Examination Manual

Federal Housing Finance Board
Office of Supervision

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Introduction

The Federal Housing Finance Board (Finance Board) Examination Manual (Manual) contains information and procedures for the examination of the Federal Home Loan Banks (FHLBanks), Office of Finance, and the Financing Corporation. The Manual is a resource for examiners on matters involving examination scope, issues, process, and procedures. The Manual also sets forth standards and expectations regarding supervision of the FHLBanks and the Office of Finance. Descriptions of applicable legal standards are for guidance, and are not legal or regulatory references or legal opinions.

Purpose of the Manual

The Manual's purpose is to document examination objectives and procedures to provide guidance to examiners, and to promote an effective and efficient examination process. Finance Board examiners assess the quality of an FHLBank's corporate governance, market, credit and operational risk management, condition and performance, and affordable housing and community investment activities, using a risk-based examination approach that calls upon examiners to determine the level of risk, the quality of risk management, and whether the institution has identified and is controlling the key risks arising from its activities and operations. The assessment of the Office of Finance is based primarily on the quality of corporate governance and operational risk management.

Examiners assign component and composite ratings in accordance with the Federal Home Loan Bank Rating System (FHLBRS), and where needed, examiners direct that corrective actions should be taken. The examination process should identify existing weaknesses and cases of apparent noncompliance, as well as practices that could manifest into problems, and emerging issues. Examiners may also recommend steps to correct deficiencies.

The Manual should also promote consistency in the examination process. While nothing in the Manual should be construed to strictly drive the scope of examinations, the standards for each area scoped must be consistently applied.

Recommendations for revisions to the Manual will be taken at any time and the Manual will be updated semi-annually.

Introduction

The FHLBanks are cooperatively structured, privately capitalized government-sponsored enterprises (GSEs). As GSEs, the FHLBanks are federal instrumentalities, chartered under the Federal Home Loan Bank Act (FHLBank Act) specifically to carry out federal policy for enhancing the availability of credit for residential mortgages and community development finance. The FHLBanks provide a readily available, economical and affordable source of funds in the form of advances to their member institutions.

The FHLBanks receive the majority of their funding through the issuance of consolidated FHLBank System debt obligations. Consolidated debt obligations are the joint and several obligations of all of the FHLBanks. FHLBank debt does not carry the full faith and credit of the U.S. government. However, owing to the joint and several nature of the debt, generally low risk balance sheets, and ties to the federal government, the FHLBanks can raise funds at narrow spreads over comparable maturity Treasury securities.

Cooperative Organization and Capitalization. Pursuant to Sections 2B and 3 of the FHLBank Act, the FHLBank System consists of 12 FHLBanks and the Office of Finance, a joint office of the FHLBank System and its fiscal agent. Each FHLBank serves a specific geographical area (see Exhibit 1). As cooperatives, FHLBank customers and stockholders (FHLBank members), are generally the same, although under Section 975.3 of the Finance Board regulations, certain correspondent services may be provided on an equal basis to institutions eligible to become FHLBank members.

Pursuant to Section 4(a) of the FHLBank Act, membership in an FHLBank is limited to savings associations, cooperative banks, homestead associations, commercial banks, savings banks, credit unions, and insurance companies. An eligible institution must apply for membership to the FHLBank that serves the geographical area where the institution has its principal place of business. All members must purchase and hold stock in their respective FHLBanks.

The FHLBanks are privately capitalized by the stock purchases of their members. FHLBank stock is not publicly-traded. The FHLBank Act authorizes an FHLBank to issue one or both of two classes of FHLBank stock and requires each FHLBank to have a capital plan approved by the Finance Board. Each FHLBank's capital plan must address, among other things, classes and subclasses of capital stock that the FHLBank intends to issue, the process for capital stock issuance, the par value of each class and subclass of stock and the required member investment in the FHLBank's stock. All of the FHLBanks have set the par value for all classes and subclasses of capital stock at $100. All FHLBank stock is bought and sold at par. Section 6 of the FHLBank Act establishes minimum leverage and risk-based capital requirements for the FHLBanks.

Funding. Section 11 of the FHLBank Act authorizes the Finance Board to issue FHLBank System consolidated bonds, also known as consolidated obligations, which are the joint and several obligations of all the FHLBanks. Until 2001, the Finance Board, through the Office of Finance as its agent, was the issuer of consolidated obligations for

which the FHLBanks are jointly and severally liable. Effective January 2, 2001, pursuant to Section 966.2 of the Finance Board regulations, the FHLBanks, through the Office of Finance as their agent, became the issuers of consolidated obligations for which the FHLBanks are jointly and severally liable. Consolidated obligations are sold at prevailing market rates and are the principal source of FHLBank funding. The FHLBanks use the proceeds to make advances to their members and for other authorized purposes, including the funding of eligible investments.

Federal Housing Finance Board

The Finance Board is an independent regulatory agency in the executive branch of the U.S. government. Pursuant to Section 2A(a) of the FHLBank Act, the Finance Board's duties are to ensure that the FHLBanks operate in a safe and sound manner, that the FHLBanks carry out their housing finance and community investment mission, and that the FHLBanks remain adequately capitalized and able to raise funds in the capital markets.

Under Section 2A(b) of the FHLBank Act, the management of the Finance Board is vested in a five-member board of directors. Four directors are appointed by the President of the United States with the advice and consent of the Senate, and hold office with terms of seven years. One of the four appointed directors is designated by the President to serve as chairman of the Finance Board. The fifth member, an *ex officio* member, is the U.S. Secretary of Housing and Urban Development. At least one director is required to be chosen from an organization with more than a two-year history of representing consumer or community interests on banking services, credit cards, housing or financial consumer protections.

Pursuant to Section 2B of the FHLBank Act, the general powers of the Finance Board include, among others, the power to supervise and examine the FHLBanks and to promulgate and enforce such regulations and orders as are necessary to carry out the provisions of the FHLBank Act, and to suspend or remove for cause a director, officer, employee or agent of any FHLBank or joint office. Section 20 of the FHLBank Act directs the Finance Board to require annual examinations and reports of condition of the FHLBanks and periodically furnish statements based upon such reports.

Supervision of the FHLBanks. The Board of Directors of the Finance Board has charged the Finance Board's Office of Supervision with responsibility for the examination and supervision of the FHLBanks. Responsibilities include annual examinations of the FHLBanks, the Office of Finance and the Financing Corporation. The Financing Corporation was created by the Federal Savings and Loan Insurance Corporation Recapitalization Act of 1987, as amended, for the sole purpose of providing financing for the FSLIC Resolution Fund. Pursuant to Section 21(b)(8) of the FHLBank Act, the Financing Corporation is regulated by the Finance Board.

Through examinations, periodic on-site visitations, and off-site monitoring, the Office of Supervision evaluates FHLBank operations, financial performance and trends,

compliance with laws, regulations, and Finance Board policy, and actions taken to correct weaknesses and violations found in examinations between examinations. The Office of Supervision also monitors the achievement by the FHLBanks of their housing finance and community development mission.

