a term to describe the yield to expected maturity, as in the expression "GNMAs are trading on a 9-1/2% basis" or a 10 percent bond selling at 100 has a 10 percent basis; 2) the difference between the spot or cash price of a commodity and the price of the nearest futures contract for the same or a related commodity, e.g., basis is usually computed in relation to the futures contract next to expire and may reflect different time periods, product forms, qualities, or locations; 3) used in the phrase "long the basis" or "short the basis" to indicate a cash market position hedged with a futures contract. See “Long the Basis” and “Short the Basis”.

Basis Point: a measurement of yield for fixed income securities. One basis point equals 1/100 of one percent. For example, the difference between 8.00 percent and 8.25 percent is 25 basis points.

Basis Risk: 1) the risk that rates on assets and liabilities will react differently to changes in interest rates, e.g., the investment coupon linked to the Federal Home Loan Bank’s 11th District Cost of Funds (COFI) will not be perfectly correlated with the funding rate offered on a money market share account tied to the overnight Federal fund rate; 2) the risk associated with an unexpected widening or narrowing of the difference in rates or prices between the time a hedge position is established and the time that it is lifted.

Beneficial Owner: the entity that is entitled to receive some or all of the benefits of ownership, including the cash flow, even though title to the security may be in another name, e.g., a nominee name. Title is frequently held in a name other than that of the beneficial owner for safety or convenience of transfer.

Bid Price: the highest declared price at which a buyer is willing to purchase a security at a particular time. Opposite of “Ask” or “Offer”.

Bid and Asked: usually refers to the inside bid/ask quotation, i.e., the best bid and best offer in the market. From a single dealer, the bid/ask represents the prices at which the dealer stands ready to purchase and to sell, often referred to as making a two-way market quotation. See also “Quotation” and “Take Out Bid”.

Bloomberg: an information vendor system that provides financial market information and performs various analyses of securities. There are a number of private companies or publications that provide a source of basic information and analytic detail about securities.

Board of Trade: an exchange or an association of persons, whether incorporated or unincorporated, that is engaged in the business of buying and selling any commodity or receiving the same for sale on consignment.

Bond: a certificate or evidence of a debt on which the issuer promises to pay a specified amount of interest and to repay the principal on the maturity date. Examples include Treasury bills (original maturity under one year), Treasury notes, Treasury bonds (original maturity over 15 years), agency debt, and mortgage backed securities.

Bond-Equivalent Yield: a comparable measure of the return over the life of a bond or Treasury bill or other discount instrument, assuming it is purchased at the ask price and the return is computed using a semi-annual interest formula and an actual-day year. Other rates of return cannot be compared directly with the bond-equivalent yield; e.g., a discount rate of return is calculated by using the par amount rather than the purchase price, by using another formula, and by using a 360-day year rather than an actual-day year. The Securities Industry Association has published standard securities calculation methods for fixed income securities formulas.

Book Entry Security: a security that is not represented by a physical certificate. The beneficial owner (or the custodian) of the security is recorded on an electronic system on which the terms and conditions of the

security exists. The method of computerized entries eliminates the need for physical certificates. For example, the Treasury and certain government sponsored enterprises use a book-entry system maintained in computerized records at the Federal Reserve Banks in the names of member banks. A member bank, in turn, keeps records of securities held for 1) beneficial owners with whom it has a direct custodian agreement and 2) other custodians that hold as nominees for others that, in turn, maintain records of beneficial ownership or other custodians.

Book Entry Transfer: a system of custody and transfer of securities through the electronic delivery and settlement of transactions.

Book Value: the value at which a held-to-maturity security is shown on the holder's balance sheet. Book value may differ significantly from market value.

Broker: an entity that engages in securities transactions for the account of others. A broker does not buy and sell securities for its own account, as contrasted to a dealer that trades for its own account. A broker charges a commission for the service which it provides.

Broker-Dealer: an entity engaged in securities transactions for its own account and for the account of others. A broker-dealer may act as agent (broker) or principal (dealer). The purchase confirmation will state whether the broker-dealer acted as broker (agent) or dealer (principal) for the transaction.

Bullet Bond: a debt security that returns 100 percent of principal on the maturity date.

Call: 1) an option contract granting the buyer the right but not the obligation to purchase (call) a specified quantity of a security at a specified price (the exercise or strike price) and time (the exercise style). Typical option terms provide for exercise a) at any time until the stated expiration date of the contract (American exercise style), or b) only at the stated expiration date (European exercise style). Such an option is bought in the expectation of a price rise above the strike price. If the price rise occurs, the purchaser will exercise the option. If the rise does not occur, the purchaser will let the option expire and will lose the purchase price of the option, that is, the option premium. 2) an embedded call in a security grants the issuer the right to retire or "call away" all or part of the security at a specific price (the call price) and at a specific time prior to its contractual maturity date. The ability to call the security is an "option" that belongs to the issuer of the bond. Common call features include a) callable only on specific call dates, or b) continuous, that is, callable anytime, usually after a lockout period, which is a time period when a call cannot occur.

Call Date: the date or dates on which a security may be redeemed by the issuer at a pre-specified price.

Call Feature: a provision on a bond which entitles the issuer to redeem the bond at face value or other price before the maturity date.

Call Loan: a short-term loan of temporarily liquid funds by banks to securities dealers and brokers.

Cap: 1) an embedded option in a floating-rate security that places a rate ceiling (specifying the highest interest rate that will be paid) on the floating rate coupon. 2) a stand-alone option contract (usually written as a swap) that pays the holder of the cap an amount equal to the notional principal amount times the excess of the market rate over the cap rate. A cap usually consists of a strip of caplets (that is, a series of options with sequential expiration dates). Each caplet is an option on rates for a single period of time. 3) for risk management purposes, the quantitative limit placed on the position that a participant in a funds or securities transfer system can incur during the business day.

Carry: the interest cost of financing securities positions, calculated by subtracting the cost of funds borrowed to finance the securities from the interest earned on the securities.

Cash Commodity: see "Actuals".

Cash Flow: 1) the stream of principal and interest payments on a security. 2) the amount of cash derived over a certain measured period of time from the operation of income-producing property after debt services and operating expenses, but before depreciation.

Cash Forward Agreement: a cash transaction in which a buyer and seller agree upon delivery of a specified amount of a security at a specified future date. Also known as a firm commitment. See "Commitment".

Cash Market: traditionally, denotes the market in which commodities are traded, for immediate delivery, against cash. The cash market in which securities trade for immediate delivery is contrasted with the futures markets in which securities trade for future delivery.

Cash Price: a price quotation obtained or a price actually received in a cash market. Same as "Spot Price".

Cash Settlement: 1) money market securities purchased for delivery on the same day the trade is made. 2) a method of settling an option contract whereby the seller pays the buyer a cash amount determined according to a procedure specified in the contract based on the cash value of the underlying instrument at expiration. Futures contracts also may specify cash settlement in lieu of physical delivery at maturity.

CATS (Certificate of Accrual on Treasury Securities): an obsolete form of zero coupon Treasury security. See "STRIPS".

Certificate of Deposit (CD): a time deposit issued by a bank that pays interest periodically or at maturity. While principal may be paid according to a schedule, typically principal is repaid in a single payment on the maturity date. "Brokered CDs" are marketed through a deposit broker to investors. By way of comparison, a "direct CD" is purchased from the issuing financial institution without the use of a deposit broker. A negotiable CD can be sold by the holder to another party in the market prior to maturity. In contrast, a non-negotiable CD cannot be transferred, but may be redeemed with the issuer subject to any interest penalty.

Cheap: Wall Street vernacular for the relative value of one security to another in terms of its historical price relationship. If a security is cheap, it is underpriced relative to another security. See also "Rich".

Chicago Board of Trade (CBOT): an exchange which is designated as a contract market in various commodity futures and option contracts. The CBOT introduced GNMA futures contracts in 1975 (no longer traded) and now is an active contract market for futures contracts in Treasury securities.

Churning: excessive purchases and sales by a broker in the accounts of one or more customers for the purpose of generating commissions while disregarding the interests of the customers.

Clean-up Call: the redemption of the remaining outstanding principal of an asset-backed security that is triggered by the reduction in outstanding principal through amortization or prepayment to a specified percentage of the original principal.

Clearing/Clearance: the process of transmitting, reconciling and in some cases confirming payment orders or security transfer instructions prior to settlement. Sometimes the terms are used to include settlement.

Clearing Corporation: 1) any person who acts as an intermediary in making payments or deliveries or both in connection with transactions in securities, generally serving to centralize and reduce the number of settlements of securities transactions. Major clearing corporations for fixed income securities include the Government Securities Clearing Corporation and the Mortgage-Backed Securities Clearing Corporation. 2) a corporation organized to function as the clearing house for an exchange, that may interpose itself as the buyer to every seller and the seller to every buyer.

Clearing Member: a brokerage concern entitled to use the services of a clearing corporation.

Clearing Organization: usually a brokerage concern which clears the transactions of another brokerage concern.

Closed Position: forward or futures contracts which have been offset in full are considered "closed" because the obligations cancel each other out.

Closing Price: the price (or price range) at which transactions are made just before the end of trading on a given day. See also “Settlement Price”.

Collar: 1) a maximum and a minimum interest rate on a floating rate bond. This is comprised of two embedded option positions: a short cap on rates and a long floor on rates. See “Embedded Option”, “Cap”, and “Floor”. 2) a swap contract that eliminates the downside risk below the floor price (or rate) and eliminates the upside participation above the cap price (or rate). This is comprised of a long floor on price (or rate) and a short cap on price (or rate).

Collateral: an asset pledged to a lender until a loan is repaid. If the borrower defaults, the lender has the right to seize the collateral and sell it to pay off the loan.

Collateralized Mortgage Obligation (CMO): a bond that represents a partitioned ownership of a mortgage pool. CMOs are issued by a trust which holds mortgage-backed securities as collateral. The trust issues several different classes of CMOs, called tranches. Tranches have different maturities, coupons, and risks. A common CMO structure separates pools into short-, medium-, and long-term classes, which divides the ownership of the MBS pools into sequential-pay tranches; principal is paid to the class with the highest priority claim on principal payments (the short-term class, often called the A tranch) until all bonds of that priority have been redeemed; then, principal is paid to the next highest priority class (the medium-term class, often called the B tranch) until all bonds of that priority have been redeemed; finally, principal is paid to the long-term class (often called the C tranch). This structuring creates a series of bonds of distinct expected maturities. There are many different structures that specify complex cash flow priorities of principal and interest. A CMO is also referred to as a REMIC (Real Estate Mortgage Investment Conduit).

Commercial Mortgage-Related Security: a mortgage related security where the mortgages are secured by real estate upon which a commercial structure is located.

Commercial Paper: a short-term unsecured promissory note issued by a corporation for a maturity specified by the buyer.

Commitment: an agreement to buy or sell a security at a future date, subject to compliance with stated conditions. Applies to mortgage-backed securities. See “Cash Forward Agreement”,” Standby Commitment”, and “Take-Out Commitment”.

Commitment Fee: see Fee.

Commodity Futures Trading Commission (CFTC): a federal regulatory agency charged and empowered under the Commodity Exchange Act with regulation of futures trading in all commodities.

Common Trust: a collective investment fund maintained by a national bank under 12 CFR part 9.

Competitive Bid: 1) bid tendered in a Treasury auction for a specific amount of securities at a specific yield or price. 2) bids solicited from one or more syndicates by issuers such as municipalities and public utilities for new issues.

Conditional Prepayment Rate (CPR): same as “Constant Prepayment Rate”.

Confirmation: the document (or process) whereby a market participant notifies its customers of the details of a trade and, typically, allows time to affirm or to question the trade which had previously been agreed to verbally.

Connie Mac: a colloquial term for securities collateralized by pools of conventional mortgages. See "Conventional Loan".

Constant Maturity Treasury (CMT): a construct to obtain a bond equivalent yield for a fixed maturity. Yield curves on U.S. Treasury securities are constructed daily by the Treasury Department. The curves are fitted based on the closing market bid yields of actively traded Treasury securities. Values are read (or interpolated using cubic spline fitting) from the yield curve for constant remaining maturities of 1, 2, 3, 5, 7, 10, and 20 years. The yield for one and three year CMT's are often used as indexes for variable rate securities.

C**onstant Percent Prepayment (CPP):** an infrequently used term that expresses single monthly mortality (SMM) on an annualized basis without correcting for the effects of compounding. CPP is SMM multiplied by 12.

