



FEDERAL RESERVE BANK  
OF DALLAS

ROBERT D. McTEER, JR.  
PRESIDENT  
AND CHIEF EXECUTIVE OFFICER

June 4, 1998

DALLAS, TEXAS  
75265-5906

Notice 98-42

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

**SUBJECT**

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

**DETAILS**

The Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, and the National Credit Union Administration (collectively referred to as the agencies) have approved the *Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities* (1998 Statement). The statement provides guidance on sound practices for managing the risks of investment activities.

In issuing the 1998 Statement, the agencies are rescinding the *Supervisory Policy Statement on Securities Activities* published February 3, 1992. The 1998 Statement became effective May 26, 1998.

**ATTACHMENT**

A copy of the agencies' notice as it appears on pages 20191-97, Vol. 63, No. 78 of the *Federal Register* dated April 23, 1998, is attached.

**MORE INFORMATION**

For more information, please contact Gayle Teague at (214) 922-6151. For additional copies of this Bank's notice, contact the Public Affairs Department at (214) 922-5254.

Sincerely yours,

*Robert D. McTeer, Jr.*

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For additional copies, bankers and others are encouraged to use one of the following toll-free numbers in contacting the Federal Reserve Bank of Dallas: Dallas Office (800) 333-4460; El Paso Branch *Intrastate* (800) 592-1631, *Interstate* (800) 351-1012; Houston Branch *Intrastate* (800) 392-4162, *Interstate* (800) 221-0363; San Antonio Branch *Intrastate* (800) 292-5810.

Supervision (OTS), and the National Credit Union Administration (NCUA) (collectively referred to as the agencies), under the auspices of the Federal Financial Institutions Examination Council (FFIEC), have approved the Supervisory Policy Statement on Investment Securities and End-User Derivatives Activities (1998 Statement) which provides guidance on sound practices for managing the risks of investment activities. By this issuance of the 1998 Statement, the agencies have rescinded the Supervisory Policy Statement on Securities Activities published on February 3, 1992 (1992 Statement). Many elements of that prior statement are retained in the 1998 Statement, while other elements have been revised or eliminated. In adopting the 1998 Statement, the agencies are removing the specific constraints in the 1992 Statement concerning investments by insured depository institutions in "high risk" mortgage derivative products. The agencies believe that it is a sound practice for institutions to understand the risks related to all their investment holdings. Accordingly, the 1998 Statement substitutes broader guidance than the specific pass/fail requirements contained in the 1992 Statement. Other than for the supervisory guidance contained in the 1992 Statement, the 1998 Statement does not supersede any other requirements of the respective agencies' statutory rules, regulations, policies, or supervisory guidance. Because the 1998 Statement does not retain the elements of the 1992 Statement addressing the reporting of securities activities (Section II of the 1992 Statement), the agencies intend to separately issue supervisory guidance on the reporting of investment securities and end-user derivatives activities. Each agency may issue additional guidance to assist institutions in the implementation of this statement.

**EFFECTIVE DATE:** May 26, 1998.

**FOR FURTHER INFORMATION CONTACT:**

FRB: James Embersit, Manager, Capital Markets, (202) 452-5249, Charles Holm, Manager, Accounting Policy and Disclosure (202) 452-3502, Division of Banking Supervision and Regulation, Board of Governors of the Federal Reserve System. For the hearing impaired only, Telecommunication Device for the Deaf (TDD), Dorothea Thompson, (202) 452-3544, Board of Governors of the Federal Reserve System, 20th and C Streets, NW, Washington, DC 20551.

FDIC: William A. Stark, Assistant Director, (202) 898-6972, Miguel D. Browne, Manager, (202) 898-6789, John J. Feid, Chief, Risk Management, (202)

898-8649, Lisa D. Arquette, Senior Capital Markets Specialist, (202) 898-8633, Division of Supervision; Michael B. Phillips, Counsel, (202) 898-3581, Legal Division, Federal Deposit Insurance Corporation, 550 17th Street, NW, Washington, DC 20429.