Statutory Examination Requirements. Under Section 20 of the FHLBank Act, the Finance Board must require annual examinations and reports of condition of all FHLBanks. Section 985.4(b) of the Finance Board regulations directs that the Office of Finance be examined annually. Additional examinations, including special examinations, can be conducted as necessary. FHLBank examinations include an assessment of the quality of an institution's corporate governance, market, credit and operational risk management, condition and performance, and affordable housing and community investment activities. Examiners evaluate management's effectiveness and the institution's compliance with the FHLBank Act, regulations and Finance Board policy.

The examination of the Office of Finance focuses on the quality of corporate governance and operational risk management in the context of the Office of Finance's debt issuance and disclosure activities. The examination of the Financing Corporation focuses on the quality of debt service administration by the Financing Corporation for REFCORP obligations.

Powers of Examiners. Under Section 20 of the FHLBank Act, examiners appointed by the Finance Board are subject to the same requirements, responsibilities and penalties as are applicable to examiners under the National Bank Act and the Federal Reserve Act and have the same powers and privileges as are vested in those examiners by law. The responsibilities, powers and privileges of Finance Board examiners are co-extensive with those vested in examiners under the National Bank Act pursuant to Section 5240 of the Revised Statutes, February 19, 1875, as amended. Section 5240 provides that examiners "…shall have power to make a thorough examination of all the affairs of [a] bank and in doing so…shall have the power to administer oaths and to examine any of the officers and agents thereof under oath." as well as to exercise similar powers with respect to bank affiliates."

Exhibit 1

The geographical areas that comprise the FHLBank districts are delineated below.

1. **Boston**
   Connecticut
   Maine
   Massachusetts
   New Hampshire
   Vermont
   Rhode Island

2. **New York**
   New Jersey
   New York
   Puerto Rico
   Virgin Islands

3. **Pittsburgh**
   Delaware
   Pennsylvania
   West Virginia

4. **Atlanta**
   Alabama
   District of Columbia
   Florida
   Georgia
   Maryland
   North Carolina
   South Carolina
   Virginia

5. **Cincinnati**
   Kentucky
   Ohio
   Tennessee

6. **Indianapolis**
   Indiana
   Michigan

7. **Chicago**
   Illinois
   Wisconsin

8. **Des Moines**
   Iowa
   Minnesota
   Missouri
   North Dakota
   South Dakota

9. **Dallas**
   Arkansas
   Louisiana
   Mississippi
   New Mexico
   Texas

10. **Topeka**
    Colorado
    Kansas
    Nebraska
    Oklahoma

11. **San Francisco**
    Arizona
    California
    Nevada

12. **Seattle**
    Alaska
    Guam
    Hawaii
    Idaho
    Montana
    Oregon
    Pacific Islands
    Utah
    Washington
    Wyoming

Preface

In carrying out their housing finance and community investment mission, FHLBanks offer advances, mortgage purchase programs, and other services in an evolving competitive environment. In doing so, the FHLBanks assume market, credit, and operational risks. The risk management processes of each FHLBank must reflect and be adequate to manage each type and level of risk undertaken.

The variety and complexity of the risks undertaken by the FHLBanks carry implications for the examination and supervision of the FHLBanks. A principal interest in the examination process is whether and how the FHLBank manages risk so that it operates in a safe and sound manner while achieving its mission requirements.

A risk-based approach to supervision is important to the effective and efficient use of resources. Central to this approach are the following processes: (i) identification of risks as market, credit or operational; (ii) measurement of risks; and (iii) evaluation of the effectiveness of the risk management processes employed by the FHLBank's board of directors and senior management. As appropriate or as otherwise noted, references to the FHLBanks shall include the Office of Finance and the Financing Corporation.

Supervisory Process

The general powers of the Finance Board include the power to supervise and examine the FHLBanks, to promulgate and enforce regulations and orders in carrying out the provisions of the FHLBank Act, and to suspend or remove for cause a director, officer, employee or agency of any FHLBank or the Office of Finance. Sections 2B and 20, respectively, of the FHLBank Act require the Finance Board to (i) make annual reports to Congress and (ii), at least annually, require examinations and reports of condition of all FHLBanks. The Finance Board also conducts annual examinations of the Office of Finance and the Financing Corporation under authority of the FHLBank Act.

The Board of Directors of the Finance Board has charged the Office of Supervision with the responsibility for the ongoing supervision of the FHLBank System. Through its examination and other supervisory activities, the Office of Supervision may take or recommend supervisory action to ensure the continued safe and sound condition of the each FHLBank and the achievement of its housing finance and community lending mission.

Annual on-site examinations are the cornerstone of the Office of Supervision's supervisory activities. On an ongoing basis, the Office of Supervision monitors FHLBank operations, financial condition and performance, legal compliance and actions taken in response to previously-identified deficiencies. In addition to examinations, activities undertaken by the Office of Supervision to assess the operations of FHLBanks include periodic on-site visitations, off-site monitoring, and System-wide or "horizontal" reviews (which focus on a specific FHLBank activity, function, or program).

The Office of Supervision has several tools for resolving issues identified in the FHLBanks' operations. Most deficiencies identified through supervisory activities are resolved in the normal course of business. For more serious situations, the Office of Supervision may issue a supervisory determination that requires corrective action. To resolve serious and intractable management problems, the Office of Supervision may recommend to the Finance Board a change in the board of directors or management of an FHLBank. The Office of Supervision's supervisory process consists of several interrelated activities. Following is a description of these activities.

1) Supervisory Strategy

The supervisory strategy is a plan for supervising an individual FHLBank. At the conclusion of an examination of an FHLBank and after meeting with the institution's board of directors, the examiner-in-charge develops a supervisory strategy that identifies key areas of risk and addresses the timeframe and the focus of the supervision of the FHLBank for the next year. For example, a supervisory strategy for an FHLBank might state that the focus for the next year will be on the quality of risk management and financial accounting. The on-site portion of the examination would focus heavily on these areas to determine their adequacy. An intervening visitation and the next examination would focus on these areas and follow up on remedial actions taken by the FHLBank to address deficiencies reported at the last examination.

The supervisory strategy is developed in consultation with modelers, accountants, analysts, and other staff and serves to alert Finance Board officials as to the general supervisory direction that will be taken with regard to the FHLBank.

From the supervisory strategy development process, the examiner-in-charge prepares a supervisory strategy, which provides specifics as to how the strategy will be addressed in the coming year. The supervisory strategy includes information on the proposed date and timeframe for the on-site examination and periodic visitation(s) and the staff who were consulted in the plan's development. The supervisory strategy discusses changes in the FHLBank'operations and management of which examiners should be aware, and concludes with an overview of the institution and emerging supervisory issues.

The supervisory strategy must be approved by the portfolio manager and should be updated throughout the year as new issues develop and existing issues are resolved.

2) Pre-Examination Planning

Thorough pre-examination analysis and a well-defined examination scope are the keys to the execution of an efficient and effective examination. Before the commencement of each examination, the examiner-in-charge, specialists from other divisions and the examination team prepare three sets of documents: (i) the examination alert letter; (ii) the pre-examination analyses memoranda; and (iii) the examination scope memorandum.