Constant Prepayment Rate (CPR): a measure of the prepayment rate at which mortgage collateral is expected to prepay, expressed as an annual percentage of the remaining collateral. Sometimes called "Conditional Prepayment Rate". CPR reflects the result of compounding on SMM. If a constant percent of the outstanding balance prepays each month, the dollar amount prepaid declines over time. Using a 4 percent SMM, on a $100,000 mortgage, $4,000 ($100,000 x .04) would prepay in the first month, but only $3,840 ($96,000 x .04) would prepay in the second month. In the first year the CPR would be 38.73 percent, i.e., $[1 - (1 - .04)^{12}]$ and the remaining mortgage balance at the end of the first year would be $61,270, i.e., [(1 - .3873) x 100,000].

Contract: 1) a bilateral agreement between buyer and seller. 2) a term of reference describing a unit of trading for a commodity for future delivery.

Contract Grades: those grades of a commodity which have been officially approved by an exchange as deliverable in settlement of a futures contract.

Contract Market: a board of trade designated by the Commodity Futures Trading Commission as a contract market under the Commodity Exchange Act. Contract markets include: 1) a futures contract in a specified commodity or financial instrument; 2) an option contract on a specified commodity or financial instrument (also called an option on a physical); and 3) an option contract on a futures contract (also called a futures option).

Contract Month: the month in which delivery is to be made in accordance with a futures contract.

Convertible: 1) a feature of an adjustable rate mortgage that permits a change to a fixed rate mortgage. 2) a bond containing a provision that permits conversion to the issuer's common stock at some fixed exchange ratio.

Convexity: 1) a measure of the curvature of the relationship between the change in bond price and the change in interest rates. A bond or note is said to have positive convexity if the instrument's value increases at least as much as duration predicts when rates drop, and decreases less than duration predicts when rates rise. Positive convexity is desirable to investors because it makes a position more valuable after an interest rate change than suggested by a duration estimate. Negative convexity refers to a position that loses value relative to duration's prediction when prices change in either direction. 2) a colloquial term for the gamma of an option, which practitioners may refer to as curvature. Practitioners also may use interchangeably the

terms selling convexity and selling volatility; these terms refer to the pick up in yield for selling the call options that are embedded in bonds such as MBS and callable GSE bonds.

Corporate Bond Equivalent Yield: an upward adjustment to reflect monthly payment of interest rather than semiannual payment of interest which is the convention in the Corporate and Government bond markets.

Correspondent: a mortgage banker who services mortgage loans as a representative or an agent for the mortgage owner or investor. Also applies to the mortgage banker s role as originator of mortgage loans for an investor.

Cost of Funds Index (COFI): an index that reflects the cost of funds for all thrift institutions as reported by the Federal Home Loan Banks. Cost of funds is defined as the annualized average interest paid or accrued on deposits, on FHLB advances and other borrowed money during a reporting period. The most common COFI is the Federal Home Loan Bank's 11th District COFI, which is compiled from savings banks in California, Arizona, and Nevada.

Counterparty: the opposite party to a financial transaction or contract.

Coupon: 1) the stated annual interest rate on a debt instrument that the issuer promises to pay periodically to the holder until maturity. See "Coupon Rate". 2) that portion of the physical security which shows the interest due on the payable date (usually semiannually). Physical securities may have detachable coupons that must be presented by the holder for payment.

Coupon Date: the date the interest payment is due to the owner of the investment.

Coupon Income: the income received from the coupon rate on owned securities.

Coupon Rate: the interest rate on a debt instrument, expressed as a percentage of face value, paid periodically by the issuer, e.g., a bond with a 6% coupon will pay $6 per $100 of face amount per year, usually in installments every six months. Not synonymous with yield. See "Rate of Interest".

Cover: purchasing to offset a short position. Same as "Short Covering". See "Offset", "Liquidation", "Evening Up".

Covered Call Writer: a seller of a call option who owns the underlying security on which the option is written.

Cover Value: the monetary amount necessary to buy-in a short position at the current market value.

Credit Enhancement: 1) the backing of a debt instrument with collateral, a bank LOC, or some other device to achieve a higher rating for the debt instrument than would be obtained based solely on the issuer's credit risk. 2) any structural component of a transaction that increases creditworthiness.

Credit Risk: the risk of default as reflected by the financial and operating risks of the issuer.

Cross Hedge: a hedge with two transactions in different, but related, securities, usually in different markets; e.g., a long position in US Treasury Bonds in the futures market and a short position in the GNMA forward market.

Current Coupon: a newly issued or to-be-announced mortgage-backed security selling at or close to par. Other new issues are referred to as discounts or premiums.

Current Issue: the most recently auctioned issue, usually in Treasury securities. Also referred to as an on-the-run issue. Trading is more active in current issues than in off-the-run issues.

Current Market Value: the closing price of a security as of the preceding business day.

Current Maturity: current time to maturity on an outstanding note, bond, or other money market instrument, e.g., a 5-year note one year after issue has a current maturity of four years.

Current Yield: coupon payments on a security as a percentage of the security's market price. The market price should be gross of accrued interest, particularly on instruments where no coupon is left to be paid until maturity. Often referred to as current return.

Custodial Agreement: a contract in which a custodian agrees to exercise ordinary care in safekeeping and administration of securities and financial instruments on behalf of others. Regulation 703 prohibits a contract with a standard of care less than ordinary. Modern term for Bailment for Hire.

Custodian: an individual or organization responsible for safeguarding and administration of securities and financial instruments on behalf of others.

CUSIP Number (Committee on Uniform Securities Identification Procedures): an identifying number assigned to a publicly-traded security. It is a nine-digit code (alpha-numeric) that uniquely identifies an issue.

Dealer: any person engaged in the business of buying and selling securities for his own account, through a broker or otherwise. Such an individual or firm is acting as principal rather than as agent. The dealer typically does not charge a commission, but makes a profit from the difference between its purchase price and its sale price. A dealer is not required to disclose its cost basis. Therefore, each party to a trade should establish whether the contra party will receive dealer status. The dealer's confirmation discloses to the customer that the dealer has acted as principal. At different times, the same individual or firm may function as either broker or dealer.

Dealers Association: see "Mortgage-Backed Securities Dealers Association".

Debenture: a bond secured only by the general credit of the issuer.

Debt securities: IOUs created through loan-type transactions-commercial paper, bank CDs, bills, bonds, and other instruments.

Decay: the rate at which a variable's value diminishes through time, e.g., if a variable is set equal to Ce^{-rt}, and C is greater than 0, r is positive, and t equals time, then the variable exhibits exponential decay. Where r is the continuously compounded interest rate, the formula computes the present value of the cash flow (C) that will occur at a time (t) in the future.

Deferred Futures: the most distant expirations of the listed futures contract months. Also called back months.

Delay: refers to the "stated" delay time elapsed to the first payment of principal and interest (GNMA I--45 days, GNMA II--50 days, FHLMC PC--75 days, FHLMC Gold--44 days, FNMA MBS--55 days, conventional pass-throughs--55 days). The "actual" delay, or penalty, is 30 days less than the "stated" delay.

Deliverable Grades: see "Contract Grades".

Delivery: 1) the tender of the securities to the purchaser against receipt of payment at the contract price in settlement of a cash or forward trade. 2) the tender and receipt of the actual commodity, the cash value of

the commodity, or of a delivery instrument covering the commodity, e.g., warehouse receipts or shipping certificates, used to settle a futures contract.

Delivery Month: a specified period (not necessarily a calendar month) within which a futures contract can be settled by delivery.

Delivery Versus Payment (DVP): a security delivery method in which the buyer's payment for securities is due at the time of delivery (usually to a bank acting as agent for the buyer) upon receipt of the securities.

Delta: the expected change in an option's price for a given change in the price of the underlying instrument or security.

Department of Housing and Urban Development (HUD): a department of the US Government. GNMA is a corporate instrumentality within HUD.

Deposit Note: a term deposit in a bank. A deposit note is an obligation of a bank that is similar to a certificate of deposit but is rated.

Depository: a central facility for holding securities which enables securities transactions to be processed by book entry without physical delivery of securities certificates. In addition to safekeeping, a depository may incorporate comparison, clearing and settlement functions. Major depositories include the Depository Trust Company (DTC) and the Fedwire book-entry securities system. DTC has a separate MBS Division (formerly operating as the Participants Trust Company).

Discount: an amount, expressed as a percentage or dollar amount, that a security is trading below its par value. Some securities, e.g., Treasury Bills, are issued at a discount, without a coupon, and are redeemable at par when they reach maturity; the difference between the original discount and par provides the rate of return on the investment.

Discount Bond: a bond selling below par.

Discounted Cash Flow: an accounting technique used to estimate the present value of future cash flows by applying a discount rate to anticipated cash flows.

Discount Rate: 1) the interest rate charged by the Federal Reserve Banks for loans to member banks, using government securities or eligible paper as collateral. 2) a discount rate (as opposed to the Discount Rate) is an interest rate used in determining the present value of future cash flows.

Disintermediation: the phenomenon that occurs when there is a decline in the deposit and lending relationships between financial intermediaries and their customers and an increase in direct relationships between ultimate suppliers of funds and ultimate borrowers of funds. Caused, for example, when financial intermediaries cannot compete efficiently with the rates being paid by others. This results in a shrinkage in the amount of deposits held by those financial intermediaries which are unable to pay the higher (market) rates. See also "Intermediation".

Dollar Rolls: a special repurchase agreement transaction where the holder of a security agrees to sell the security to a second party and agrees to buy back a security with substantially similar characteristics at a specified price, on a specified date. It differs from a repurchase transaction in that the seller gives up the cash flows from the security during the roll period. The accounting profession may refer to this type of transaction as a Dollar Price Repurchase Agreement.

Domino Effect: the notion that a default by (or financial stress at) one organization will cause a default or financial stress at other firms in the securities industry because of interconnected obligations.

Don't Know (DK): denying knowledge of a trade and a refusal to settle a trade by a buyer when the buyer (or the buyer's receiving agent) does not recognize confirmation or the securities that the seller has delivered. The buyer's operations department may have no record of or instructions to complete the trade, or the buyer may "DK" the trade because it reflects an incorrect price or quantity.

Due Bill: a promissory note delivered in lieu of the security to a buyer by the seller which evidences the seller's obligation to deliver the security to the buyer at a later date. A due bill check is a post-dated check issued by the seller to the buyer that becomes payable to the buyer on a specified date in the amount of principal and interest due to the buyer. Prior to the payable date, the due bill check serves as a due bill.

Duration: a measure of the sensitivity of an instrument's price to changes in yields. It is calculated as a present value-weighted time to maturity of the cash flows from an instrument. Also termed "Macaulay Duration". See also "Modified Duration", which is slightly different but often used interchangeably with duration. For a bond with known cash flows, the percentage change in the security's price in response to a small change in yield is approximately equal to the negative of the product of the security's modified duration and the rate shift. For mortgage-backed securities, such as CMOs, where cash flows are subject to uncertainty, the calculated duration is a poor indication of market risk, since it does not adjust for the impact of changing interest rates on prepayment and extension risks. In such a case "Effective Duration" is a better measure.

Effective Duration: a measure of the sensitivity of an instrument's price to changes in yields, taking into account the effect of embedded options and changes in prepayments. It is calculated typically as an average percentage change in a bond's value (price plus accrued interest) for shifts in the Treasury curve of +/- 100 basis points (that is, plus and minus one percent). Effective duration may also be calculated for other shifts (e.g., +/- 200 basis points) in the Treasury curve.

Embedded Option: an option that is an inseparable part of another instrument. Embedded options include caps, floors, calls, puts, and prepayment provisions. Typical embedded options grant early termination rights to the issuer, such as the call provision in many corporate bonds or the homeowner's prepayment option that permits the issuer to repay the mortgage-backed security earlier than the nominal maturity. While embedded options are not severable, in contrast, detachable options can be traded separately.

Endorsement: a signature, other than that of a signer as maker, drawer, or acceptor, that alone or accompanied by other words is made on an instrument for the purpose of 1) negotiating the instrument, 2) restricting payment of the instrument, or 3) incurring endorser's liability on the instrument. Spelled "indorsement" in the Uniform Commercial Code.

Equivalent Bond Yield: annual yield on a short-term, non-interest-bearing security calculated so as to be comparable to yields quoted on coupon securities. See "Bond-Equivalent Yield".

Escrow Agent: a third party, acting as an agent for the buyer and the seller, who carries out the instruction of both and assumes the responsibilities of handling the paperwork and the disbursement of funds.

Escrow Fees: fees charged by the escrow holder for services.

Eurodollars: U.S. dollars deposited in a financial institution located outside of the United States. Permissible Eurodollar deposits under Part 703 are deposits in foreign branches of United States depository institutions. These deposits are not covered by FDIC insurance.

Evening Up: buying or selling to offset an existing market position. See "Liquidation".

Exchange: an organization which maintains a market by bringing together members to execute trades in the commodities or securities listed on the exchange. Also called a "Board of Trade" in the commodities markets.