OCC: Kurt Wilhelm, National Bank Examiner, (202) 874-5670, J. Ray Diggs, National Bank Examiner, (202) 874-5670, Treasury and Market Risk; Mark J. Tenhundfeld, Assistant Director, (202) 874-5090, Legislative and Regulatory Activities Division, Office of the Comptroller of the Currency, 250 E Street, SW, Washington, DC 20219.

OTS: Robert A. Kazdin, Senior Project Manager, (202) 906-5759, Anthony G. Cornyn, Director, (202) 906-5727, Risk Management; Vern McKinley, Senior Attorney, (202) 906-6241, Regulations and Legislation Division, Chief Counsel's Office, Office of Thrift Supervision, 1700 G Street, NW, Washington, DC 20552.

NCUA: Daniel Gordon, Senior Investment Officer, (703) 518-6360, Office of Investment Services; Michael McKenna, Attorney, (703) 518-6540, National Credit Union Administration, 1775 Duke Street, Alexandria, VA 22314-3428.

**SUPPLEMENTARY INFORMATION:** In 1992, the agencies implemented the FFIEC's Supervisory Policy Statement on Securities Activities (57 FR 4028, February 3, 1992). The 1992 Statement addressed: (1) selection of securities dealers, (2) portfolio policy and strategies (including unsuitable investment practices), and (3) residential mortgage derivative products (MDPs).

The final section of the 1992 Statement directed institutions to subject MDPs to supervisory tests to determine the degree of risk and the investment portfolio eligibility of these instruments. At that time, the agencies believed that many institutions had demonstrated an insufficient understanding of the risks associated with investments in MDPs. This occurred, in part, because most MDPs were issued or backed by collateral guaranteed by government sponsored enterprises. The agencies were concerned that the absence of significant credit risk on most MDPs had allowed institutions to overlook the significant interest rate risk present in certain structures of these instruments. In an effort to enhance the investment decision making process at financial institutions, and to emphasize the interest rate risk of highly price sensitive instruments, the agencies implemented supervisory tests designed

**FEDERAL FINANCIAL INSTITUTIONS EXAMINATION COUNCIL**

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

**AGENCY:** Federal Financial Institutions Examination Council.

**ACTION:** Statement of policy.

**SUMMARY:** The Board of Governors of the Federal Reserve System (FRB), the Federal Deposit Insurance Corporation (FDIC), the Office of the Comptroller of the Currency (OCC), the Office of Thrift

to identify those MDPs with price and average life risks greater than a newly issued residential mortgage pass-through security.

These supervisory tests provided a discipline that helped institutions to better understand the risks of MDPs prior to purchase. The 1992 Statement generally provided that institutions should not hold high risk MDPs in their investment portfolios.<sup>1</sup> A high risk MDP was defined as a mortgage derivative security that failed any of three supervisory tests. The three tests included: an average life test, an average life sensitivity test, and a price sensitivity test.<sup>2</sup>

These supervisory tests, commonly referred to as the "high risk tests," successfully protected institutions from significant losses in MDPs. By requiring a pre-purchase price sensitivity analysis that helped institutions to better understand the interest rate risk of MDPs, the high risk tests effectively precluded institutions from investing in many types of MDPs that resulted in large losses for other investors. However, the high risk tests may have created unintended distortions of the investment decision making process. Many institutions eliminated all MDPs from their investment choices, regardless of the risk versus return merits of such instruments. These reactions were due, in part, to concerns about regulatory burden, such as higher than normal examiner review of MDPs. By focusing only on MDPs, the test and its accompanying burden indirectly provided incentives for institutions to acquire other types of securities with complex cash flows, often with price sensitivities similar to high risk MDPs. The emergence of the structured note market is just one example. The test may have also created the impression that supervisors were more concerned with the type of instrument involved (i.e., residential mortgage products), rather than the risk characteristics of the instrument, since only MDPs were subject to the high risk test. The specification of tests on individual securities may have removed the incentive for some institutions to apply more comprehensive analytical

techniques at the portfolio and institutional level.

As a result, the agencies no longer believe that the pass/fail criteria of the high risk tests as applied to specific instruments constitutes effective supervision of investment activities. The agencies believe that an effective risk management program, through which an institution identifies, measures, monitors, and controls the risks of investment activities, provides a better framework. Hence, the agencies are eliminating the high risk tests as binding constraints on MDP purchases in the 1998 Statement.