Alert Letter. Addressed to the FHLBank president, the alert letter announces the commencement, timing, and staffing of the planned examination. The alert letter is sent to the

FHLBank approximately two months before the beginning of the on-site portion of the examination and requests information on such matters as investments, advances, mortgages, community investments, auditing, and membership that should be delivered to examiners prior to the examination. Enclosed with the alert letter are questionnaires to key executives of the institution and a request list of documents. Similar letters are sent to the chairman of the board of directors, chairman of the audit committee and chief financial officer requesting information on their functions and principal concerns for the operations and future of the FHLBank.

Pre-Examination Analysis Memoranda. Prepared by the examiner-in-charge and assisting examiners and other Office of Supervision staff, these memoranda are based on information received from the information request list, data obtained through the Call Report System (CRS), past examination findings and workpapers, and other evaluative information, as available.

Examination Scope Memorandum. Based on the pre-examination analyses, this memorandum sets the scope of the on-site portion of the examination. As with the supervisory strategy, the scope memorandum must be approved by the appropriate portfolio manager(s).

3) On-Site Examinations

On-site examinations of each of the FHLBanks are conducted on an annual basis. In examinations of FHLBanks, examiners: (i) assess the credit, market, and operational risks in the FHLBank's operations and the management, control and reporting of those risks; (ii) evaluate the FHLBank's financial condition and performance, capital adequacy, and corporate governance; (iii) assess the FHLBank's affordable housing and community investment programs; and (iv) determine an FHLBank's compliance with its own policies and procedures, the rules and regulations of the Finance Board, and other applicable laws.

In contrast, reflecting the differing type of operations of the Office of Finance, examiners reviewing that entity: (i) evaluate the Office of Finance's corporate governance; (ii) assess the operational risks in the Office of Finance's operations and the management, control and reporting of those risks; and (iii) determine the Office of Finance's compliance with its own policies and procedures, as well as Finance Board rules, regulations and policies. The examination of the Office of Finance also includes an assessment of the process and procedures of the Office of Finance for preparing the combined financial statements of the FHLBank System.

During examinations of the FHLBanks, examiners review and test systems, controls, and reports for adequacy and accuracy, evaluate financial condition and performance, corporate governance (including strategic planning), and review board of directors and committee meeting minutes. In addition, examiners review actions taken based on audit and examination findings. During the course of the examination, the examiner-in-charge meets with the FHLBank's executive management, as well as the institution's chairman and audit committee chairman, to discuss preliminary findings.

At the end of their review, the examiners prepare written findings memoranda that are discussed with line and senior management. Management is asked to address the examiners' findings, including planned actions to correct deficiencies and violations.

At the conclusion of the examination, the examiner-in-charge assigns composite and component ratings of "1" to "4" to an FHLBank, based on the totality of factors, including the level and direction of market, credit and operational risk, the adequacy of risk management policies and practices, financial performance and condition (including capital management), corporate governance, and affordable housing and the administration of the FHLBank's community investment activities. In the case of examinations of the Office of Finance, the examiner-in-charge assigns composite and component ratings based upon the quality of corporate governance and the level and direction of operational risk and the quality of risk management.

The report of examination is written by the examiner-in-charge, subject to the review and approval of the portfolio manager. Subsequently, the report is presented by the examiner-in-charge to the board of directors of the FHLBank and a copy is distributed to the Board of Directors of the Finance Board.

4) Periodic On-Site Visitations and Reviews

In addition to on-site examinations, the examiner-in-charge, together with other appropriate staff, may conduct periodic on-site visitations. The purpose of these visits is to monitor the FHLBanks' progress in addressing deficiencies previously identified, evaluate financial condition and performance, and identify emerging issues.

In preparation for each on-site visitation, the FHLBank analyst prepares an analysis of the most recent financial information obtained through the CRS and identifies trends and issues for discussion with FHLBank management. At the conclusion of the visitation, the examiner-in-charge prepares an internal memorandum, which includes a discussion of financial performance and condition, emerging supervisory issues and concerns, and, as applicable, compliance with written agreements with the Finance Board. The internal memorandum is distributed to appropriate Office of Supervision management.

5) Horizontal Reviews

"Horizontal reviews" are another supervisory activity that the Office of Supervision undertakes to assess an activity, function, or program across all twelve of the FHLBanks. These reviews lend themselves to timely comparison of the operations, strategies, and policies in place at the FHLBanks. Through these reviews, the Office of Supervision identifies best practices and shares these through dissemination of a report of findings from the horizontal review. In addition, concerns, deficiencies and other matters can be identified in the horizontal review. These are often addressed in advisory bulletins issued by the Office of Supervision following the review.

6) Off-Site Monitoring Activities

Apart from examiners, other Finance Board staff monitors the FHLBanks on an ongoing basis through the analysis of CRS data, audited financial statements, strategic business plans, and other reports. These individuals work to support the supervision of the FHLBanks and assist in the development of the supervisory strategy. In addition, these individuals may participate in the on-site examinations as situations warrant. The Finance Board staff that provides assistance to the examination staff includes:

***Accountants*:** Accountants evaluate FHLBank accounting and auditing matters and provide expertise on relevant pronouncements by such groups as the Financial Accounting Standards Board and the Institute of Internal Auditors. The accountants work closely with examiners on technical accounting matters in developing examination findings and conclusions. The accountants also review combined FHLBank System financial statements issued by the Office of Finance for conformity with law, regulation and Generally Accepted Accounting Principles.

***Attorneys*:** The Office of General Counsel provides advice on legal issues that arise during an examination and other supervisory activities. When safety and soundness concerns or conduct in violation of the law or regulations necessitate enforcement action, the Office of the General Counsel advises on the appropriate level of response, based on the law and facts underlying the concern or violation. If the response is a written supervisory agreement, the attorneys work with the Office of Supervision in drafting comprehensive, binding documents.

***FHLBank Analysts*:** FHLBank analysts review board of directors meeting minutes and provide summary memoranda to the examiner-in-charge, monitor and analyze CRS data, and prepare semi-annual FHLBank profiles. The FHLBank analysts also assess market developments that may affect the FHLBank System and prepare papers on conditions and trends and their effects on FHLBank System condition, profitability, and stability. The analysts work closely with the examiners in developing the scope of examinations and routinely participate in the examinations.

***Risk Measurement and Modeling Specialists*:** Risk measurement and modeling specialists support the examination function through the use of financial models, such as the measurements of interest-rate-risk exposure and market value sensitivity at each FHLBank. They also evaluate proposed changes to the internal market risk models that the FHLBanks use to calculate risk-based capital requirements. An off-site risk monitoring program analyzes quarterly data and risk exposure reports prepared by each FHLBank using its own risk modeling systems. These specialists work closely with the examiners on technical modeling matters in developing examination findings and conclusions.

***Risk Monitoring Analysts*:** Risk monitoring analysts provide data management support on economic, financial, housing and CRS data, FHLBank System structure, and membership. They also develop the Office of Supervision's information architecture and maintain its data dictionary. The data dictionary contains a detailed description and identifiers for accessing data related to the financial, mortgage, affordable housing, and membership activities of the FHLBanks. These analysts work closely with the examiners in providing information to develop the scope of examinations.