Exchange of Cash for Futures: a transaction in which the buyer of a cash commodity receives a short futures position in a corresponding amount and the seller of a cash commodity receives a long futures position in a corresponding amount, at a price difference from the cash commodity mutually agreed upon. These transactions allow ex-pit trading of futures to facilitate movement of the cash commodity and can establish, transfer, or offset open interest. Also called Exchange for Physical, or Against Actuals.

Exempted Securities: securities exempt from registration under the Securities Act of 1933 (see section 3) or exempt from certain provisions of the Securities Exchange Act of 1934 (see section 3(a)(12)). Such securities include governments, agencies, municipal securities, and certain commercial paper and private placements.

Exercise: to elect to put into effect the right (but not the obligation) held by an option holder, e.g., to require the option writer to deliver a security at the strike price (call), or to require the option writer to purchase a security at the strike price (put).

Exercise Price: the price at which the option buyer may purchase (call) or sell (put) the underlying security. Also called "Strike Price".

Expiration Date: the final date on or before which an option may be exercised. If not exercised by the expiration date, the option is void and worthless.

Extension Risk: the potential that the principal of a mortgage-backed security will be paid later than expected, typically in response to rising interest rates. Since the expected prepayments will be slower in a higher interest rate environment, the result is a longer expected average life. Opposite of "Prepayment Risk".

Face Value: typically the value of a bond or financial instrument at maturity. Historically, all securities were issued in the physical form of a certificate; the face value appeared on the face of the certificate. Face value is not an indication of market value. For amortizing instruments such as mortgage-backed securities, face value typically refers to the original principal amount. Also called "Par Value".

Factor: the proportion of the outstanding principal balance of a security to its original principal balance expressed as a decimal. In mortgage backed securities (MBS), the principal amount of each outstanding certificate is reduced monthly by its pro rata share of the regular mortgage payments by the mortgagees of the underlying mortgages and any prepayments or foreclosures. The MBS issuer publishes a list of factors each month (e.g., .987654321). The MBS security holder can calculate the current amount of principal outstanding by multiplying the factor by the original principal amount (e.g..987654321 factor times $100,000 original principal balance = $98,765 outstanding principal balance). The MBS security holder can calculate the amount of principal received in the current month by subtracting the prior month's outstanding principal balance from the current month's outstanding principal balance.

Fail: when the seller of a security does not make delivery on the agreed settlement date.

Fair Value: the amount at which an instrument could be exchanged in a current arms-length transaction between willing parties, other than in a forced liquidation sale. Market prices, if available, are the best evidence of the fair value of financial instruments. If market prices are not available, the best estimate of fair value may be based on the quoted market price of a financial instrument with similar characteristics or on valuation techniques (e.g., the present value of estimated future cash flows using a discount rate commensurate with the risks involved, option pricing models, or matrix pricing models.)

Fannie Mae: see "Federal National Mortgage Association (FNMA)".

Farmers Home Administration (FmHA): a US Government agency established under the Farmers Home Administration Act of 1946 to provide financing to farmers and other qualified borrowers who are unable to obtain loans elsewhere. It makes, participates in, and insures loans for rural housing and other purposes.

Federal Agency Security: interest bearing debt securities issued by U.S. departments and agencies. Agency securities are backed by the full faith and credit of the U.S. government (e.g., GNMA pass throughs and participation certificates). Securities of Government Sponsored Enterprises (GSEs) often are referred to as agency securities, but typically are backed only by the issuer (e.g., FNMA debentures).

Federal Funds (Fed Funds): funds deposited at Federal Reserve Banks by financial institutions, including funds in excess of reserve requirements. Fed funds can be sold by a credit union to a Section 107(8) institution. Fed funds sold represents an uninsured investment by the credit union (a permitted borrowing by the bank). Although a credit union can also buy Fed funds, Fed funds purchased represents a borrowing by the credit union.

Federal Home Loan Mortgage Corporation (FHLMC or Freddie Mac): a private corporation authorized by Congress. FHLMC is a secondary-market facility of the FHLBB system. It primarily sells mortgage participation certificates secured by pools of conventional mortgage loans whose principal and interest are guaranteed through the FHLMC.

Federal Housing Administration (FHA): a division of HUD. Its main activity is the insuring of residential mortgage loans made by private lenders. It sets standards for construction and underwriting. FHA does not lend money or construct housing.

Federal National Mortgage Association (FNMA or Fannie Mae): a private corporate created by Congress to support the secondary mortgage market. It primarily purchases conventional residential mortgages and issues mortgage-backed securities.

Federal Open Market Committee (FOMC): the arm of the Federal Reserve System (Fed) that controls the purchase and sale of securities in the market for the Fed's open market account. A purchase of securities by the Fed adds reserves to the banking system (increasing the money supply), while a sale of securities withdraws reserves. Open market operations serve as one of three basic tools the Fed uses to conduct monetary policy (the other two being changes in the discount rate and reserve requirements).

Fee: 1) a Commitment Fee is a payment to investors or prospective investors, which may or may not be refundable, for the purpose of obtaining a commitment to purchase or to sell securities. 2) a Standby Fee is a non refundable amount received or paid for the sale or purchase of a standby commitment. 3) an Up-front Fee is a commitment fee paid in advance of the settlement date to an investor for a future purchase.

Fee Trading: see "Adjusted Trading".

FHA Experience: a statistical series, revised periodically, which represents the portion of mortgages that "survive" a given number of years from their origination.

Financial Accounting Standards Board (FASB): the professional quasi-regulatory organization that primarily establishes and reviews generally accepted accounting principles (GAAP), which are mainly delineated by Statements of Financial Accounting Standards (SFAS).

Financial Instruments: 1) any obligation or contract which can be negotiated, including stocks, bonds, commercial paper, forwards, and futures. 2) more generally, cash, evidence of an ownership interest in an equity, or a contract that establishes a right of one party to receive cash (or another financial instrument) or to exchange other financial instruments on potentially favorable terms with the counterparty.

Financial Intermediary: a financial institution which acts as an intermediary between savers and borrowers by accepting money from the public and, in turn, by lending the accumulated funds to borrowers. The classification includes savings associations, commercial banks, mutual savings banks, life insurance companies, and credit unions.

Firm Commitment: a commitment to buy or sell a security at a fixed price for a specified period of time.

Firm Price: a price at which a trader is willing to trade for a limited period of time, usually no longer than the length of the phone call. Opposite of indicative price or indication.

Floor: 1) an embedded option in a floating-rate security that places a rate minimum (specifying the lowest interest rate that will be paid) on the floating rate coupon. 2) a stand-alone option contract (usually written as a swap) that pays the holder of the floor an amount equal to the notional principal amount times the excess of the floor rate over the market rate. A floor usually consists of a strip of caplets, i.e., a series of options with sequential expiration dates. Each caplet is an option on rates for a single period of time.

Floor Broker: any person who, in or surrounding any pit, ring, post or other place provided by an exchange for the meeting of persons similarly engaged, executes for others any orders for the purchase or the sale of any commodity or security and receives a prescribed fee or commission.

Foreclosure Payment: a prepayment made to holders of mortgage-backed securities from proceeds of property liquidation after foreclosure. Amount of prepayment must equal the principal balance of the foreclosed mortgage.

Forward: a cash market transaction in which two parties agree to the purchase and the sale of a commodity at some future time under such conditions as the two agree. In contrast to futures contracts, the terms of forward contracts are not standardized. A forward contract usually is not transferable and can be canceled only with the consent of the other party, which often must be obtained for consideration and under penalty, and forward contracts are not traded in federally designated contract markets. Essentially, forward contract refers to any cash market purchase or sale agreement for which delivery is not made "on the spot." See “Commitment”, “Cash Forward Agreement”, and “Standby Commitment”.

Forward Contract: see “Forward”.

Forward Market: refers to informal (non exchange) trading of commodities to be delivered at a future date. Contracts for forward delivery are not standardized, e.g., delivery time and amount are as determined between seller and customer.

Forward Months: see “Deferred Futures”.

Forward Roll: like "roll over," a term used to describe the action of selling an investment position and redeploying the proceeds into a new but similar position. A trader in the Government securities market may elect to sell a long position in the previously-issued 2-year note (the "current" 2-year) and use the proceeds to buy the newly-issued 2-year note (referred to as the "when issued" or "w.i." 2-year) prior to its settlement date. When this action is done with the forward settlement date, it is described as a "forward roll from the current to the w.i.” In the futures and options markets, a forward roll is used to describe the extension of a position from one month (maturity) to a longer month. A trader may elect to shift from a March Eurodollar contract to a June Eurodollar contract to avoid the expiration date on the March contract.

Freddie Mac: see “Federal Home Loan Mortgage Corporation (FHLMC)”.

Fully Modified Pass-Through: a security for which the timely payment of both principal and interest is guaranteed. Investors in the security will receive mortgage interest and principal payments on a certain date regardless of whether the mortgage borrowers have actually made those payments.

Funding Date: term used by mortgage bankers to denote the date on which the mortgage banker funds or finances a new issue of MBS. See “Settlement Date”.

Fungibility: the characteristic of interchangeability. Treasury securities of the same maturity and coupon are interchangeable, as entries in the Fed’s book-entry system. Futures contracts for the same commodity and delivery month are fungible due to their standardized specifications for quality, quantity, delivery date, and delivery locations. GNMAs bearing the same interest rate generally are treated as fungible until pool numbers are assigned. Subsequently, fungibility may decline or vanish.

Futures Commission Merchant: the CFTC’s term for a futures broker. Any individual, association, partnership, corporation, or trust engaging in soliciting or in accepting orders for the purchase or sale of any commodity for future delivery on, or subject to, the rules of any futures exchange.

Futures Contract: an agreement to purchase or sell a commodity or financial instrument for delivery in the future: at a price determined at initiation of the contract, which obligates each party to the contract to fulfill the contract at the specified price, which is used to assume or shift price risk, and which may be satisfied by delivery or offset. Futures contracts are sold on an exchange or board of trade in which the terms are standardized. See “Contract Market”.

Futures Exchange: see “Contract Market”.

Futures Price: the price of a given commodity unit determined by public auction on a futures exchange.

Gamma: a measure of the rate of change of the option’s delta with respect to a change in the price of the underlying asset.

Gap: mismatch between the earlier of maturity or repricing of a depository institution’s assets and liabilities, prepared by scheduling the cash flows of all balance sheet items into time periods, or “buckets.” A static gap reports the current balance sheet repricing mismatch. Dynamic gap a) typically refers to a gap report projected as of a future balance sheet date, but b) may refer to the use of estimated cash flows in the maturity or repricing buckets of a gap report.

General Obligation Bonds: municipal securities secured by the issuer’s pledge of its full faith, credit, and taxing power.

Ginnie Mae Mortgage-Backed Security (Ginnie Mae or GNMA): a security issued and guaranteed by the U.S. Government. Cash flows on Ginnie Mae securities are based on the underlying FHA, VA, or FmHA mortgages. The term "pass-throughs" is often used to describe Ginnie Maes. See “Government National Mortgage Association”, “GNMA I”, “GNMA II”.

GNMA I: a pass-through mortgage-backed security on which the registered holders receive on the 15th day of each month a separate principal and interest payment on each of their certificates. GNMA I securities are collateralized by a pool of mortgages from a single originator, such as a mortgage banker, commercial bank, savings and loan association, savings bank, credit union, or and other institution.

GNMA II: a pass-through mortgage-backed security on which registered holders receive on the 20th day of each month an aggregate principal and interest payment from a central paying agent on all of their GNMA II certificates. GNMA II securities are collateralized by multiple-issuer pools (“Jumbos”) or custom pools (one originator but different interest rates that may vary within one percentage point).

Go-Around: the technique whereby the manager of the System Open Market Account purchases and sells securities for the Federal Reserve System.

Good Delivery: a term indicating that a security in proper form has been delivered timely in accordance with the terms of the transaction.

Government Agency: organizations established by Congress to serve many different purposes. Most agencies typically do not issue securities, but borrow indirectly through the US Treasury. Those securities issued directly by agencies typically are direct obligations of the US Government. Government Sponsored Enterprises, which are private corporations, often are called (loosely and erroneously) "agencies".

Government National Mortgage Association (GNMA or Ginnie Mae): a wholly-owned government corporation within the Department of Housing and Urban Development. GNMA supports a secondary market in government insured and guaranteed mortgages. GNMA securities are backed by pools of FHA-insured and VA-guaranteed mortgages. See "Ginnie Mae", "GNMA I", "GNMA II".