Effective risk management addresses risks across all types of instruments on an investment portfolio basis and ideally, across the entire institution. The complexity of many financial products, both on and off the balance sheet, has increased the need for a more comprehensive approach to the risk management of investment activities.

The rescission of the high risk tests as a constraint on an institution's investment activities does not signal that MDPs with high levels of price risk are either appropriate or inappropriate investments for an institution. Whether a security, MDP or otherwise, is an appropriate investment depends upon a variety of factors, including the institution's capital level, the security's impact on the aggregate risk of the portfolio, and management's ability to measure and manage risk. The agencies continue to believe that the stress testing of MDP investments, as well as other investments, has significant value for risk management purposes. Institutions should employ valuation methodologies that take into account all of the risk elements necessary to price these investments. The 1998 Statement states that the agencies believe, as a matter of sound practice, institutions should know the value and price sensitivity of their investments prior to purchase and on an ongoing basis.

#### Summary of Comments

The 1998 Statement was published for comment in the **Federal Register** of October 3, 1997 (62 FR 51862). The FFIEC received twenty-one comment letters from a variety of insured depository institutions, trade associations, Federal Reserve Banks, and financial services organizations. Overall, the comments were supportive of the 1998 Statement. The comments generally approved of: (i) the rescission of the high risk test as a constraint on investment choices in the 1992 Statement; (ii) the establishment by institutions of programs to manage market, credit, liquidity, legal,

operational, and other risks of investment securities and end-user derivatives activities; (iii) the implementation of sound risk management programs that would include certain board and senior management oversight and a comprehensive risk management process that effectively identifies, measures, monitors, and controls risks; and (iv) the evaluation of investment decisions at the portfolio or institution level, instead of the focus of the 1992 Statement on limiting an institution's investment decisions concerning specific securities instruments.

The following discussion provides a summary of significant concerns or requests for clarifications that were presented in the aforementioned comments.

#### 1. Scope

The guidance covers a broad range of instruments including all securities in held-to-maturity and available-for-sale accounts as defined in the Statement of Financial Accounting Standards No. 115 (FAS 115), certificates of deposit held for investment purposes, and end-user derivative contracts not held in trading accounts.

Some comments focused on the 1998 Statement's coverage of "end-user derivative contracts not held in trading accounts." According to these comments, the 1998 Statement appears to cover derivative contracts not traditionally viewed as investments including: (i) Swap contracts entered into when the depository institution makes a fixed rate loan but intends to change the income stream from a fixed to floating rate, (ii) swap contracts that convert the interest rates on certificates of deposit from fixed to floating rates of interest, and (iii) swap contracts used for other asset-liability management purposes. Those commenters objected to the necessity of additional guidance for end-user derivatives contracts given current regulatory guidance issued by the agencies with respect to derivative contracts.

The guidance contained in the 1998 Statement is consistent with existing agency guidance. The agencies believe that institutions should have programs to manage the market, credit, liquidity, legal, operational, and other risks of both investment securities and end-user derivative activities. Given the similarity of the risks in those activities and the similarity of the programs needed to manage those risks, especially when end-user derivatives are used as investment vehicles, the agencies believe that covering both activities

<sup>1</sup> The only exceptions granted were for those high risk securities that either reduced interest rate risk or were placed in a trading account. Federal credit unions were not permitted these exceptions.

<sup>2</sup> Average Life: Weighted average life of no more than 10 years; Average Life Sensitivity: (a) weighted average life extends by not more than 4 years (300 basis point parallel shift in rates), (b) weighted average life shortens by no more than 6 years (300 basis point parallel shift in rates); Price Sensitivity: price does not change by more than 17 percent (increase or decrease) for a 300 basis point parallel shift in rates.



within the scope of the 1998 Statement is appropriate.

## 2. Board Oversight

Some commenters stated that the 1998 Statement places excessive obligations on the board of directors. Specifically, comments indicated that it is unnecessary for an institution's board of directors to: (i) Set limits on the amounts and types of transactions authorized for each securities firm with whom the institution deals, or (ii) review and reconfirm the institution's list of authorized dealers, investment bankers, and brokers at least annually. These commenters suggested that it may be unnecessary for the board—particularly for larger institutions—to review and specifically authorize each dealer. They indicated that it should be sufficient for senior management to ensure that the selection of securities firms is consistent with board approved policies, and that establishment of limits for each dealer is a credit decision that should be issued pursuant to credit policies.