***Affordable Housing Specialists*:** Affordable housing specialists provide guidance on FHLBank affordable housing and community investment activities, such as the FHLBank homeownership set-aside program, including adherence to regulations and guidelines for disbursement of funds to households, retention of documents, eligible income calculations, and scoring criteria. Affordable housing specialists also provide information on the scope of the on-site examination, including review of information reporting to the FHLBank's board of directors. The affordable housing program and community investment activities of each FHLBank are examined under a separate examination program.

7) Regulatory Requests: Approvals, No-Action Letters, Regulatory Interpretations, Waivers, Reviews of Disputed Supervisory Determinations, Case-by-Case Determinations, and New Business Activities

a) Regulatory Requests Pursuant to Part 907 of the Finance Board's Regulations

The Office of Supervision and the Office of General Counsel work jointly to address requests under Part 907 of the Finance Board regulations for approvals, no-action letters, waivers, case-by-case determinations, and reviews of disputed supervisory determinations. Such requests are described below.

Approvals are written statements issued to an FHLBank approving a transaction, activity or other matter that requires Finance Board action under the FHLBank Act or Finance Board rule, regulation, policy or order. Approvals may be issued by the Director of the Office of Supervision or the General Counsel.

No-Action Letters are written statements issued to an FHLBank providing that the Office of Supervision will not recommend supervisory or other action to the Board of Directors of the Finance Board for failure to comply with a specific provision of a Finance Board rule, regulation, policy, or order. No-Action Letters are issued by the Director of the Office of Supervision.

Regulatory interpretations are written guidance issued with respect to application of the FHLBank Act or a Finance Board rule, regulation, policy, or order to a transaction or activity. Regulatory Interpretations are issued by the General Counsel.

Waivers are written statements issued by the Board of Directors of the Finance Board to a FHLBank or a member of an FHLBank that waive a provision, restriction, or requirement of a Finance Board rule, regulation, policy, or order, or a required submission of information, not otherwise required by law, in connection with a particular transaction or activity. A Waiver can be granted only if it is not inconsistent with the law and does not adversely affect any substantial existing rights and upon a determination that application of the provision, restriction, or requirement would adversely affect achievement of the purposes of the FHLBank Act, or upon a showing of good cause.

Reviews of disputed Supervisory Determination are conducted by the Board of Directors of the Finance Board. For the purposes of Part 907, a Supervisory Determination

includes a finding, such as an unsafe and unsound practice or condition, weakness, or violation, by the Finance Board that is set forth in a report of examination, order or directive. It also includes any order or directive concerning safety and soundness or compliance matters that requires mandatory action by an FHLBank. An FHLBank may also seek review of the rating assigned by the Office of Supervision under the FHLBRS.

Case-by-Case Determinations are final decisions by the Board of Directors of the Finance Board requested by an FHLBank concerning matters that require a determination, finding or approval by the Board of Directors under the FHLBank Act or Finance Board regulations, for which no controlling statutory, regulatory or other Finance Board standard previously has been established, and that, in the judgment of the Board of Directors, are best resolved on a case-by-case basis by a ruling applicable only to the FHLBank that filed the request (and any entity permitted to intervene in the Board of Directors' consideration of the request) and not by adoption of a rule of general applicability.

All applications for a waiver or approval or request for no-action letter or regulatory interpretation pursuant to Part 907 of the Finance Board regulations must be signed by the president of the FHLBank and must include identifying information, the relevant section of the statute or regulation, identification of the determination or relief requested, including alternative relief requested if the primary relief is denied, a statement as to why relief is needed, facts and circumstances giving rise to the application, references to relevant authorities, previous requests for related waivers, no-action letters, approvals and interpretations, an opinion of counsel supporting the request, and a certification of statements in the submission. Requests for reviews of disputed supervisory determinations and case-by-case determinations under Part 907 must comply with the requirements set forth in that part.

b) Responses to New Business Activity Notices Pursuant to Part 980 of the Finance Board's Regulations

The Finance Board provides ***responses to notices of new business activities*** that must be submitted by an FHLBank pursuant to Part 980 of the Finance Board regulations prior to the FHLBank's undertaking of an activity that involves collateral, risks, or operations that the institution has not previously accepted, managed or undertaken, as appropriate. (For new business activity requests relating to an FHLBank acceptance of collateral enumerated in Section 950.7(a)(4) of the Finance Board's regulations, the institution may commence the new activity immediately upon the Finance Board's receipt of the new business activity notice.)

The Finance Board may respond to a notice of a new business activity by providing consent for the FHLBank to undertake the particular activity and set forth terms and conditions that apply to the activity. Alternatively, the agency may, within 60 days of receipt of a new activity notice, issue a notice to the FHLBank: (i) disapproving the activity; (ii) instructing the FHLBank not to commence the activity pending further consideration by the Finance Board; (iii) declaring an intent to examine the FHLBank;

(iv) establishing conditions for the Finance Board's approval of the activity; or (v) containing other instructions or information that the Finance Board deems appropriate under the circumstances.

A notice of new business activities submitted by an FHLBank must include a description of the new business activity, the FHLBank's assessment of the risks associated with the activity and its capacity to safely administer and address such risks, the FHLBank's criteria to determine member or housing associate eligibility to participate in the activity, a good faith estimate of the dollar volume of the new activity over the short- and long-term, and an opinion of counsel citing legal authority for the activity. In its review and response to such a notice, the Finance Board may consider the safety and soundness implications of the proposed activity, as well as its compliance with statutes and regulations, responsiveness to member needs, and effectiveness in supporting the nation's housing finance system. Actions on new business activity requests have been delegated to the Director of the Office of Supervision.

8) Supervisory Actions

The Finance Board and the Office of Supervision possess several tools for resolving deficiencies identified within an FHLBank's operations. These tools range from informal to formal remedies. Formal remedies include cease-and-desist, temporary cease-and-desist, civil money penalty, and suspension or removal orders. Informal remedies include board of directors resolutions adopted by the institution, memoranda of understanding, and written agreements. Several of these formal and informal remedies are also available for deficiencies identified in the Office of Finance's operations. Most matters are resolved through moral suasion and can be corrected through the normal course of business; however, the Finance Board may take "supervisory" action. The range of supervisory actions available to the Finance Board is discussed below.

a) Supervisory Actions Pursuant to Section 2B(a)(5) of the FHLBank Act and Part 908 of the Finance Board Regulations

Pursuant to Section 2B(a)(5) of the FHLBank Act and Part 908 of the Finance Board regulations, the Finance Board may initiate a proceeding to obtain a cease-and-desist order, temporary cease-and-desist order or order assessing civil money penalties from the Board of Directors of the Finance Board. An FHLBank may stipulate to a cease-and-desist or other order or may contest the order, in which case there is an evidentiary hearing on the record before an administrative law judge. The three types of orders do the following:

1) A cease–and-desist order requires an FHLBank or its directors or executive officer to take affirmative action to correct a condition resulting from a violation or practice, or places limitations on the activities or functions of the FHLBank or its directors or executive officers. Such a proceeding is commenced by the issuance of a notice of charges that, among other things, specifies the alleged misconduct and the relief sought.