Government Sponsored Enterprise (GSEs): a financial intermediary established by Congress to provide funding to sectors of the economy that are in need of credit beyond that supplied by purely private intermediaries. GSEs are privately owned and operate with limited government direction. Obligations are not guaranteed by the full faith and credit of the U.S. government. Examples include:

- Federal Home Loan Bank (FHLB)
- Federal Home Loan Mortgage Corporation (FHLMC - Freddie Mac)
- Farm Credit System
- Agriculture Mortgage Corporation (Farmer Mac)
- Student Loan Marketing Association (SLMA - Sallie Mae)
- Financing Corporation (FICO)

Graduated Payment Mortgage (GPM): a mortgage that features negative amortization in which early payments are scheduled to be insufficient to pay the interest accruing on the outstanding principal. After a period of low initial payments, there is a graduation period where the size of the payments increase for some number of years. The number, frequency, and rate of increases are specified in the original contract.

Gross Long: the total of open long (purchase) contracts, not reduced by any short positions (sales contracts) held at the same time.

Gross Short: the total of open short (sales) contracts, not reduced by any long positions (purchase contracts) held at the same time.

Guaranteed Loan Participation Certificate (GLPC): see "Small Business Administration Secondary Participation".

Guaranty: a promise by one party to pay a debt or to perform an obligation contracted by another party in the event that the original obligor fails to pay or perform as contracted.

Haircut: 1) deductions of specified percentages from the market value of assets solely for the purpose of computing regulatory net capital. 2) in computing the worth of assets deposited as collateral or margin, the difference between the actual market value of a security and the value assessed by the lending side of a transaction.

Hedge: 1) a position or combination of positions that reduces some type of risk, usually at the expense of expected return. A hedging transaction is a transaction or position in a swap, futures contract, or other financial instrument that reduces financial risks of a commercial enterprise. Typical hedges involve: entering into an opposite position (in a related security in the cash market or in a futures contract) to a position held in the cash market to minimize the risk from adverse price changes; and entering into a position in the futures market as a temporary substitute for a cash transaction that will occur later to guarantee today's price. 2) among traders and portfolio managers, a term used to describe a partially hedged position. 3) used erroneously to minimize the perceived risk in describing a risky position (or combination

of positions) taken with the intent of profiting from an expected change in a spread (also termed a basis arbitrage) or value (also termed a risk arbitrage).

Hit: a dealer is "hit" when the bid side of a market which the dealer has made is accepted by the customer, that is, when the customer sells a security to the dealer. When bids are being “hit,” the general response of the dealer is to lower the bid price.

HUD: the Department of Housing and Urban Development. Established by the Housing and Urban Development Act of 1965 to supersede the Housing and Home Finance Agency. Responsible for the implementation and administration of government housing and urban development programs. HUD programs include community planning and development, housing production, the extension of mortgage credit (FHA), and ensuring equal opportunity in housing.

Impound: see “Escrow Payment”.

Indenture of a Bond: a legal statement spelling out the obligations of the bond issuer and the rights of the bondholder.

Index: the interest rate used in determining the coupon rate of a variable rate security or loan. A margin is usually added to the index.

Index Amortizing Note (IAN): a note that returns principal prior to final maturity. The amount and timing of the return of principal is linked to an index, such as three-month LIBOR or the prepayment speed of a mortgage-backed security. Typically, as the index rises, the scheduled return of principal payments slow down, exposing the owner to extension risk; as the index declines, the scheduled return of principal payments increase, exposing the owner to prepayment and reinvestment risk. Corporate credit unions have offered Amortizing Certificate Programs (ACPs) that behave in a similar manner. IANs are not mortgage backed, but they have similar market risk due to the uncertainty of payments.

Initial Margin: the amount of money or its equivalent that a customer must deposit with a broker when the customer buys or sells a security or futures contract on margin.

Institutional Lender: a financial institution that invests in mortgages and carries them in its own portfolio, e.g., mutual savings banks, life insurance companies, commercial banks, pension and trust funds, and savings and loan associations.

Insured Association: a savings association with savings accounts insured by FDIC.

Interest Rate Risk: the potential for change in the value of a security when the level of interest rates changes.

Interest Rate Swap: a contract to exchange streams of interest payments, e.g. fixed for floating, based upon a specified dollar amount (notional amount) at specified dates in the future.

Interest Trades: these transactions involve a) a purchase of securities for current settlement; b) a delayed settlement (forward) sale of these securities or the possession of a long standby; and c) a financing of a long position by a sale under an agreement to repurchase on or before the forward delivery date.

Intermediation: the phenomenon that occurs when rates paid by certain financial intermediaries can compete successfully with the rates being paid by others, e.g., the US Government on its Treasury Bills. This causes an expansion in the amount of deposits held by the intermediaries which are able to pay higher rates. See “Disintermediation”.

In-the-Money: a term to describe an option that has a positive value if exercised immediately. A call option is in-the-money if the underlying security's price is higher than the option's strike price. A put option is in-the-money if the underlying security's price is below the option's strike price. An option that is in-the-money has intrinsic value.

Intrinsic Value: the value of an option if immediately exercised. A call option has intrinsic value when the price of the underlying security exceeds the option's exercise price. A put option has intrinsic value when the underlying security's price is less than the option's exercise price.

Inventory: the total issues, long and short, held by a dealer that comprise that dealer s inventory.

Inverted Market: a futures market in which the nearer months are selling at prices higher than the more distant months; hence, a market displaying inverse carrying charges. This is characteristic of markets in which supplies are currently in shortage.

Inverted Yield Curve: a graph illustrating the level of interest rates as a function of time to maturity, where shorter maturity investments have higher yields than longer maturity investments. Inverted Yield Curves generally occur during period when the Federal Reserve is attempting to fight inflation by restraining growth in economic activity and restricting growth in the money supply. Normally, the yield curve is upward slopping.

Issuer: the legal entity that is selling or has sold its security or other financial instrument. In mortgage banking, the entity who pools mortgages to back GNMA pass-through securities. See "Originator".

Junior/Senior Structure: a securities issuance with one class that is subordinated to a senior obligation.

Junk Bond: a bond with a credit rating that is low, below BBB (S P) or equivalent.

Key Rate Duration: a duration analysis technique to determine the affect on an instrument's value of a rate change in part of the yield curve. The sum of the key rate durations for an investment provides a measure comparable to duration for parallel shifts in the yield curve.

Legal Eligibility: investments that life insurance companies, mutual savings banks, or other regulated investors may make under a state charter, law, or regulation.

Liquidation: 1) making a transaction that offsets or closes out a position. 2) closing out a defaulted transaction.

Liquidity Risk: 1) the potential loss when a security cannot be sold promptly at or near prevailing market prices. This may be the result of a general market disruption, uncertainty in the market place regarding the value of the security, or a large position relative to market trading volume. 2) in a financial institution, the costs incurred to attract new deposits or liquidate assets to meet the cash flow needs of unanticipated withdrawals.

Liquidity Support: in a structured securities transaction, a source of funds for the issuing trust to cover shortfalls in cash flow resulting from timing mismatches between payments received on trust assets and payments due to securities holders.

Load Fee: a fee charged to invest in a mutual fund. Load fees may be "up-front" fees charged at the time of purchase and/or "back-door" or "back-end" fees charged at the time of sale. These fees may be based on the amount of funds placed in the investment and the length of time the investment is held.

Long Bond: generally a bond that matures in more than ten years is a long bond. Wall Street refers to the 30-year U.S. Treasury bond as the "long bond."

LIBOR: the London Interbank Offered Rate. When not specified, usually the rate at which major banks offer to lend US dollars (i.e., to make a Eurodollar deposit, as opposed to a deposit denominated in some other currency such as the German mark). There is a different LIBOR rate quoted for each deposit maturity. Different banks may quote slightly different LIBOR rates, just as different banks in the US may have slightly different deposit rates. A popular interest rate survey of LIBOR is prepared each day by the British Bankers' Association (BBA). NCUA considers a US dollar-denominated LIBOR to be a domestic interest rate.

Long: one who owns an inventory of securities, commodities, or forward or futures contracts.

Long the Basis: a person or firm that has bought the spot commodity and hedged with a sale of futures is said to be long the basis.

Macaulay Duration: see "Duration".

Maintenance Margin: the minimum amount of money or collateral required to be maintained in a margin account in accordance with exchange regulations or broker requirements. If a customer's margin account drops below the required level, the broker issues a margin call to the customer for a payment sufficient to restore the account, often to the level of the initial margin. Maintenance Margin differs from Variation Margin or Payment, which is a cash payment made to the clearinghouse, usually at least daily, because of an adverse movement in price.

Maker: see "Writer".

Making a Market: a dealer makes a market when he stands ready to buy or sell at his bid and offered prices.

Margin: 1) a constant value added to an index to arrive at the fully indexed coupon, which is the interest rate paid on a variable rate loan or investment, in the absence of a teaser rate or binding cap rate. The cap rate will be paid on an investment while its fully indexed coupon is above the cap rate. 2) a deposit of cash or collateral by a client with a broker (or by a broker with a clearing house) which protects the broker (or clearing house). Margin in commodities is not a payment for equity or down payment on the commodity itself, but rather is in the nature of a performance bond. The difference is significant because a) both buyers and sellers post margin in commodities; b) the remainder of the position is not being borrowed from one s broker and does not require interest payments; and c) as price moves against one's position, the account is debited (termed Variation Margin at the clearing member level) and the protection represented by the Initial Margin may fall below the prescribed maintenance level, in which case the trader will be required to post additional margin. See "Initial Margin", "Maintenance Margin", "Original Margin", and "Variation Margin".

Margin Call: 1) a call from a brokerage firm to a customer to bring margin deposits up to minimum levels required by the broker, at least equal to exchange minimums. 2) a request by the clearing house to a clearing member to bring clearing margins back to minimum levels required by the clearing house rules.

Market Order: an order to buy or to sell a stated amount of a security at the most advantageous price obtainable after the order is entered.

Market Price: market price usually is indicated by the last reported price at which the security or financial instrument sold. For an inactive security that has not traded recently, the market price is the latest bid price.

Market Risk: the risk that an investment will vary in price as market conditions change.

Market Value: the current or prevailing price of a security, at which a security presumably could be sold.

Marketability: 1) the capacity of the market in a particular security to absorb a reasonable amount of buying and of selling at reasonable price changes. See “Liquidity Risk”. 2) the degree of investment interest underlying a security.

Mark-to-Market: 1) to value a position or portfolio at current market prices. Marking to market is an effective way to monitor profit and loss. Trading accounts must be marked to market daily to provide management with a measure for control purposes. 2) a procedure whereby a brokerage concern has the right to demand funds or securities in the amount of unrealized loss on unsettled contracts to purchase or sell securities. The making of a mark to market payment restores original margin. 3) the accounting adjustment made to bring the book value of an investment to its market value. It is the accounting procedure that is applicable to a credit union s trading account securities.

Markup: the difference between what a dealer has paid for a security and the price at which the security is offered to another person. May be referred to loosely as Spread. Spread, however, usually refers to the difference in current bid and current offer prices, rather than the difference between the dealers cost and the current offer price.

Matched Repurchase Agreement (Matched REPO): matched repurchase agreements include transactions in which a dealer acquires a security on a reverse repurchase agreement or a collateral loan, only when the dealer has outstanding commitments both to repurchase and to resell the security on the same date. If the reverse repurchase agreement is made first in anticipation of a subsequent matching agreement, the transaction is not a matched agreement until the security is sold under a repurchase agreement. Matched agreements also include transactions in which a dealer is in any way subject to a contingent liability, as well as those where the dealer is acting as an agent in a transaction that involves the temporary exchange of cash for securities between two or more other parties but remains contingently liable for any losses incurred because of the failure of any of the other parties to fulfill their part of the agreement.

Matched Sale-Purchase Agreements: an agreement where the Federal Reserve sells a security outright for immediate delivery to a dealer or foreign central bank, with an agreement to buy the security back on a specific date (usually within seven days). Matched Sale-Purchase Agreements are the reverse of repurchase agreements and allow the Federal Reserve to withdraw reserves on a temporary basis.

Maturity: the date on which the principal amount of the security is due and payable to the registered owner of the security. On such date, the accrual of interest typically terminates on a note, time draft, acceptance, bill of exchange, mortgage-backed security, or bond.

Medium-Term Notes (MTNs): plain corporate debt instruments with a fixed rate and fixed maturity (typically less than seven years), that often are continuously offered notes, ranging in maturity from nine months to 30 years. Bank Deposit Notes are a form of MTN.

Midgets: GNMA pass-through security with collateral of 15-year original maturity mortgages. It is similar in structure to a GNMA security backed by 30-year original maturity mortgages.