The agencies believe that the board of directors is responsible for supervision and oversight of investment portfolio and end-user derivatives activities, including the approval and periodic review of policies that govern relationships with securities dealers. Especially with respect to the management of the credit risk of securities settlements, the agencies encourage the board of directors or a subcommittee chaired by a director to actively participate in the credit decision process. The agencies understand that institutions will have various approaches to the credit decision process, and therefore that the board of directors may delegate the authority for selecting dealers and establishing dealer limits to senior management. The text of the 1998 Statement has been amended to clarify the obligation of the board of directors.

## 3. Pre-Purchase Analysis

The majority of the commenters were in full support of eliminating the specific constraints on investing in "high risk" MDPs. Some commenters expressed opposition with respect to the 1998 Statement's guidance concerning pre-purchase analysis by institutions of their investment securities. Those commenters felt that neither pre-acquisition stress testing nor any specific stress testing methodology should be required for individual investment decisions. Some commenters involved in the use of securities for collateral purposes emphasized the benefits of pre-and post-

purchase stress testing of individual securities.

The agencies wish to stress that institutions should have policies designed to meet the business needs of the institution. These policies should specify the types of market risk analyses that should be conducted for various types of instruments, including that conducted prior to their acquisition and on an ongoing basis. In addition, policies should specify any required documentation needed to verify the analysis. Such analyses will vary with the type of investment instrument.

As stated in Section V of the 1998 Statement, not all investment instruments need to be subjected to a pre-purchase analysis. Relatively simple or standardized instruments, the risks of which are well known to the institution, would likely require no or significantly less analysis than would more volatile, complex instruments. For relatively more complex instruments, less familiar instruments, and potentially volatile instruments, institutions should fully address pre-purchase analysis in their policies. In valuing such investments, institutions should ensure that the pricing methodologies used appropriately consider all risks (for example, caps and floors in adjustable-rate instruments). Moreover, the agencies do not believe that an institution should be prohibited from making an investment based solely on whether that instrument has a high price sensitivity.

## 4. Identification, Measurement, and Reporting of Risks

Some commenters questioned whether proposed changes by the agencies concerning Schedule RC-B of the Consolidated Reports of Condition and Income ("Call Reports") conflicted with the 1998 Statement's elimination of the high risk test for mortgage derivative products. The proposed changes to the Call Reports would require the disclosure of mortgage-backed and other securities whose price volatility in response to specific interest rate changes exceeds a specified threshold level. (See 62 FR 51715, October 2, 1997.)

The banking agencies have addressed the concerns presented in these comments within the normal process for changing the Call Reports. For the 1998 Call report cycle, there will be no changes to the high risk test reporting requirement in the Call Reports.

## 5. Market Risk

One commenter suggested that the agencies enhance the 1998 Statement by discussing and endorsing the concept of

total return. The agencies agree that the concept of total return can be a useful way to analyze the risk and return tradeoffs for an investment. This is because the analysis does not focus exclusively on the stated yield to maturity. Total return analysis, which includes income and price changes over a specified investment horizon, is similar to stress test analysis since both examine a security under various interest rate scenarios. The agencies' supervisory emphasis on stress testing securities has, in fact, implicitly considered total return. Therefore, the agencies endorse the use of total return analysis as a useful supplement to price sensitivity analysis for evaluating the returns for an individual security, the investment portfolio, or the entire institution.

## 6. Measurement System

One respondent stated that the complexity and sophistication of the risk measurement system should not be a factor in determining whether pre- and post-acquisition measurement of interest rate risk should be performed at the individual investment level or on an institutional or portfolio basis. The agencies agree that this statement may be confusing and are amending the Market Risk section.

The text of the statement of policy follows.