2) A temporary cease-and-desist order can be issued at the same time as the notice of charges commencing a proceeding for a permanent cease-and-desist order and immediately imposes the relief sought in that proceeding. A temporary cease-and-desist order remains in effect pending completion of that proceeding and can only be issued if necessary to protect the FHLBank from ongoing or expected harm.

3) An order assessing civil money penalties imposes a money penalty on an FHLBank or its directors or executive officers for a violation or for conduct specified in Part 908. The amount of the penalty is determined by the Finance Board based upon factors and limits set out in Part 908. Such a proceeding is commenced by the issuance of a notice of assessment of a civil money penalty that, among other things, specifies the alleged misconduct and the relief sought.

The Finance Board may initiate a supervisory action under Section 2B(a)(5) of the FHLBank Act and Part 908 of the Finance Board regulations against an FHLBank in case of:

1) Unsafe or sound conduct or practice;
2) Conduct that causes or is likely to cause loss to the institution;
3) Violations of law or regulation; and
4) Violations of a Finance Board order, agreement between the Finance Board and the FHLBank, or a condition imposed in writing by the Finance Board in connection with the granting of an application or other request by the FHLBank.

The Finance Board may also initiate a cease-and-desist proceeding when it has reasonable cause to believe that an FHLBank or its director or executive officer is *about to* engage in practices or violations set forth in Section 908.4(a) of the Finance Board regulations.

In determining whether to initiate a formal supervisory action against an FHLBank, the Finance Board may consider the following factors:

1) Overall condition and risk profile of the FHLBank;
2) Nature, severity and frequency of the condition, practice or violation;
3) Board of directors' and management's past record of taking remedial or corrective action;
4) Board of directors' and management's ability to correct the deficiency; and
5) Likelihood that the conduct, violation, or practice will continue if corrective or supervisory action is not taken.

Pursuant to Section 2B(a)(1) and (a)(5) of the FHLBank Act and Part 908 of the Finance Board's regulations, the Finance Board may also enter into a Written Agreement with an FHLBank that prescribes in article-by-article form those restrictions and corrective and remedial measures to return the institution to a safe and sound condition. An FHLBank's violation of a Written Agreement can provide a

legal basis for the Finance Board to obtain a cease-and-desist order or order assessing civil money penalties against the FHLBank or its directors or executive officers.

Section 2B(a)(5) of the FHLBank Act and Part 908 of the Finance Board regulations authorize the agency's use of cease-and-desist, temporary cease-and-desist and civil money penalty assessment proceedings, as well as Written Agreements, in response to deficiencies identified in the operations of the FHLBanks. Section 2B(a)(5) and Part 908 do not provide explicit authority for the Finance Board's use of these remedies in response to deficiencies identified in the operations of the Office of Finance.

b) Action Pursuant to Section 2B(a)(2) of the FHLBank Act to Suspend or Remove a Director, Officer, Employee or Agent

Pursuant to Section 2B(a)(2) of the FHLBank Act, the Finance Board may suspend or remove for cause a director, officer, employee or agent of an FHLBank upon the communication of the cause of such suspension or removal to that person and to the FHLBank. Section 2B(a)(2) also authorizes the Finance Board to take such action with respect to a director, officer, employee or agent of the Office of Finance. Neither the FHLBank Act nor the Finance Board regulations prescribes a procedure for the agency's exercise of this supervisory remedy.

c) Other Supervisory Actions

The Finance Board may pursue other types of actions to address issues at an FHLBank that require supervisory response under Section 2B of the FHLBank Act. These actions provide more explicit guidance and direction than is normally contained in a report of examination. These types of actions may be in the form of a resolution of the FHLBank's board of directors or a memorandum of understanding. These remedies are also available to respond to supervisory issues at the Office of Finance.

A board of directors resolution is prepared by an FHLBank, adopted by its board of directors and addresses one or more specific supervisory concerns identified by the Office of Supervision. A board of directors resolution is not legally binding, but failure by an FHLBank to honor commitments made in a resolution may provide evidence for a supervisory action pursuant to Section 2B(a)(2) or (a)(5) of the FHLBank Act.

A memorandum of understanding is drafted by the Finance Board and normally involves more serious matters. The Finance Board issues a determination and notification of failure to meet safety and soundness standards to the FHLBank and requires corrective action. A memorandum of understanding is not legally binding. If the FHLBank fails to implement corrective action, the Finance Board can take additional steps to ensure that the safety and soundness provisions of the FHLBank Act are met in a timely manner.

The following types of actions or events may trigger the Office of Supervision seeking a board of directors resolution or memorandum of understanding:

1) Adverse examination rating;
2) Unsatisfactory condition or inaccurate or inadequate books and records of the FHLBank;
3) Lack of compliance by FHLBank management or board of directors with Office of Supervision directives; or
4) Failure to address supervisory findings.

In determining whether to initiate one of the aforementioned supervisory actions against an FHLBank, the Office of Supervision considers the following factors:

1) Nature and severity of the problem, including safety and soundness issues; and
2) Nature and extent of corrective action previously undertaken by the FHLBank.

9) Judicial Enforcement and Review of Orders

Pursuant to Section 2B of the FHLBank Act and Part 908 of its regulations, the Finance Board may bring an action in Federal District Court for the District of Columbia to obtain judicial enforcement of any cease-and-desist order, temporary cease-and-desist order, order assessing a civil money penalty, or any other effective order adopted by the agency's board of directors.

Section 2B of the FHLBank Act and Part 908 of the Finance Board regulations authorize a party to obtain judicial review of a final decision or order by the Board of Directors of the Finance Board to cease-and-desist or assess a civil money penalty by filing a petition with the United States Court of Appeals for the District of Columbia Circuit within 30 days after the date of service of the final decision or order. The provisions also authorize a party that has been served with a temporary cease-and-desist order to apply to the U.S. District Court for the District of Columbia within 10 days after such service for an injunction setting aside, limiting or suspending the enforcement, operation or effectiveness of the temporary order pending the completion of the hearing on the grant of a permanent cease-and-desist order.

Federal Home Loan Bank Rating System

Introduction

The FHLBRS is a risk-focused rating system under which each FHLBank and the Office of Finance is assigned a composite rating based on an evaluation of various aspects of its operations. Specifically, the composite rating of each FHLBank is based on an evaluation and rating of five key components: corporate governance, market risk, credit risk, operational risk, and financial condition and performance. The composite rating of the Office of Finance is based primarily on an evaluation of two components: corporate governance and operational risk. The administration of an FHLBank's affordable housing and community investment activities is taken into account under the corporate governance and operational risk components of the rating system.

Under the rating system, each FHLBank and the Office of Finance is assigned a composite rating from "1" to "4." A "1" rating indicates the lowest degree of supervisory concern, while a "4" rating indicates the highest degree of supervisory concern. The composite rating of each institution is based on the ratings of the underlying components, which are also rated on a scale of "1" to "4." The composite rating assigned to an institution is not an arithmetic average of the component ratings. Instead, the relative importance of each component is determined case-by-case within the parameters established by this rating system.