Modified Duration: a measure of the sensitivity of an instrument's price to changes in yields. It is calculated as Duration, discounted by a small factor noted below. See “Duration”. Modified Duration often is used interchangeably with Duration, since many uses of duration are not sensitive to the small difference. For a bond with known cash flows, the percentage change in the security’s price in response to a small change in yield is approximately equal to the negative of the product of the security’s modified duration and the rate shift. For mortgage-backed securities, such as CMOs where cash flows are subject to uncertainty, the calculated duration is a poor indicator of market risk, since it does not adjust for the impact of changing interest rates on prepayment and extension risks. In such a case Effective Duration is a better measure.

$D_{mod} = [1/(1 + [y/f])] D$

where D_{mod}= modified duration; y= yield to maturity; f frequency of coupon payment, and D = duration.

Modified Pass-Through: a security for which the timely payment of interest, but not principal, has been guaranteed by an institution or agency.

Money Market: the market for trading of short-term, high-grade financial instruments, such as banker's acceptances, certificates of deposit, and commercial paper.

Money Market Mutual Fund: a mutual fund that invests in highly liquid securities and pays money market rates of interest, in accordance with regulations of the SEC (17 CFR 240.2a-7). Some funds invest only in government-backed securities. Money market funds attempt to maintain a stable Net Asset Value (NAV) of $1.00 per share. These funds are not insured by the government.

Mortgage-Backed Security Dealers' Association: a voluntary association of dealers in GNMA mortgage-backed securities. The association changed its name from the GNMA Mortgage-Backed Securities Dealers' Association.

Mortgage Banker: a party who originates, sells, and services mortgages. A mortgage banker retains servicing rights to loans and may service the loans it has sold. A mortgage banker also may sell servicing rights. As the local representative of regional or national institutional lenders, it acts as a correspondent between lenders and borrowers.

Mortgage Bankers Association of America (MBA): an association of mortgage bankers. The association serves as the trade association for the mortgage banking industry.

Mortgage Bond: a bond secured by a lien on property, equipment, or other real assets.

Mortgage-Backed Bonds: a bond collateralized by mortgages. The cash flow of the bond need not be linked directly to the principal payments of the mortgages.

Mortgage-Backed Security: a term used broadly to refer to a security backed by mortgages, including pass-through securities, pools, mortgage-backed bonds, and CMOs.

Mortgage Pass-Though Security: a security representing an undivided ownership interest in a pool of mortgages. The mortgages are serviced by a financial institution which transfers the monthly payments by home owners of principal and interest (less a servicing fee and a guarantee fee, if any) to be received by the owner of the interest in the MBS. This process of transferring cash flow is termed a "pass through."

Mortgage Participation Certificates: similar to pass-through securities, representing an undivided interest in residential mortgages.

Mortgage Yield: an internal rate of return calculation. In the early days of mortgage-backed securities, the yield was calculated as if all principal were prepaid at the end of 12 years. Now, a reasonable and supportable estimate of the prepayment speed is used in calculating the estimated yield on a mortgage-backed security. See "Constant Prepayment Rate".

Municipal Securities Rulemaking Board (MSRB): a self regulatory organization established to propose and adopt rules for brokers and dealers in Municipal Securities. The SEC oversees the MSRB. The MSRB was created under §15B of the Securities Exchange Act of 1934.

Municipal Security (Muni): obligations of a state, and of a county, city, tax district, or other division of a state. Municipal securities include: a) General Obligation (GO) Bonds, which the municipality backs with its full faith and credit; b) Revenue Bonds, which are payable from specified revenues only, such as a property or facility financed by the revenue bond, but which do not bind the municipality; and c) short term notes issued by municipalities in anticipation of tax receipts (tax anticipation notes or TANs), proceeds from a bond issue (bond anticipation notes or BANs), or other revenues (revenue anticipation notes or RANs). Many municipal bonds are insured by municipal bond insurance typically issued by one of three leading triple-A rated municipal-bond insurers, AMBAC Indemnity corporation, FGIC (Financial Guarantee Insurance Corporation, or MBIA (Municipal Bond Insurance Association).

Mutual Fund: a fund operated by an investment company that raises money from shareholders. Funds offer professional management and diversification for a fee. The market price of a share is called its Net Asset Value (NAV), which reflects the mark-to-market value of all securities held by the investment company. Also called open end investment company. A mutual fund that invests in fixed income securities often is called a bond fund. See “Money Market Mutual Fund”.

National Association of Securities Dealers, Inc. (NASD): the self-regulatory organization of the securities industry responsible for regulation of the Over-The-Counter securities market and the many products traded in it. The NASD administers qualifications tests to securities professionals and enforces compliance by its members with the securities laws, the rules of the Municipal Securities Rulemaking Board, and NASD rules. The NASD rules, in general, protect investors by preventing fraudulent and manipulative acts and practices, and promoting just and equitable principles of trade. The NASD was created under §15A of the Securities Exchange Act of 1934 (the Maloney Act). The SEC oversees the activities of the NASD. The NASD also owns and operates the NASDAQ market.

Negative Arbitrage: See “Arbitrage”.

Negative (or Inverse) Yield Curve: See “Inverted Yield Curve”.

Negotiable Security: under the Uniform Commercial Code (UCC), an instrument that meets certain legal requirements and can be transferred by endorsement or delivery.

Net Asset Value: the value of a mutual fund share determined by the fund on a daily basis based upon the market value of the underlying securities and the number of shares outstanding.

Net Capital: net worth of a brokerage concern, less certain items such as exchange memberships, carrying value of securities which are not readily marketable, "haircuts" on marketable securities in proprietary accounts, furniture and equipment, etc.

Net Long: a net position that is long.

Net Position: the difference between the open long contracts and open short contracts held by one trader in any one contract market or financial instrument. Trades which have been offset are removed from the net position.

Net Short: a net position that is short.

Net Yield: the part of gross yield that remains after the deduction of all costs, such as mortgage servicing expenses and guaranty fees. See also “Yield”.

New Issue: 1) a security that is purchased at issuance. 2) a recently issued security.

No Load: a mutual fund sold without a load fee.

Normal Yield Curve: a graph illustrating the level of interest rates as a function of time to maturity, where shorter-maturity investments have lower yields than longer-maturity investments. The Normal Yield Curve is upward slopping.

Note: a written promise to pay a debt.

Notional Principal (or Notional Amount): in an interest rate swap agreement, the dollar amount to which interest rates are applied in order to calculate periodic payment obligations. The notional amount is not exchanged by the parties to the interest rate swap agreement.

Odd Lot: a quantity of securities which is less than the typical cash market trading unit, e.g., an odd lot for a Treasury security is a par amount of less than one million dollars. The bid-ask spread on an Odd Lot is slightly wider than for a round lot.

Offer: the lowest declared price at which a seller is willing to sell a security at a particular time. Opposite of bid.

Offset: the liquidation of a purchase of futures through sale of an equal number of contracts of the same delivery month or the covering of a short sale of futures through the purchase of an equal number of contracts of the same delivery month. Either action cancels the obligation to make or take delivery of the commodity.

Open Interest: the total number of future contracts in a given commodity which have not yet been liquidated by offset or fulfilled by delivery; the total number of open contracts. Each open contract has a buyer and a seller; however, when calculating the open interest of an exchange, only one side of the contract is counted.

Open Position: a forward or futures contract is open if it has not been fulfilled by delivery or liquidated by offset. The open position includes open long and short contracts, including option contracts that have not been exercised.

Option: a contract that grants the option buyer the right or privilege, but not the obligation, to buy or sell a specified amount of a given financial instrument at a fixed price (the exercise price) before or on a designated date (the expiration date). A call option confers on the option buyer the right to buy the financial instrument. A put option confers on the option buyer the right to sell the financial instrument. The option writer has the obligation of performing if the option is exercised timely by the option buyer. See also “Standby Commitment”, “Optional Commitment”, “Exercise Price”, “Expiration Date”.

Option Adjusted Spread (OAS): represents an expected incremental return (spread) over Treasury rates, given the observed market price for a security. The OAS is normally positive and reflects the risks of the security, including option risk, relative to a Treasury security. A Treasury security will have an OAS of zero. A negative OAS means a security is expected to earn less than a Treasury security of comparable maturity.

OAS is calculated using an iterative modeling process. First, a large sample of potential Treasury interest-rate paths consistent with the current term structure and current level of volatility are generated; second, the cash flows of the security for each of those Treasury interest-rate paths are generated; third, the cash flows are discounted using the projected Treasury rates to compute an estimated model price. The estimated model price is then compared to the observed market price of the security. If the model price is greater than the market price, an increasingly larger spread is added to each of the Treasury rates and the process of discounting cash flows is repeated until the model price equals the market price. OAS is the spread that results in the estimated model price equaling the observed market price.

When OAS is calculated using Treasury rates as discount rates, the OAS includes both option spread and credit spread. Thus, occasionally OAS may be calculated using a corporate interest-rate curve, such as LIBOR, to compute primarily the spread arising from the embedded optionality.

Given a reasonable estimate for OAS, a fair (model) value can be calculated for a security, using the current term structure of interest rates and the current level of volatility.

Option Buyer: the purchaser of a call or put option who pays a premium to receive the exercise right of the contract.

Option Writer: the seller of a call or put option who grants the exercise right to the buyer in exchange for receiving the premium.

Optional Commitment: a term for an over-the-counter option; an option to receive securities, exercisable at a future date. The buyer of the optional commitment has the option to receive the securities. A long optional commitment is an option to purchase securities. A short optional commitment is a commitment to sell. See also “Option and Call”.

Optional Commitment Fee: amount paid for the purchase of an optional commitment. Also called a “Premium”.

Original Margin: term applied to the initial deposit of performance bond or margin money required of clearing member firms by clearing house rules.

Origination: the process whereby a bond, such as a GNMA certificate, backed by approved mortgages in a pool, is issued. See “Issuer”.

Originator: one whose function is to originate or issue mortgage-backed securities. Builders, brokers, and others are solicited to obtain applications for mortgage loans. The individual mortgage company which performs this function is also designated as the originator or issuer. See “Issuer”.

Out-of-the-Money: an option that has no value if exercised under current market conditions (e.g., the option to purchase is at $100, while the market price is below $100). Such an option has no intrinsic value, but may have time value. A call option is out-of-the-money when the exercise price of the option is higher than the underlying security’s price. A put option is out-of-the-money when the exercise price is lower than the underlying security’s price.

Output: the volume of mortgage securities that a mortgage company can be expected to issue in a month. Also called “Production” or “Origination”.

Overcollateralization: the value of the collateral for an asset-backed security exceeds the par amount of the asset-backed security. From the perspective of the issuing entity, the extent to which the value of the asset or the cash flow produced by the asset (collateral) exceeds the liability or the cash flow required to meet the liability obligations. It is usually expressed as a percentage of par amount of the liability.

Over-The-Counter (OTC): 1) non-exchange traded instruments, including Treasury securities, mortgage-backed securities, municipal securities, negotiable CDs, swaps, forwards, and certain options. 2) a market that is not part of an organized exchange.

Overtrading: see “Adjusted Trading” and “Fee Trading”.

P&I: abbreviation for "principal and interest." This is customarily used to describe the regular monthly checks paid to the registered owner of mortgage-backed securities by the issuer. Payment of GNMA I P I

is scheduled to arrive by the fifteenth of each month and contains the interest, regular principal payments, and prepayments made on a pro rata basis by the entire pool for the previous calendar month.

PAC (Planned Amortization Class): a CMO tranche which is protected, to some degree, from both prepayment and extension risk. The CMO pays principal according to a predetermined schedule that is expected to be met if the collateral prepayment speed remains within the PAC band, that is, between the two specified prepayment speeds.

Pair Off: the matching or netting of contra transactions between two parties when delivery is due. Only the unmatched balance is delivered with a check for the difference between the purchase and sale prices of all transactions being received or delivered. This reduces the number of physical deliveries and redeliveries which otherwise would be required. A pair-off transaction is a security purchase transaction that is closed or sold at, or prior to the settlement or expiration date.

Papers: term sometimes given to put or call options.

Par Cap: a provision in the contract of sale for GNMA securities which restricts delivery only to pools which bear an interest rate sufficiently high so that the securities would trade at or below par when computed on the agreed-to yield.

Par Value: the face value of a security.

Participation Certificate: a type of mortgage-backed security which represents an undivided interest in certain real estate loans.

Pass-Through: a mortgage-backed security on which payment of interest and principal on the underlying mortgages are "passed through" to the security holder by an agent shortly after interest and principal payments are received from the mortgage borrowers.

Pay Down: when the dollar value of a new issue of Government securities is less than the maturing issue which it replaces, the difference is called the pay down.

Paying Agent: an agent, usually a commercial bank, engaged by an issuer to effect dividend or interest payments periodically.

Pay Up: when the dollar value of a new issue of Government securities is more than the maturing issue which it replaces, the difference is called the pay up.