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

#### I. Purpose

This policy statement (Statement) provides guidance to financial institutions (institutions) on sound practices for managing the risks of investment securities and end-user derivatives activities.<sup>3</sup> The FFIEC agencies—the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, and the National Credit Union Administration—believe that effective management of the risks associated with securities and derivative instruments represents an essential component of safe and sound practices. This guidance describes the practices that a prudent manager normally would follow and is not intended to be a checklist. Management should establish practices and maintain documentation appropriate to the institution's

<sup>3</sup> The 1998 Statement does not supersede any other requirements of the respective agencies' statutory rules, regulations, policies, or supervisory guidance.

individual circumstances, consistent with this Statement.

## II. Scope

This guidance applies to all securities in held-to-maturity and available-for-sale accounts as defined in the Statement of Financial Accounting Standards No. 115 (FAS 115), certificates of deposit held for investment purposes, and end-user derivative contracts not held in trading accounts. This guidance covers all securities used for investment purposes, including: money market instruments, fixed-rate and floating-rate notes and bonds, structured notes, mortgage pass-through and other asset-backed securities, and mortgage-derivative products. Similarly, this guidance covers all end-user derivative instruments used for nontrading purposes, such as swaps, futures, and options.<sup>4</sup> This Statement applies to all federally-insured commercial banks, savings banks, savings associations, and federally chartered credit unions.

As a matter of sound practice, institutions should have programs to manage the market, credit, liquidity, legal, operational and other risks of investment securities and end-user derivatives activities (investment activities). While risk management programs will differ among institutions, there are certain elements that are fundamental to all sound risk management programs. These elements include board and senior management oversight and a comprehensive risk management process that effectively identifies, measures, monitors, and controls risk. This Statement describes sound principles and practices for managing and controlling the risks associated with investment activities.

Institutions should fully understand and effectively manage the risks inherent in their investment activities. Failure to understand and adequately manage the risks in these areas constitutes an unsafe and unsound practice.

## III. Board and Senior Management Oversight

Board of director and senior management oversight is an integral part of an effective risk management program. The board of directors is responsible for approving major policies for conducting investment activities, including the establishment of risk limits. The board should ensure that management has the requisite skills to

manage the risks associated with such activities. To properly discharge its oversight responsibilities, the board should review portfolio activity and risk levels, and require management to demonstrate compliance with approved risk limits. Boards should have an adequate understanding of investment activities. Boards that do not, should obtain professional advice to enhance its understanding of investment activity oversight, so as to enable it to meet its responsibilities under this Statement.

Senior management is responsible for the daily management of an institution's investments. Management should establish and enforce policies and procedures for conducting investment activities. Senior management should have an understanding of the nature and level of various risks involved in the institution's investments and how such risks fit within the institution's overall business strategies. Management should ensure that the risk management process is commensurate with the size, scope, and complexity of the institution's holdings. Management should also ensure that the responsibilities for managing investment activities are properly segregated to maintain operational integrity. Institutions with significant investment activities should ensure that back-office, settlement, and transaction reconciliation responsibilities are conducted and managed by personnel who are independent of those initiating risk taking positions.

## IV. Risk Management Process

An effective risk management process for investment activities includes: (1) policies, procedures, and limits; (2) the identification, measurement, and reporting of risk exposures; and (3) a system of internal controls.

### *Policies, Procedures, and Limits*

Investment policies, procedures, and limits provide the structure to effectively manage investment activities. Policies should be consistent with the organization's broader business strategies, capital adequacy, technical expertise, and risk tolerance. Policies should identify relevant investment objectives, constraints, and guidelines for the acquisition and ongoing management of securities and derivative instruments. Potential investment objectives include: generating earnings, providing liquidity, hedging risk exposures, taking risk positions, modifying and managing risk profiles, managing tax liabilities, and meeting pledging requirements, if applicable. Policies should also identify the risk characteristics of permissible

investments and should delineate clear lines of responsibility and authority for investment activities.

An institution's management should understand the risks and cashflow characteristics of its investments. This is particularly important for products that have unusual, leveraged, or highly variable cashflows. An institution should not acquire a material position in an instrument until senior management and all relevant personnel understand and can manage the risks associated with the product.

An institution's investment activities should be fully integrated into any institution-wide risk limits. In so doing, some institutions rely only on the institution-wide limits, while others may apply limits at the investment portfolio, sub-portfolio, or individual instrument level.