The ratings assigned under the FHLBRS are to be viewed within the context of the risk profiles of the FHLBanks. For example, the rating system employs three risk categories "Low Risk," "Moderate Risk," and "High Risk" to designate the level of risk exposure of an FHLBank's market risk, credit risk, and operational risk. These risk levels are intended to measure risk within the context of the FHLBanks. They are not intended to measure risk relative to risk levels of other types of financial institutions. In this regard, the ratings assigned under the FHLBRS should not be viewed as comparable to the ratings used by any other rating system or rating agency.

Composite Ratings

Composite ratings are based on an evaluation of an institution's corporate governance, market, credit, and operational risk, and its overall financial condition and performance. An institution will be assigned a composite rating of "1" to "4" as described in the FHLBRS.

Component Ratings

The composite rating is derived from the five component ratings. For each of the components, the FHLBRS provides a rating description that includes a non-exclusive list of the principal evaluative factors that relate to that component. The rating components are described briefly below.

A. Corporate Governance

An institution's corporate governance is rated based upon, but not limited to, an assessment of evaluative factors relating to the board of directors and senior management, risk management and controls, and compliance. The quality of corporate governance is rated in accordance with definitions set forth in the FHLBRS.

B. Market, Credit, and Operational Risk

The market, credit and operational risk ratings of an institution are based upon, but not limited to, an assessment of evaluative factors relating to the level of risk exposure and the quality of risk management for each risk. Examiners will assess the level of each risk of an institution, within the context of a government sponsored enterprise, as "low," "moderate" or "high," as defined in the FHLBRS. Examiners will also assess the quality of risk management of each risk as "strong," "adequate" or "weak," as defined in the FHLBRS.

In deriving component ratings for market, credit and operational risk, examiners will use a matrix to combine the level of risk exposure and the quality of risk management:

	LEVEL OF RISK		
QUALITY OF RISK MANAGEMENT	LOW RISK	MODERATE RISK	HIGH RISK
Strong	1	1-2	2-3
Adequate	1-2	2-3	3-4
Weak	2-3	3-4	4

Each rating is described in the FHLBRS.

C. Condition and Performance

The financial condition and performance of an institution is rated based upon, but not limited to, an assessment of evaluative factors relating to earnings and profitability, operating efficiency, capital and retained earnings, and liquidity. The financial condition and performance of an institution includes as an important element the FHLBank's prospects, and is rated generally in accordance with definitions set forth in the FHLBRS.

The FHLBRS is contained by reference in Advisory Bulletin 06-04 (December 2006). Examiners should refer to that document for specific provisions of the FHLBRS.

Introduction

The Office of Supervision's examination process emphasizes an ongoing supervisory approach involving both off-site and on-site activities. The identification and reduction of excessive risk exposure is a primary goal of the examination process. The Office of Supervision accomplishes this goal by applying a risk-based examination approach to efficiently use limited resources. Risk-based examinations permit examiner judgment in determining the scope and depth of work to be performed for each activity or function of a specific institution.

The ongoing supervisory process is accomplished through formal and informal communications with each of the FHLBanks, the Office of Finance and the Financing Corporation by their respective examiners-in-charge and portfolio managers, who monitor and analyze conditions in their assigned institutions. (Because the Office of Supervision's examinations of the Office of Finance usually incorporate examinations of the Financing Corporation, references hereinafter made in this section to the Office of Finance shall also be deemed to include the Financing Corporation.) A portfolio manager has the responsibility for managing the resources and conducting planning operations for his or her specific portfolio of institutions.

Examiners-in-charge are the central point of contact for communication by the Office of Supervision with an FHLBank and Office of Finance and have the responsibility of managing the ongoing supervision of their respective FHLBank or the Office of Finance. The examiner-in-charge is responsible for monitoring and advising Office of Supervision management as to all activities of and developments concerning his or her institution that have a bearing on supervisory and examination matters.

The Office of Supervision has established processes to ensure the ongoing supervisory process is risk-based:

1) Portfolio managers and examiners-in-charge coordinate their reviews with Office of Supervision FHLBank analysts, accountants, risk-modeling staff, affordable housing specialists and risk monitoring analysts responsible for each FHLBanks and Office of Finance, as well as attorneys assigned by the Office of General Counsel to each institution. Certain of these specialists, such as the FHLBank analysts and risk-modelers, routinely participate in examinations as well as performing other related duties.

2) Portfolio managers and examiners-in-charge meet with FHLBank and Office of Finance external auditors and internal audit directors to address any potential issues or concerns that may require further review or emerging issues that should be considered in determining the scope of the annual examination or periodic on-site visitations.

3) Examiners-in-charge prepare a supervisory strategy that identifies key areas of risk

and addresses the timeframe and the focus of their supervision during the year. The supervisory strategy may change based on the results of the examinations, periodic on-site visitations, results of off-site monitoring and other factors, but it serves as a risk-based framework for the supervision and examination of the FHLBanks and Office of Finance. The examiner-in-charge solicits input from FHLBank analysts, risk-modelers, accountants, risk analysts, affordable housing specialists and attorneys when planning the supervisory strategy, annual examination, periodic on-site visitations, and ongoing supervision of the FHLBanks and Office of Finance. The examiner-in-charge coordinates supervisory activities with such specialists as the need arises.

4) Examiners-in-charge conduct periodic on-site visitations. The scope of the visitation includes discussions with members of executive management on current performance of their institution, emerging issues and strategies, and follow-up on previously reported examination findings or other issues. The on-site visitation can be an important element of the supervisory process. It allows examiners-in-charge to monitor developments at the FHLBanks and Office of Finance and the risks attending these, and provides information that may be used to change the supervisory strategy. As appropriate, the visitation may include FHLBank analysts, risk-modelers, accountants, and other staff.

A. Examination Cycle

(1) Examinations

An examination's scope can range with respect to the degree of assessment from targeted to comprehensive. A specific assessment may also vary in its depth and detail. Within each examination's scope, examiners determine the procedures to be used. The Office of Supervision conducts on-site examinations, with a portion of the onsite examination conducted off-site.

In its examinations, the Office of Supervision evaluates the condition and practices of an FHLBank or the Office of Finance, including the adequacy of risk management policies, procedures, compliance and control systems. In the case of the FHLBanks, the Office of Supervision also evaluates the quality and effectiveness of the administration of the institution's affordable housing and community investment activities. (The Office of Supervision's procedures for the examination of an FHLBank's affordable housing and community investment activities are contained in a separate manual.)

Examinations are scheduled as part of the annual plan for examinations. The scope of an examination is determined as a result of the annual planning and on-going supervisory process, as well as a pre-examination analysis. The scope of examinations of the FHLBanks may include any aspect of their operations, but generally includes corporate governance, financial condition and performance,

market, credit and operational risk management, regulatory and policy compliance, financial condition and performance, and affordable housing finance and community investment activities. Examinations of the Office of Finance emphasize the quality of corporate governance and operational risk management.

On-site examinations versus off-site monitoring

The collection of information, monitoring and analysis entailed in the supervision of the FHLBanks and Office of Finance do not always require an on-site presence since examiners can frequently review and evaluate specific reports submitted to the Finance Board off-site. On-site examinations and off-site monitoring should complement each other. On-site examinations should enable an examiner to:

1) Test and reach a conclusion about the reliability of systems, controls and reports so that examiners may reasonably rely upon off-site monitoring and analysis;

2) Examine changes or anomalies disclosed by off-site monitoring and analysis; and

3) Evaluate aspects of operations for which off-site monitoring of systems and control is insufficient.