Permanent Investor: one who provides permanent mortgage financing.

Physical/Definitive Security: a security for which there exists a physical paper document as a certificate of ownership identifying terms and conditions.

Plus (+): describes an additional 1/64th on quotations. For example, 98.4+ means 98 and 4/32nds, plus an additional 1/64th.

Point: 1) an amount equal to one percent of the face value or principal amount of an investment or note. 2) a mortgage loan discount point, which is a one-time charge assessed at closing by the lender to increase the yield on the mortgage loan to a market rate. 3) in the foreign-exchange market, the lowest digit at which the currency is quoted, e.g., "one point" is the difference between sterling prices of $1.8080 and $1.8081. Also called pips.

Pool: a collection of mortgages which are packaged and sold as a security. Holders of GNMA pass-through securities own a pro rata share of the outstanding balance of all mortgages in the same pool. Pools must be

mortgages of the same kind (single family, mobile home, or projects), carrying the same or similar rate of interest, and must all be of the same or similar maturity (e.g., 30 years). All mortgages within a single pool are serviced by the same issuer and are usually from the same geographic area.

Position: an interest in the market, either long or short. Securities purchased and held are a long position. Securities sold short and not yet covered are a short position. Forward or futures contracts purchased are called a long position. Forward or futures contracts sold and not yet liquidated are called a short position. A call option purchased and a put option sold economically are equivalent to a long position. A put option purchased and a call option sold economically are equivalent to a short position. See also "Open Position" and "Net Position".

Position Limit: the maximum number of speculative futures contracts in one commodity that a person or group of persons acting in concert can hold as determined by the Commodity Futures Trading Commission or the exchange upon which the contract is traded.

Positive Yield Curve: See "Normal Yield Curve".

Premium: 1) the amount by which the current market price exceeds the security's face value, 2) the amount paid to purchase an option, 3) the amount by which the redemption price exceeds a callable security's face value, 4) loosely, refers to the higher yield demanded by the market for CDs and securities issued by a particular institution as a result of higher perceived credit risk of that institution relative to other similarly rated institutions (also referred to as "paying up for funds"), 5) in the case of federally insured zero-coupon CDs, the amount of the purchase price in excess of the original (or accredited) issue price charged by Broker-Dealers to secondary market investors, which is not FDIC-insured, 6) refers to a higher price charged for a security that is in short supply relative to other similar securities, as in the phrase, "the old 2-year is at a premium to the When Issued 2- year."

Prepayment: payment made ahead of the scheduled payment date.

Prepayment Model: an empirical method which produces a reasonable and supportable forecast of mortgage prepayments in particular interest rate scenarios. The estimated prepayment speeds from such models typically are available from securities broker-dealers and industry-recognized information providers. These estimated prepayment speeds are used in tests to forecast the weighted average life, change in weighted average life, and price sensitivity of CMOs and mortgage-backed securities. The estimated prepayment speeds usually are expressed in terms of a prepayment benchmark, either "Constant Prepayment Rate (CPR)" or "PSA".

Prepayment Risk: the potential that all or part of the principal of a security, such as a mortgage-backed security, will be paid earlier than expected, typically in response to falling interest rates.

Price Limits: the maximum price advance or decline from the previous day s settlement price permitted for a contract in one trading session by the regulations of a futures exchange.

Prime Rate: the interest rate at which preferred customers can borrow from commercial banks.

Primary Dealer: dealer in Treasury securities which reports its activities and resource commitments to the Federal Reserve Bank of New York and with whom the Federal Reserve conducts open market operations to expand or contract the money supply. To maintain their status with the Federal Reserve, primary dealers must maintain an active market-making role in Treasury securities.

Primary Market: offerings in a security at its issuance. See also "Secondary Market".

Principal: (as contrasted with Agent) a party who buys and sells for his or her own account in an arms-length transaction with another, and who is not required to disclose the price basis of a transaction.

Principal Balance: the actual balance of an obligation exclusive of accrued or unpaid interest.

Principal Transaction: a securities transfer wherein one or both of the parties acts as principal dealing for his/her own account.

Private Placement: a security issue offered only to a limited number of sophisticated investors, as opposed to being publicly offered. Subject to certain securities laws, a Prospectus for a Private Placement does not have to be registered with the SEC.

Production: the aggregate of mortgages assembled by a mortgage company, e.g., if a mortgage company generates $1 million per day of new mortgages, it is said to be a $5 million a week producer.

Prospectus: a detailed statement prepared by an issuer and filed with the SEC prior to the sale of a new issue. The prospectus gives detailed information on the issue and on the issuer's condition and prospects.

Proxy: when one person acts on behalf of another, the first person is acting as proxy for the second. Similarly, one instrument can be viewed as a proxy for another when the primary instrument is unavailable or too costly. Warehouse receipts or depository receipts may be used as proxies for commodities or securities.

PSA: a prepayment speed benchmark used for expressing estimated prepayment rates for CMOs. The PSA benchmark assumes slow, but rising, prepayments during the first thirty months, then level prepayments in subsequent months. Thirty months after issuance, a speed of 100% PSA is equal to a 6% CPR. The name derives from the Public Securities Association (now The Bond Market Association), which was an association of dealers in government securities that served as the trade association for brokers and dealers in exempt securities.

Purchased Interest Receivable: interest due to the previous owner of an investment that is paid to the new owner. This accrued interest is part of the transaction's cost, but is not reflected in the investment's quoted price. The receivable is eliminated when the first coupon payment is received.

Put: 1) an option contract granting the buyer the right, but not the obligation, to sell (put) a specified quantity of a security at a specified price (the exercise or strike price) and time (the exercise style). Such an option is bought with the expectation of a price decline below the contract price. If the price decline occurs, the purchaser will exercise the option. If the decline does not occur, the purchaser will let the option expire and will lose the purchase price of the option, that is, option premium. 2) an embedded put in a security grants the holder the right to retire or "put back to the issuer" all or part of the security at a specific price (the put price) and at a specific time prior to its contractual maturity date. The ability to put the security is an "option" that belongs to the holder of the bond. See "Option"; compare with "Call".

Pyramiding: successive borrowing on securities to finance the purchase of additional securities.

Quality: a reference to the credit quality of a security. A security is said to be of high quality if the return on principal and the payment of interest are well secured or guaranteed.

Quotation: the bid to buy and the offer to sell a security in a given market at a given time. Often shortened to "quote." See also "Bid" and "Asked".

Range/Accrual Note: a note with a coupon determined by whether the underlying price or rate falls within a specified range, e.g., for a typical LIBOR-based range note, no interest is paid if the LIBOR rate is outside of the specified range.

Rate of Interest: the coupon rate of a security; the annual interest rate of a pool. Usually not equal to the yield. See “Bond Equivalent Yield”.

Real Estate Syndicate: a group of investors who pool funds for investment in real property.

Refunding: the process of issuance of a new security to replace a security that was redeemed before maturity. Usually used in reference to a municipal security that was called.

Registered: 1) a security that is issued in the name of the owner or the owner's nominee. 2) opposite of exempt. A registered security may not be issued without the filing of a registration statement with the SEC.

Regular-way Settlement: 1) delivery of a security by a seller to a buyer within the number of days (between the trade date and the delivery date) that the securities industry has established for a particular type of security for normal settlement, e.g., regular-way settlement is three business days after the trade date for agency securities and once a month on the earliest scheduled date for mortgage-backed securities 2) delivery of a security for spot delivery, as opposed to forward delivery, e.g., a US government security may settle for spot delivery on the same (cash), the next (regular), or the second (skip) day after the trade date.

Regulation T: the name for the Federal Reserve Board s regulation governing the amount of credit that brokers and dealers may extend to customers who buy securities.

Regulation U: the name for the Federal Reserve Board s regulation governing the amount of credit that banks may extend to customers who borrow money to buy securities on margin.

REMIC (Real Estate Mortgage Investment Conduit): a CMO issued after January 1, 1987, through a financing vehicle created by the Tax Reform Act of 1986. A pass-through entity that can hold mortgages secured by any type of real property and issue multiple classes of ownership interests to investors in the form of pass-through certificates, bonds or other legal forms. See “CMO”.

Remote: 1) isolated, as in bankruptcy remote. 2) non-recurring. Per FASB, “isolated, nonrecurring, and unusual” encompasses the “extremely remote ‘disaster scenarios’ (such as a run on the credit union).” This type of event would not be anticipated by a credit union in deciding whether it has the positive intent and ability to hold a debt security to maturity. Other events, no matter how infrequent or remote, that are related to on-going business activities, such as the construction of a building or the payment of claims by an insurance company, are not considered “isolated, nonrecurring, and unusual” under SFAS 115.

Repurchase Agreement (Repo): a security sold subject to an agreement to repurchase at a specified price on an agreed forward date. From the broker’s standpoint, this transaction occurs when a security is sold to a counterparty (e.g., credit union) with the obligation that the broker will repurchase the security at a later date. (Industry terminology uses the broker’s standpoint.)

Residual: the difference between the cash flows originating from the collateral of a mortgage pool and the funds needed to fund the securities supported by the collateral. Among the CMOs issued by a REMIC, the residual has special tax consequences.

Revenue Bond: See “Municipal Security”.

Reverse Repurchase Agreement (Reverse Repo): a security purchased subject to an agreement to resale at a specified price on an agreed forward date. From the broker’s standpoint, this transaction occurs when a security is purchased from a counterparty (e.g., credit union) with the obligation that the counterparty will repurchase the security at a later date. (Industry terminology uses the broker’s standpoint.)

Rich: Wall Street vernacular for a high value of one security relative to another in terms of its historical price relationship. If a security is said to be rich, it is believed to be overpriced relative to another security. See also “Cheap”.

Roll Over: using funds received from a maturing security to reinvest in a similar new security.

Round-Lot: the usual minimum unit of trading (normally $1,000,000 or more in Governments.)

Safekeeping: a term that refers to the storage and protection of securities provided as a service by a bank or institution acting as agent for the customer. Since ownership interests in most securities now are held as securities entitlements in book-entry form, the broader term is custodian.

Safety: an attribute of an investment. Safety is often associated with securities that have a short maturity and a low credit risk arising from insurance or government guarantee.

Seasoning: the aging of a mortgage. The amount of time that has elapsed since origination.

Secondary Market: the resale market for securities. See also “Primary Market”.

Section 107(8) Institution: an institution in which a credit union may make a deposit as authorized under Section 107(8) of the Federal Credit Union Act (12 U S C 1757(8)), e.g., an institution that is insured by the FDIC or a state bank, trust company, or mutual savings bank operating in accordance with the laws of a state in which the credit union maintains a facility.

Securities and Exchange Commission (SEC): an agency established by Congress to regulate the corporate securities market. Brokers and dealers in securities are required to register with the SEC.

Securities Industry Association (SIA): a trade association of securities dealers.

Securities Investor Protection Corporation (SIPC): a federally chartered corporation that provides insurance for customer accounts carried by US broker-dealers. The insurance protects against safekeeping losses from failure of the broker-dealer up to $500,000.

Securities Lending: lending a security to a counterparty, directly or through an agent, and receiving as collateral an amount of money or securities in return. The value of the collateral usually is greater than the value of the loaned security. A fee is earned by the lender. Similar to “Reverse Repurchase Agreement”.

Security: a common or preferred stock, a bond, a US Government or agency issue, or a state or municipal obligation. See also “Negotiable Security”.

Self-Regulatory Organization (SRO): any organization which develops regulations for its members and enforces the regulations. Typically, enforcement is obtained by expulsion of members who do not follow the regulations.

Seller-Servicer: an approved corporation that sells mortgages to, and services mortgages for, FNMA, GNMA, and/or FHLMC.

Seller's Option: the right of a seller to select, within the limits prescribed by a contract, the quality of the commodity delivered and the time and the place of delivery.

Selling Hedge: selling futures contracts to protect against possible decreased prices of commodities. Usually called short hedge. See “Hedge”.

Sell Out: action taken by a broker or a dealer to liquidate an account or a transaction for failure to maintain proper margin or to make timely payment.

Serial Bonds: a multiple bond issue in which the maturities are staggered over a number of years.

Servicing: the duties of the mortgage banker as a loan correspondent, per specifications in the servicing agreement for which a fee is received. The collection for an investor of payments, interest, principal, and trust items (e.g., hazard insurance and taxes), on a note by the borrower in accordance with the terms of the note. Servicing also consists of operational procedures covering accounting, bookkeeping, insurance, tax records, loan payment follow-up, delinquent loan follow-up, and loan analysis.

Servicing Agreement: a written agreement between an investor and a mortgage loan correspondent stipulating the rights and obligations of each party.

Settlement: an act that discharges obligations in respect of funds or securities transfers between two or more parties, e.g., settlement of a security transaction typically is by delivery of securities in proper form to the buyer and delivery of funds in proper form to the seller on the settlement date.