The board and senior management should review, at least annually, the appropriateness of its investment strategies, policies, procedures, and limits.

### *Risk Identification, Measurement and Reporting*

Institutions should ensure that they identify and measure the risks associated with individual transactions prior to acquisition and periodically after purchase. This can be done at the institutional, portfolio, or individual instrument level. Prudent management of investment activities entails examination of the risk profile of a particular investment in light of its impact on the risk profile of the institution. To the extent practicable, institutions should measure exposures to each type of risk and these measurements should be aggregated and integrated with similar exposures arising from other business activities to obtain the institution's overall risk profile.

In measuring risks, institutions should conduct their own in-house pre-acquisition analyses, or to the extent possible, make use of specific third party analyses that are independent of the seller or counterparty. Irrespective of any responsibility, legal or otherwise, assumed by a dealer, counterparty, or financial advisor regarding a transaction, the acquiring institution is ultimately responsible for the appropriate personnel understanding and managing the risks of the transaction.

Reports to the board of directors and senior management should summarize the risks related to the institution's investment activities and should address compliance with the investment policy's objectives, constraints, and

<sup>4</sup> Natural person federal credit unions are not permitted to purchase non-residential mortgage asset-backed securities and may participate in derivative programs only if authorized by the NCUA.



legal requirements, including any exceptions to established policies, procedures, and limits. Reports to management should generally reflect more detail than reports to the board of the institution. Reporting should be frequent enough to provide timely and adequate information to judge the changing nature of the institution's risk profile and to evaluate compliance with stated policy objectives and constraints.

#### *Internal Controls*

An institution's internal control structure is critical to the safe and sound functioning of the organization generally and the management of investment activities in particular. A system of internal controls promotes efficient operations, reliable financial and regulatory reporting, and compliance with relevant laws, regulations, and institutional policies. An effective system of internal controls includes enforcing official lines of authority, maintaining appropriate separation of duties, and conducting independent reviews of investment activities.

For institutions with significant investment activities, internal and external audits are integral to the implementation of a risk management process to control risks in investment activities. An institution should conduct periodic independent reviews of its risk management program to ensure its integrity, accuracy, and reasonableness. Items that should be reviewed include:

- (1) Compliance with and the appropriateness of investment policies, procedures, and limits;
- (2) The appropriateness of the institution's risk measurement system given the nature, scope, and complexity of its activities;
- (3) The timeliness, integrity, and usefulness of reports to the board of directors and senior management.

The review should note exceptions to policies, procedures, and limits and suggest corrective actions. The findings of such reviews should be reported to the board and corrective actions taken on a timely basis.

The accounting systems and procedures used for public and regulatory reporting purposes are critically important to the evaluation of an organization's risk profile and the assessment of its financial condition and capital adequacy. Accordingly, an institution's policies should provide clear guidelines regarding the reporting treatment for all securities and derivatives holdings. This treatment should be consistent with the organization's business objectives, generally accepted accounting

principles (GAAP), and regulatory reporting standards.

#### *V. The Risks of Investment Activities*

The following discussion identifies particular sound practices for managing the specific risks involved in investment activities. In addition to these sound practices, institutions should follow any specific guidance or requirements from their primary supervisor related to these activities.

#### *Market Risk*

Market risk is the risk to an institution's financial condition resulting from adverse changes in the value of its holdings arising from movements in interest rates, foreign exchange rates, equity prices, or commodity prices. An institution's exposure to market risk can be measured by assessing the effect of changing rates and prices on either the earnings or economic value of an individual instrument, a portfolio, or the entire institution. For most institutions, the most significant market risk of investment activities is interest rate risk.

Investment activities may represent a significant component of an institution's overall interest rate risk profile. It is a sound practice for institutions to manage interest rate risk on an institution-wide basis. This sound practice includes monitoring the price sensitivity of the institution's investment portfolio (changes in the investment portfolio's value over different interest rate/yield curve scenarios). Consistent with agency guidance, institutions should specify institution-wide interest rate risk limits that appropriately account for these activities and the strength of the institution's capital position. These limits are generally established for economic value or earnings exposures. Institutions may find it useful to establish price sensitivity limits on their investment portfolio or on individual securities. These sub-institution limits, if established, should also be consistent with agency guidance.