Examiners should make every effort to conduct as many pre-examination procedures as reasonably possible, off-site, in order to minimize disruptions to the FHLBank's or Office of Finance's normal business activities. Additionally, examiners should be mindful of an institution's space and personnel limitations and schedule the number of examiners working on bank premises accordingly.

(2) Pre-examination planning

The examiner-in-charge is responsible for the administration of the examination. This responsibility encompasses the review and approval of scope, determination and assignment of team resources to accomplish the objectives, cross-training of team members, coordination with other Finance Board staff as well as with FHLBank or Office of Finance staff, timely fulfillment of requirements and objectives, and ensuring of the quality of findings, the report of examination and workpapers.

Prior to the commencement of the examination, the following documents must be completed:

a) Alert Letter

Addressed to an FHLBank president or the managing director of the Office of Finance, the Alert Letter includes a detailed list of information needed by examination staff to conduct offsite pre-examination analysis and onsite examination work. The Alert Letter also details the commencement, timing and staffing of the planned examination. Additionally, the Alert letter includes the "as of" date of the examination, which is the most recent quarter for which the Office of Supervision has financial information for the institution. The Alert Letter also encloses questionnaires that are to be completed by key members of the board of directors and senior management such as the chief executive officer, chief financial officer, chief risk officer, chief information officer, community investment officer, chairman of the board, and the audit committee chairman.

The alert letter is sent approximately nine weeks prior to the start of the on-site examination. To enhance efficiency, the Office of Supervision collects this information from the FHLBank electronically.

b) Pre-examination analysis memoranda

The examiner-in-charge and other examiners who are assigned to an examination assist in the preparation of pre-examination analyses and proposed scope of the examination. The examination staff review and evaluate several sources of information to prepare the pre-examination analysis, including, but not limited to, the following:

1. Prior report of examination and workpapers;
2. Documentation of periodic on-site visitations;
3. Discussions with Finance Board FHLBank analysts, risk-modelers, accountants, risk analysts, affordable housing specialists and attorneys;
4. Minutes from relevant meetings of the board of directors and board and management committees;
5. Documentation of capital management issues;
6. Information obtained from the alert letter and management questionnaires;
7. Finance Board Call Report System data for investments, unsecured credit, advances, credit concentrations and other assets, as well as liabilities;
8. Analytical reviews performed of information obtained from vendor software such as FIRE and Bloomberg;
9. Information contained in the FHLBank's or Office of Finance's website;
10. New business activity requests and approvals;
11. Documentation of new and recently withdrawn or terminated member relationships;
12. Consultant reports; and
13. External and internal audit reports.

Factors examiners evaluate when determining the scope of examination include:

1. Significance or relevance of the area to the FHLBank's or Office of Finance's risk profile;
2. Scope and results of reviews that have been conducted in prior examinations;
3. Adequacy of the FHLBank's or Office of Finance's policies, procedures and internal controls;
4. Significant changes in the FHLBank's or Office of Finance's organizational structure, systems, products and regulatory requirements; and
5. Reliance on independent testing performed by the FHLBank's or Office of Finance's external and internal auditors and consultants.

The pre-examination analysis provides the examiner-in-charge and assisting examiners with the information necessary to recommend the scope of review and appropriate staffing as well as determine the timeframe within which to complete the examination objectives.

The practice of defining the scope of examination provides a control on the examination process and documents the areas to be reviewed. To enhance the efficiency of the examination, once the scope has been determined, additional requests approved by the examiner-in-charge are sent to the FHLBank or Office of Finance, as appropriate, for detailed information such as departmental policies and procedures, system access reports, and reconciliations that are applicable to the specific functions to be reviewed.

When an examiner believes that the agreed-upon scope of on-site review can be reasonably reduced, he or she should obtain the prior approval of the examiner-in-charge for the modifications. The examiner should document the reasons supporting his or her decision to deviate from the approved scope in the examination workpapers.

The examiner should ensure the adequacy of review of the FHLBank function or activity and not rely simply upon the application of specific procedures set out in the applicable work program. In all events, the examiner is expected to exercise his or her professional judgment to apply the appropriate examination procedures and make appropriate inquiry to adequately assess the level of risk and quality of risk management (or other relevant measure) attending the FHLBank function or activity under review.

c) Scope of Examination Memorandum

Based upon the pre-examination analysis, the examiner-in-charge prepares a scope of examination memorandum. The examiner-in-charge provides the scope of examination memorandum to the Associate Director of the Office of Supervision for Supervision and Examinations or his or her designee for approval prior to the start of the on-site examination.

(3) Coordination with Other Finance Board Offices and Office of Supervision Divisions

As the need for specialized expertise arises, the examiner-in-charge notifies the portfolio manager and coordinates the receipt of examination assistance from other professionals within the Office of Supervision, such as FHLBank analysts, accountants, risk analysts, risk-modelers and affordable housing specialists, as well as with attorneys of the Office of General Counsel. Assisting examiners bring issues requiring such expertise to the attention of the examiner-in-charge. The examiner-in-charge is responsible for ensuring the completion of any work that is assigned to other professionals. Examiners document all assistance received in their workpapers.

(4) On-Site Examination Procedures

a) Entrance Meeting

On the first day of the on-site examination or as soon thereafter as can be arranged, the examination team should hold an "entrance meeting" with senior management. This is an opportunity for the members of the examination team to introduce themselves to the senior managers and discuss assignments, examination scope and timeframes. The meeting also provides management with an opportunity to ask questions or raise any concerns or issues associated with the examination. The examiner-in-charge emphasizes that cooperation and timely response to examiner requests will expedite the examination process.

b) Identification and Evaluation of Key Risks, Controls and Significant Changes

In accordance with examination program objectives, examiners perform an assessment of corporate governance, risk management, internal controls and the independent testing that is performed by external and internal auditors and outside consultants of the FHLBank or the Office of Finance, as appropriate.

In completing these assessments, examiners should evaluate:

1. The degree to which the activities, risk tolerances and internal controls reflect the goals and parameters established by the board of directors and senior management;

2. The adequacy of risk management and internal controls to inform and support the governance processes, management and decision-making;

3. The adequacy of governance processes to address all material risks of the FHLBank's or Office of Finance's activities and risk profile; and

4. The adequacy of independent testing that is performed of the internal control environment by external and internal auditors and outside consultants.

In addition, the examiners determine whether there are any significant changes that have been implemented, are in the process of being implemented, or are in the preliminary planning stages.

The assessment of the aforementioned factors permits the examiner to determine the degree of reliance that can be placed upon the institution's policies, procedures and internal controls to manage the risks associated with a specific function or activity and the continuing appropriateness of the initial scope evaluation.

c) Amendment of Examination Scope

With approval of their examiner-in-charge, examiners may modify the approved scope of examination during the examination. The following are examples that may warrant an adjustment in the approved scope:

1. The examiners' assessment of corporate governance, risk management, internal controls and independent testing has revealed significant weaknesses in the function or activity under review;

2. The FHLBank or Office of Finance has instituted significant changes in policies, procedures or controls that have not been independently tested or are not addressed in the examination programs;

3. The FHLBank or Office of Finance has discontinued specific activities and processes and the examination objectives are therefore no longer applicable; and

4. The examiner has identified concerns in the conduct of testing procedures that warrant further expansion of scope and testing.