Settlement Date: the date agreed upon by parties to a security transaction for the payment of funds and the transfer of the security. Trades that are not settled on the settlement date are said to fail.

Settlement Price: the price at which a security or a commodity is to be settled. Used primarily in connection with clearing house operations. In commodity trading, the settlement price is based on the closing price or the range of closing prices.

Short Covering: the purchase of securities so that securities previously sold to make delivery on a short sale may be returned. To close a short position.

Short Hedge: see “Selling Hedge”.

Short Option: an option that has been sold.

Short Sale: the sale of a security not owned by the seller. The seller anticipates being able to purchase the security at a later time at a lower price. To make delivery on the short sale, the seller will obtain the security through borrowing (securities lending) or a reverse repurchase agreement.

Short the Basis: the purchase of futures as a hedge against a commitment to sell in the cash market.

Short (vs. Long) Bond: Wall Street refers to the short bond as a US Treasury security with a maturity of two years. See “Long Bond”.

Short-Term Investment Fund (STIF): a collective investment fund maintained by a national bank under 12 CFR Part 9, that is restricted to a dollar-weighted average portfolio maturity of 90 days or less similar to a Money Market Mutual Fund.

Small Business Administration Secondary Participation: a security that represents the guaranteed portion of a SBA loan that is sold by a lending institution to a secondary participant. Also called a “Guaranteed Loan Participation Certificate (GLPC)”.

Small Business Related Security: a security as defined in §3(a)(53) of the Securities and Exchange Act of 1934, i.e., a security, rated in one of the four highest rating categories by a nationally recognized statistical rating organization, that represents ownership of one or more promissory notes or leases of personal property which evidence the obligation of a small business concern. It does not mean a security issued or guaranteed by the Small Business Administration.

Slow-Pay Bonds: bonds in a low priority class compared with bonds in other classes with respect to the order of redemption, which may result in slow redemption when compared to other classes.

Speculate: to buy or sell securities, commodities, futures, or forward contracts without a natural hedge or a bona fide hedge, e.g., a natural hedge would be to buy a security funded by a deposit liability of similar duration. To trade (e.g., GNMAs) with the hope of quick profit by market movement as opposed to investment income. See “Speculator”.

Speculator: one who trades with the objective of achieving profit through the successful anticipation of price movements. In commodity futures, a speculator is any person with a position that is not a bona fide hedge as defined by the Commodity Futures Trading Commission.

Spot: refers to the characteristic of being available for immediate or nearly immediate delivery. Cash market transactions usually are grouped into two kinds - spot and forward contracts. An outgrowth of the phrase "on the spot."

Spot Commodity: see “Actuals”.

Spot Month: in futures trading, the nearby contract month, in which case delivery usually is possible at any time. However, such trading is in a futures contract.

Spot Price: the price at which a financial instrument or physical commodity is selling at a given time and place. Same as cash price.

Spread: the difference between yields on securities of different quality or different maturity. The difference between bid and ask price is also called the spread.

Spreading: the purchase of one futures contract and the sale of another, in the expectation that the price relationships between the two will change so that a subsequent offsetting sale and purchase will yield a net profit. Examples include: (a) the purchase of one delivery month and the sale of another in the same commodity on the same exchange, (b) the purchase and the sale of the same delivery month in the same commodity on different exchanges, (c) the purchase of one commodity and the sale of another (wheat vs. corn or GNMAs vs. long-term US Treasury Bonds), and (d) the purchase of one commodity and the sale of the products of that commodity (soybean vs. soybean oil and soybean meal). When the terms of the contract and all other relevant factors indicate that the price relationships between the contracts should be constant, but price discrepancies develop due to temporary supply-demand imbalances, spreading operations to take advantage of such discrepancies are sometimes erroneously called arbitrage. Spreading generally involves the making of judgments about price relationships which are subject to gradual change due to economic factors which vary over a period of time and is, therefore, a form of speculation.

Standby Commitment: a commitment to either buy or sell a security, on or before a future date, at a predetermined price. The seller of the commitment is required to either accept delivery of a security (in the case of a commitment to buy) or make delivery of a security (in the case of a commitment to sell), in either case, at the option of the buyer of the commitment. See “Option”.

Standby Fee: the fee charged by an investor for a standby commitment. The fee is earned upon issuance and acceptance of the commitment.

Stop-Loss: a method of limiting the amount of loss caused by a decline in the market value of an investment by establishing a "low" point at which an investment will be sold.

Street Name: a registered security which has been endorsed in blank or endorsed in favor of a recognized dealer is said to be in street name. A security may remain in the broker’s name as long as the credit union is

the beneficial owner of the security.

Strike Price: the price at which a security underlying a call (or put) option can be purchased (or sold) upon exercise during the period specified in the contract. Also called "Exercise Price".

Strips or Stripped Treasuries or STRIPS: see "Zero Coupon Treasury Bonds".

Stripped Mortgage-Backed Security: a mortgage-backed security that has been separated into principal and interest components. Stripped mortgage-backed securities are not permissible investments for natural person federal credit unions.

Structured Note: a security with a coupon, average life, or redemption value that is linked to a) changes in an underlying index; b)changes in the prepayment speed of a mortgage-backed security used as a reference for the structured note; or 3) other factors. A government sponsored enterprise may issue structured notes to reduce the agency's cost of funds. The risk of embedded options make some structured notes unsuitable investments for federal credit unions.

Stuffed Pig: a transaction initiated by a dealer for a client without authorization from the client. See also "Wooden Ticket".

Subordinated Debenture: an unsecured debt obligation that is junior in payment priority to other senior bonds. In the event of bankruptcy, the claims of the unsecured debt holders are paid after those of senior unsecured debt holders.

Swap: 1) a contract between two parties to exchange cash flows in the future based on an agreed formula. A swap is a bundle of forward contracts. Swaps are available in and between all active financial instruments. a) The "plain vanilla" interest rate swap agreement is an agreement to exchange fixed interest payments for floating-rate payments based on a notional principal amount. The notional principal amount is not exchanged in an interest rate swap. b) A generic currency swap is an agreement to exchange one currency for another, at the beginning and at the end of the swap, and to make fixed interest rate payments based on the currency obtained during the life of the swap. c) A generic equity swap is an agreement to exchange the capital gains (and perhaps dividends) based on an equity index in return for payments based on a fixed or floating rate of interest. 2) the practice of exchanging one bond for another to improve yield, change credit exposure, reflect an interest rate view, or register a tax loss. More generally, the exchange of one asset or liability for a similar asset or liability for the purpose of lengthening or shortening maturities, or raising or lowering coupon rates, to maximize revenue or minimize financing costs. A bond swap is very different from a notional principal swap, but the term "swap" has been in use longer in the context of bond swaps. The different uses occasionally confuse new users of notional principal swaps.

Sweep Account: an account into which funds are transferred on a short-term basis. Cash or checking accounts may be swept into an overnight federal funds account through a sweep account arrangement.

Switch: liquidation of a position in one delivery month of a commodity and simultaneous initiation of a similar position in another delivery month of the same commodity. When used by hedgers, this tactic is referred to as rolling forward the hedge.

Systemic Risk: the risk that the failure of one participant in a transfer system, or in financial markets generally, to meet its required obligations will cause other participants or financial institutions to be unable to meet their obligations (including settlement obligations in a transfer system) when due. Such failure may cause significant liquidity or credit problems and, as a result, might threaten the stability of financial markets.

Systematic Risk: the risk associated with the movement of a market or market segment as opposed to distinct elements of risk associated with a specific security. Systematic risk cannot be diversified away; it can only be hedged.

TAC (Targeted Amortization Class): a CMO tranche which is protected, to some degree, from prepayment risk, but not extension risk. See “PAC”, “CMO”.

Take Out Bid: a GNMA dealer agrees to purchase GNMA securities at a specific price from a mortgage banker, subject to a successful bid for mortgages sold at auction. This take-out or backup bid allows mortgage bankers to bid on the purchase of mortgages, obtained from GNMA, to their servicing portfolios. This two-party agreement helps GNMA to implement its management and its liquidation functions. In net effect, the mortgage banker is purchasing the mortgage collateral and is financially backed by the GNMA dealer.

Taken (Lifted): a dealer is "taken" (lifted) when the offering side of a market which he has made to a customer is accepted.

Taking a Position: purchasing a security for inventory.

Term: 1) the period of time between the commencement date and the termination date of a note, mortgage, legal document, or other contract. 2) a provision in a contract.

Theta: a measure of the rate of change in the value of an option (or portfolio) as a result of the passage of time. The value of an option usually will decline with the passage of time with all else remaining constant. Also called time decay.

Tick: the typical minimum price increment in cash market quotations, e.g., one thirty-second of one percent, .03125% or .0003125, in US Treasury securities.

Time Value: the part of the option premium that reflects the remaining life of the option. The total option value is the sum of its intrinsic value and its time value. The more time that remains before the expiration date, generally the higher the premium, because more time is available for the value of the underlying security to move up or down.

To Be Announced (TBA): a delayed-delivery contract. A contract for the purchase or sale of a mortgage-backed security to be delivered at an agreed upon future date, but that does not specify an identified pool number and number of pools. Trading in these securities is often done on a yield basis.

Total Return: the sum of interest and principal payments, the income earned on the reinvestment of these cash flows, and the change in fair value over a specific holding period (horizon) for a specific security.

Trade: either a purchase or a sale of a security.

Trade Date: the date on which parties enter into an agreement, orally or in writing, for the purchase or sale of a security.

Trading: the act of entering into purchases or sales of a security.

Trading Income: income derived from the trading of a portfolio of securities.

Trading Profits or Losses: profits or losses resulting from the trading of a portfolio of securities.

Transfer: when a registered instrument is acquired, it is sent to the transfer agent for transfer. The transfer agent records that this certificate is no longer owned by the previous holder but is now owned in the name of the individual who has acquired it.

Transfer Agent: an entity appointed to maintain records of securities owners, to cancel and issue certificates and to address issues arising from lost, destroyed or stolen certificates.

Treasury/U.S. Government Obligations: negotiable debt obligations of the US Government secured by its full faith and credit.

Treasury Bill (T-Bill): a direct obligation of the US Government issued at regular auctions on a discount basis from face value for original maturity periods of 13 weeks to 52 weeks.

Treasury Bonds: a direct obligation of the US Government issued at regular auctions. Currently issued in original maturity of 30 years. Treasury bonds are coupon instruments with semi-annual interest payments.

Treasury Notes: Treasury notes have the same characteristics as Treasury bonds except that the original maturities range from one to ten years.

Twelve-Year Life: historically, an assumption that the cash flow associated with a mortgage will consist of level payments until the twelfth year, when the remaining principal balance is paid in full.

Uncovered Call Writer: a call writer who does not own the underlying financial instrument on which the option is written. Also called a naked call writer.

Underlying: the security, cash commodity, forward, futures, swap, or other contract or instrument that is the subject of a derivatives contract or instrument.

Underwriting: 1) any person who has purchased from an issuer with a view to distribute any security. Securities dealers use this term to designate the issue of origination of new securities. 2) the process used by a Mortgage Banker to analyze risk and the matching of risk to an appropriate rate and term.

Uniform Commercial Code (UCC): a comprehensive model statute to simplify and clarify the law governing commercial transactions, designed to make uniform the laws of the states. It has been adopted, with modification, by most states.

Unit Investment Trust: an investment company similar to a mutual fund, but which issues only redeemable securities (units), each of which represents an undivided interest in a portfolio of securities.

Up-Front Fee: see “Fee”.

Variation Margin: in futures trading, a payment made on a daily or intraday basis by a clearing member to the clearing organization based on adverse price movement in positions carried by the clearing member. Variation margin is a cash payment, as opposed to maintenance margin, which is a value (in cash or eligible securities) which must be maintained on deposit as a performance bond. Individuals may be subject to a margin call to replenish the performance bond to the initial margin level in the event the value drops below the maintenance margin level.

Vega: a measure of the change in an option’s price for a given change in the volatility of the underlying security.

Volatility: a measure of a security’s actual or expected price movement over a specific time period. Usually this is the standard deviation of proportional changes in the asset’s price.

Warehousing: the borrowing of funds by a mortgage banker on a short-term basis at a commercial bank, using permanent mortgage loans as collateral. This form of interim financing is used until the mortgages are sold to a permanent investor. It is a form of "line of credit" financing.

Weighted-Average Coupon (WAC): the arithmetic mean (dollar-weighted) of the coupon rate of the underlying mortgages that collateralize a security as of its issue date. This is the same calculation used for WAM except using the mortgage coupon.