It is a sound practice for an institution's management to fully understand the market risks associated with investment securities and derivative instruments prior to acquisition and on an ongoing basis. Accordingly, institutions should have appropriate policies to ensure such understanding. In particular, institutions should have policies that specify the types of market risk analyses that should be conducted for various types or classes of instruments, including that conducted prior to their acquisition (pre-purchase analysis) and

on an ongoing basis. Policies should also specify any required documentation needed to verify the analysis.

It is expected that the substance and form of such analyses will vary with the type of instrument. Not all investment instruments may need to be subjected to a pre-purchase analysis. Relatively simple or standardized instruments, the risks of which are well known to the institution, would likely require no or significantly less analysis than would more volatile, complex instruments.<sup>5</sup>

#### **§ 703.90. Sec 62 FR 32989 (June 18, 1997).**

For relatively more complex instruments, less familiar instruments, and potentially volatile instruments, institutions should fully address pre-purchase analyses in their policies. Price sensitivity analysis is an effective way to perform the pre-purchase analysis of individual instruments. For example, a pre-purchase analysis should show the impact of an immediate parallel shift in the yield curve of plus and minus 100, 200, and 300 basis points. Where appropriate, such analysis should encompass a wider range of scenarios, including non-parallel changes in the yield curve. A comprehensive analysis may also take into account other relevant factors, such as changes in interest rate volatility and changes in credit spreads.

When the incremental effect of an investment position is likely to have a significant effect on the risk profile of the institution, it is a sound practice to analyze the effect of such a position on the overall financial condition of the institution.

Accurately measuring an institution's market risk requires timely information about the current carrying and market values of its investments. Accordingly, institutions should have market risk measurement systems commensurate with the size and nature of these investments. Institutions with significant holdings of highly complex instruments should ensure that they have the means to value their positions. Institutions employing internal models should have adequate procedures to validate the models and to periodically review all elements of the modeling process, including its assumptions and risk measurement techniques. Managements relying on third parties for market risk measurement systems and analyses should ensure that they fully understand the assumptions and techniques used.

<sup>5</sup> Federal credit unions must comply with the investment monitoring requirements of 12 C.F.R. § 703.90. See 62 FR 32989 (June 18, 1997).

Institutions should provide reports to their boards on the market risk exposures of their investments on a regular basis. To do so, the institution may report the market risk exposure of the whole institution. Alternatively, reports should contain evaluations that assess trends in aggregate market risk exposure and the performance of portfolios in terms of established objectives and risk constraints. They also should identify compliance with board approved limits and identify any exceptions to established standards. Institutions should have mechanisms to detect and adequately address exceptions to limits and guidelines. Management reports on market risk should appropriately address potential exposures to yield curve changes and other factors pertinent to the institution's holdings.

#### *Credit Risk*

Broadly defined, credit risk is the risk that an issuer or counterparty will fail to perform on an obligation to the institution. For many financial institutions, credit risk in the investment portfolio may be low relative to other areas, such as lending. However, this risk, as with any other risk, should be effectively identified, measured, monitored, and controlled.

An institution should not acquire investments or enter into derivative contracts without assessing the creditworthiness of the issuer or counterparty. The credit risk arising from these positions should be incorporated into the overall credit risk profile of the institution as comprehensively as practicable. Institutions are legally required to meet certain quality standards (i.e., investment grade) for security purchases. Many institutions maintain and update ratings reports from one of the major rating services. For non-rated securities, institutions should establish guidelines to ensure that the securities meet legal requirements and that the institution fully understands the risk involved. Institutions should establish limits on individual counterparty exposures. Policies should also provide credit risk and concentration limits. Such limits may define concentrations relating to a single or related issuer or counterparty, a geographical area, or obligations with similar characteristics.

In managing credit risk, institutions should consider settlement and pre-settlement credit risk. These risks are the possibility that a counterparty will fail to honor its obligation at or before the time of settlement. The selection of dealers, investment bankers, and brokers is particularly important in

effectively managing these risks. The approval process should include a review of each firm's financial statements and an evaluation of its ability to honor its commitments. An inquiry into the general reputation of the dealer is also appropriate. This includes review of information from state or federal securities regulators and industry self-regulatory organizations such as the National Association of Securities Dealers concerning any formal enforcement actions against the dealer, its affiliates, or associated personnel.

The board of directors is responsible for supervision and oversight of investment portfolio and end-user derivatives activities, including the approval and periodic review of policies that govern relationships with securities dealers.

Sound credit risk management requires that credit limits be developed by personnel who are as independent as practicable of the acquisition function. In authorizing issuer and counterparty credit lines, these personnel should use standards that are consistent with those used for other activities conducted within the institution and with the organization's over-all policies and consolidated exposures.

#### *Liquidity Risk*

Liquidity risk is the risk that an institution cannot easily sell, unwind, or offset a particular position at a fair price because of inadequate market depth. In specifying permissible instruments for accomplishing established objectives, institutions should ensure that they take into account the liquidity of the market for those instruments and the effect that such characteristics have on achieving their objectives. The liquidity of certain types of instruments may make them inappropriate for certain objectives. Institutions should ensure that they consider the effects that market risk can have on the liquidity of different types of instruments under various scenarios. Accordingly, institutions should articulate clearly the liquidity characteristics of instruments to be used in accomplishing institutional objectives.

Complex and illiquid instruments can often involve greater risk than actively traded, more liquid securities. Oftentimes, this higher potential risk arising from illiquidity is not captured by standardized financial modeling techniques. Such risk is particularly acute for instruments that are highly leveraged or that are designed to benefit from specific, narrowly defined market shifts. If market prices or rates do not

move as expected, the demand for such instruments can evaporate, decreasing the market value of the instrument below the modeled value.

#### *Operational (Transaction) Risk*

Operational (transaction) risk is the risk that deficiencies in information systems or internal controls will result in unexpected loss. Sources of operating risk include inadequate procedures, human error, system failure, or fraud. Inaccurately assessing or controlling operating risks is one of the more likely sources of problems facing institutions involved in investment activities.

Effective internal controls are the first line of defense in controlling the operating risks involved in an institution's investment activities. Of particular importance are internal controls that ensure the separation of duties and supervision of persons executing transactions from those responsible for processing contracts, confirming transactions, controlling various clearing accounts, preparing or posting the accounting entries, approving the accounting methodology or entries, and performing revaluations.

Consistent with the operational support of other activities within the financial institution, securities operations should be as independent as practicable from business units. Adequate resources should be devoted, such that systems and capacity are commensurate with the size and complexity of the institution's investment activities. Effective risk management should also include, at least, the following:

- **Valuation.** Procedures should ensure independent portfolio pricing. For thinly traded or illiquid securities, completely independent pricing may be difficult to obtain. In such cases, operational units may need to use prices provided by the portfolio manager. For unique instruments where the pricing is being provided by a single source (e.g., the dealer providing the instrument), the institution should review and understand the assumptions used to price the instrument.

- **Personnel.** The increasingly complex nature of securities available in the marketplace makes it important that operational personnel have strong technical skills. This will enable them to better understand the complex financial structures of some investment instruments.

- **Documentation.** Institutions should clearly define documentation requirements for securities transactions, saving and safeguarding important documents, as well as maintaining

possession and control of instruments purchased.

An institution's policies should also provide guidelines for conflicts of interest for employees who are directly involved in purchasing and selling securities for the institution from securities dealers. These guidelines should ensure that all directors, officers, and employees act in the best interest of the institution. The board may wish to adopt policies prohibiting these employees from engaging in personal securities transactions with these same securities firms without specific prior board approval. The board may also wish to adopt a policy applicable to directors, officers, and employees restricting or prohibiting the receipt of gifts, gratuities, or travel expenses from approved securities dealer firms and their representatives.

#### *Legal Risk*

Legal risk is the risk that contracts are not legally enforceable or documented correctly. Institutions should adequately evaluate the enforceability of its agreements before individual transactions are consummated. Institutions should also ensure that the counterparty has authority to enter into the transaction and that the terms of the agreement are legally enforceable. Institutions should further ascertain that netting agreements are adequately documented, executed properly, and are enforceable in all relevant jurisdictions. Institutions should have knowledge of relevant tax laws and interpretations governing the use of these instruments.

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