Weighted Average Life: the arithmetic mean (dollar-weighted) of the time to principal repayment of a security. WALs for CMOs and mortgage pass-through securities are calculated under a prepayment assumption. The WAL is a commonly used maturity measure in the mortgage market. Since the weighted-average lives of Treasuries are equal to their maturities, the par yield curve for Treasuries provides a natural benchmark for pricing mortgage-backed securities of various projected average lives.

Weighted-Average Maturity (WAM): the arithmetic mean (dollar-weighted) of the remaining term of the underlying mortgages that collateralize a security as of its issue date. This is the sum of the principal balance of each mortgage in the pool times its months to maturity divided by the total principal balance of the mortgages in the pool. Subsequent to issuance, estimates are made of the expected average remaining term assuming no prepayments.

When Issued (WI): short for when, as, and if issued. Transactions prior to issuance of a security are on a WI basis, because the transaction is conditional on issuance, although the security has been authorized. The when issued trading period in US Treasury securities is normally three to ten days. However, interest does not accrue during the when issued period, and payment is not required until the settlement date. When issued trading in Treasury securities occurs on a yield basis prior to the auction (sometimes denoted w.w.i.) and on a price basis following the auction (denoted w.i.).

Wooden Tickets: a transaction initiated by a dealer for a client without authorization. See ‘Stuffed Pig’.

Writer: the grantor of an option contract. Also called the “Maker”.

Yield: the yield on a bond is the annual percentage of return that it pays, typically based on a semi-annual coupon convention. By way of comparison, the annual percentage yield (APY) is based on an annual compounding convention. In real estate, the term refers to the current yield, that is, the effective annual amount of income which is being accrued on an investment, expressed as a percentage of the price originally paid. See also “Net Yield”.

Yield Curve: a graph illustrating the level of interest rates as a function of time to maturity. The most common yield curve plots Treasury securities from the 3-month Treasury bill to the 30-year Treasury bond. Yield Curves may be described as a) a normal yield curve (short-term rates are lower than long-term rates); b) an inverted yield curve (short-term rates are higher than long-term rates); and 3) a flat yield curve (little difference between short-term and long-term rates).

Yield on Average Life: historically, GNMA yields were quoted from tables which calculated the yield on a single loan prepaid at the end of 12 years. It was assumed that such a yield calculation was fairly representative of a pool of loans wherein the average loan life was thought to be 12 years. No longer a basis of trading.

Yield Maintenance Contract: concurrent commitment to purchase a security via a cash forward agreement and to sell the same security on the same settlement date via a standby commitment. Also refers to a forward contract written with terms which maintain the yield at a fixed rate until the delivery date.

Yield to Call: the bond-equivalent yield that an investor would receive on his investment if he were to buy a particular security at the quoted asked price and the bond was called on the call date.

Yield to Maturity: the bond-equivalent yield that an investor would receive on his investment if he were to buy a particular security at the quoted asked price and hold to maturity.

Zero Coupon Bond: a security that makes no periodic interest payments and is sold at a discount from face value. Zero coupon bonds that mature more than ten years from settlement date are not permissible under Part 703.

Zero Coupon CMOs: CMO bonds that are either true zero coupon instruments or accrual bonds. An accrual bond (or compound interest bond) is a coupon bond that, during some part of its life, accumulates accrued interest as increased principal rather than as cash paid. This accumulation is called accretion.

Zero Coupon Treasury Bonds (STRIPS, Stripped Treasuries): a Treasury security with a single cash flow at maturity. These securities result from the separation of the principal (corpus) and interest (coupon) portions of US Government obligations. Most zero coupon Treasury securities are in the Federal Reserve book-entry system under the STRIPS program, Separate Trading of Registered Interest and Principal of Securities. The holder of a corpus strip has the right to receive the principal balance on the maturity date. The holder of a coupon strip has the right to receive the periodic interest payment on the coupon payment date. These instruments are sold at a discount from the value to be received on the due date. Prior to the STRIPS program, Wall Street firms issued ownership interests in trusts that stripped Treasury securities. As a transitional measure, the Federal Reserve registered stripped physical coupons as CUBES, Coupons Under Book-Entry System.

REVIEWING THE AUDIT OF DERIVATIVE INSTRUMENTS, HEDGING ACTIVITIES, AND INVESTMENTS IN SECURITIES – APPENDIX 12B

Definitions

Derivatives are broadly defined as an instrument or financial contract with cash flows that receives its value from the performance of underlying assets, interest or currency exchange rates, or indices. The most common derivatives are swaps, futures, forwards, and options.

Hedging is a position that reduces some type of risk, usually at the expense of expected return. Typically, hedging involves entering into an opposite position to a position held in the cash market to minimize the risk from adverse price changes.

Overview

Before beginning an examination, the examiner may benefit from reviewing the audit documentation regarding derivatives, hedging, and investments to assist in developing the scope and risk assessment. The examiner may explore regional procedures to obtain assistance for reviewing this complex area from a Capital Market Subject Matter Examiner or the Regional Capital Market Specialist.

Portions of the Statement on Auditing Standards (SAS) No. 92 of generally accepted auditing standards (GAAS) provide guidance to the licensed professional auditors in planning and performing audits of derivative instruments, hedging activities, and investments in securities.

When an auditor plans the derivative audit, the complexity and extent of the review determines the relevant scope and level of associated risk. SAS 92 identifies six areas that the auditor must consider when planning and auditing derivatives and securities. These areas are discussed below.

1. The need for special skill or knowledge to plan and perform the auditing procedures. The auditor may need special knowledge to plan and perform auditing procedures for derivatives and securities. Specialized knowledge may include:

    - Understanding information systems for derivatives and securities including third party provider systems and related system controls;

- Understanding generally accepted accounting principles (GAAP) relative to derivatives (i.e., the accounting treatment, estimating fair value);
- Understanding fair value determination (i.e., valuation concepts and models);
- Assessing inherent and control risk, (i.e., understanding general risk management concepts and typical asset and liability management strategies) appropriately;
- Deciding whether to seek and use the assistance of others with the necessary knowledge, skills, and abilities to perform the audit; and
- Identifying controls placed in operation by a third-party vendor.

2. Audit risk and materiality. The auditor must design procedures that provide reasonable assurance of detecting misstatements that, when aggregated with other misstatements, could cause a material effect on the financial statements.

   - Inherent risk is the susceptibility of the instrument to material misstatement. Areas that may affect the auditor's assessment of derivatives and securities with respect to inherent risk include:

     - Complexity of the derivative's features (may increase the complexity of measurement and disclosure required by GAAP);
     - Management's objective (i.e., hedging, not hedging, and accounting treatment);
     - Whether cash was exchanged in the transactions (those that do not involve cash can contain more risk);
     - The credit union's experience with derivatives and securities;
     - Whether a derivative is freestanding or an embedded feature of an agreement (management may less likely identify embedded derivatives);
     - Whether external factors affect the assertion (e.g., credit, market, basis, and legal risk);
     - The evolving nature of derivatives and the applicable GAAP; and
     - Significant reliance on outside parties.

   - Control risk relates to obtaining an understanding of internal controls that will enable the auditor to plan the audit. This may include controls over transactions from initiation to inclusion in the financial statements. It may also include controls in operation by third parties, in which case, the credit union's auditor may require audit reports, contracts, user manuals, and

other resources. This understanding of controls could also include an assessment of a regular review by senior management (or an independent group) of the identified controls to determine the effectiveness of their implementation.

Areas that can affect the auditor's assessment of derivatives and securities with respect to control risk may include:

- Monitoring by control staff that is independent of derivative activities;
- Obtaining management's approval before derivative personnel exceed limits;
- Addressing by senior management any limit excesses and divergences from approved strategies;
- Transmitting accurate derivatives positions within risk measurement systems;
- Performing reconciliations to ensure data integrity;
- Defining constraints on derivative activities by traders, risk managers, and management;
- Performing regular reviews of identified controls and financial results to determine whether staff adheres to established controls;
- Reviewing limits within the context of strategy, risk tolerance, and market conditions; and
- Reviewing the controls of service organizations, where applicable.

After obtaining an understanding of internal control over derivatives and securities transactions, the auditor should assess control risk and test, where necessary, considering the credit union's size, organizational structure, frequency and complexity of derivatives, and controls over transactions.

3. Designing substantive procedures based on risk assessments. In addition to using professional judgment, the auditor should use the assessed levels of inherent risk and control risk to determine the nature, timing, and extent of substantive procedures needed to detect material misstatements. The auditor should also consider whether the results of other audit procedures conflict with management's assertions. The use of a third-party service organization (including data processors, investment advisers, holders of securities, record keepers, etc.) may affect the nature, timing, and extent of the substantive procedures for assertions and whether an auditor needs to visit and test controls of the provider. Evaluation of audit risk should include a review of

controls by data processors and third parties that initiate transactions and/or hold and service the derivatives.

4. Financial statement assertions. These assertions concern the existence, occurrence, completeness, valuation, presentation and disclosure, and rights and obligations of derivatives and securities.

   - Existence or occurrence assertions address whether the instruments existed at the date of the statement of financial position while occurrence assertions address whether reported transactions actually occurred. Examples of documents the examiner may see include confirmations from issuers of securities, holders of securities, brokers of settled transactions, or copies of significant contracts. One characteristic of derivatives is that they may involve only a commitment to perform under a contract, and not an initial exchange of tangible consideration. Therefore, tests should not focus exclusively on evidence relating to cash receipts and disbursements.

   - Completeness assertions determine whether these instruments were included in the financial statements. The auditor may obtain information from external parties, inspect documents for embedded derivatives, read meeting minutes, compare previous and current account detail, etc., while maintaining that not all transactions require an initial cash outlay.

   - Rights and obligations assertions relate to whether the credit union has the rights and obligations associated with the derivatives and securities. The external auditor may confirm terms with the counterparty, inspect underlying agreements, and other relevant data.

   - Valuation addresses whether the derivatives and securities were reported in accordance with GAAP, which may require that the basis for valuing a derivative or security be one of the following:

     - Cost. The auditor should evaluate the need to recognize an impairment loss[3] below cost.

[3] Impairment loss factors include fair value significantly below cost and the decline is attributable to adverse security or market conditions and has existed for an extended period of time, and management does not possess the intent and ability to hold the security for long enough to recover fair value. Other factors may include the downgrading of the security by a rating agency, deteriorated financial condition of the issuer, losses from securities or reduced or eliminated dividends.

- The investee's financial results (including, but not limited to, the equity method). The auditor should obtain and review the audited financial statements, the accompanying report of the investee, and additional materials as needed. The auditor may expand the review to include the investee's committee minutes, budgets, cash flow information, interim financial statements, etc., if a time lag in reporting exists between the investee and credit union, or differences in accounting principles, changes in ownership, or a significant purchase between reporting dates, etc., have occurred.

- Fair value. If valuation is based on fair value, audit evidence may exist supporting management's contention about fair value, whether the valuation method is consistent with accounting principles, and how the valuation determination method was derived (national exchanges, over the counter, broker-dealer, valuation model). If the determination of fair value requires the use of estimates, the auditor should consider the guidance in section 342, *Auditing Accounting Estimates*. Estimates from broker-dealers or other third parties based on valuation models may suffice when quoted prices are not available. The auditor should understand the method used in developing the estimate and be aware that the relationship with the third party may impact or impair objectivity (e.g., involvement of the pricing source in selling the product).

- Presentation and Disclosure assertions address whether derivatives and securities conform with GAAP (i.e., are the securities held to maturity or available for sale).

5. Additional considerations about hedging activities. GAAP requires management to designate the derivative as a hedge at its inception. Management should document and the auditor should review the hedging relationship, risk management objective and strategy for undertaking a hedge, and the method of assessing the hedge's effectiveness. Reviewing the audit documentation will enable the examiner to determine that the auditor collected sufficient data to conclude that the credit union complied with GAAP. Audit documentation must also support management's expectation that the hedging relationship will be highly effective and they are performing a periodic assessment as required by GAAP.

6. Assertions about securities based on management's intent and ability. The auditor must consider management's intent and ability in classifying securities

as held to maturity, available for sale, or trading. The documentation should show that the auditor:

- Obtained an understanding of the process management used to classify securities;
- Determined whether management has the ability to exercise influence over the financials of the investee when using the equity method;
- Evaluated and disclosed reasons for deviating from the accounting methodology if the presumption was that management should be using the equity method of accounting;
- Considered whether management's activities reconciles to their intent (review historical security documentation);
- Considered whether management's activities, contractual agreements, or the credit union's financial condition provides evidence of its ability to hold to maturity (i.e., the credit union's financial position may provide evidence of its ability).

References

- Statement of Auditing Standard (SAS) No. 92, Auditing Derivative Instruments, Hedging Activities, and Investments in Securities [AU Section 332]