Examiners document proposed modifications in scope and seek approval of these by the examiner-in-charge. The examiner retains all supporting documentation in his or her workpapers.

d) Testing

In selecting attributes to be reviewed or tested for each FHLBank or Office of Finance function or activity examined, examiners possess discretion to select those attributes he or she considers necessary or appropriate to make assess the adequacy of corporate governance, risk management, internal controls and audit coverage, or other relevant assessments, and, where appropriate, assign ratings for corporate governance, market, credit and operational risk and condition and performance.

Examiners may rely upon the work performed by an FHLBank's or Office of Finance's external and internal auditors when it is reasonable to do so. The degree of reliance that an examiner may reasonably place on this work is based upon his or her judgment of the competence and independence of the auditors involved, the scope of the audits and the amount of testing performed, the timeframe during which the audits were performed, and the overall adequacy of the institution's system of internal controls. Examiners should consider these factors in determining the level of testing to be conducted.

e) Evaluation of Potential Findings

Examiners evaluate potential examination findings to determine whether the issue or concern warrants reporting to senior or line management or the board of directors and document these evaluations in their workpapers.

When evaluating potential findings, the examiner considers the significance of the issue or concern to the safety, soundness and condition of the FHLBank or the Office of Finance and assesses the risks presented within the context of the FHLBRS. In particular, he or she considers whether the issue or concern represents an isolated occurrence or is a manifestation of an overall weakness in corporate governance, risk management, internal controls or audit coverage that could affect risk or other assessments of the institution under the FHLBRS.

In their assessment of potential examination findings, examiners use the findings categories established by the Office of Supervision in its Advisory Bulletins. These categories are set out below:

a) ***Unsafe or Unsound Practice or Condition***- Any action or inaction that is contrary to prudent operation that has resulted in, or if continued could

result in, abnormal loss or risk or damage to the FHLBank or the Office of Finance. An institution's condition need not deteriorate to the brink of insolvency before a practice or condition may be found to be unsafe or unsound. Immediate corrective action is required.

b) ***Violation***- Non-compliance with statute, regulation, or agency rule. Corrective action is required.

c) ***Weakness-*** An inadequate or otherwise unacceptable policy, procedure, or practice, or a lack of sufficient internal controls or risk management. Corrective action is required.

d) ***Recommendation***- A suggested change to a policy, procedure, practice, or control to improve performance or operations.

e) ***Referral***-A matter that raises a legal or policy issue requiring guidance from or development of a position by Finance Board staff.

The examiner's evaluation of a potential finding is accompanied by adequate supporting documentation and is transmitted to the examiner-in-charge for review and approval. The examiner-in-charge reviews all proposed findings for accuracy, relevance and materiality prior to their inclusion in the report of examination. The portfolio manager should conduct an additional review of the proposed findings.

f) Exit Meeting

Throughout the examination process, examiners communicate with FHLBank or Office of Finance management and staff in order to facilitate the flow of information and ensure an accurate understanding of the key risks, processes and controls and the factual basis for examination findings.

Examiners hold an exit meeting with senior or line management to communicate the results of the examination and to discuss any potential findings prior to the closing conference.

g) Preparation and Issuance of Findings Memoranda

Findings memoranda provide FHLBank or Office of Finance management with examiners' preliminary conclusions and findings. Examiners use findings memoranda to thoroughly communicate examination findings and their bases to management, elicit management's views, and confirm facts. The outline for the findings memoranda is as follows:

1. ***Finding-*** a concise description of the deficiency.

2. ***Basis-*** an overview of the deficiency, its root cause, and the analysis performed. If it can be identified, the effect of the deficiency on the FHLBank would be discussed. For example, "…if not corrected or changed, the FHLBank's credit risk will rise to an unacceptable level."

3. ***Remediation-*** the remedial action requested. The remedial action may take the form of a general statement, for example, "develop a plan to reduce interest rate risk," or be a specific requirement with imposed deadlines. An example of the latter might be, "…revise the investment policy by XX-XX-200X."

4. ***Discussion with management-*** identify when and with whom the matter was discussed. Commitments for correction would be memorialized here.

The findings memoranda should be succinct and contain only the information needed to explain the deficiency. Like findings should be grouped. For example, internal control deficiencies across business units should be presented in a single findings memorandum.

An examiner issues a findings memorandum to management as soon as the examiner-in-charge has reviewed it and considers the findings it contains to be adequately supported. In most circumstances, examiners discuss findings orally with management prior to the presentation of a findings memorandum.

h) Communication of Findings to Management and Management Response

Throughout the examination, the examiner-in-charge meets with executive management to discuss the examination approach and any relevant issues or concerns needing to be addressed or clarified. Examiners should meet regularly throughout the examination with FHLBank staff responsible for areas under examination.

The examiner-in-charge is responsible for planning a closing conference with management to discuss the findings identified during the examination. He or she generally prepares a proposed agenda of topics to be discussed at the closing conference and attaches completed findings memoranda to it.

Once the agenda is prepared, the examiner-in-charge furnishes a copy to senior management of the FHLBank or the Office of Finance, as appropriate. If a findings memorandum is still in preparation, the examiner-in-charge includes a short description of matters to be covered in that area of review in the agenda.

The purpose of the closing conference and discussion of the agenda is to:

1. Review the data and issues with the executive management to ensure that the information is accurate, relevant and complete;

2. Solicit executive management's response to the issues discussed;

3. Communicate the examiners' findings and conclusions that are to be included in the report of examination; and

4. Answer questions that executive management may have regarding the examination.

The examiner-in-charge leads the meeting with management, but may include assisting examiners. During the meeting, the examiner-in-charge reaches an understanding with management as to the timeframe within which management can provide a response. However, a written response is not required. The examiner-in-charge includes a copy of the agenda in the workpaper documentation.

An effective closing conference results in an agreement as to the factual basis for examination findings by all parties and an understanding of the Office of Supervision's position on the findings, conclusions and ratings to be reported. Examiners should avoid creating inconsistencies between the tone or message conveyed at the closing conference and that contained in the report of examination.

i) Preparation of Memoranda (Activity/Function)and Conclusions Memoranda (Component/Composite), and Assignment of Ratings under the FHLBRS

For each FHLBank or Office of Finance function or activity examined, examiners summarize the results of the examination in a separate memorandum in accordance with the instructions set forth in the appropriate examination work program.

Based upon the memoranda for the functions or activities examined, examiners also prepare a separate Conclusions Memorandum for each component rating under the FHLBRS that assigns the proposed component rating and articulates its basis. In addition, examiners prepare a similar Conclusions Memorandum that assigns the proposed composite rating under the FHLBRS.

Examiners should not discuss any proposed rating under the FHLBRS with the board of directors or management of the FHLBank or Office of Finance prior to the issuance of the report of examination.

(5) Post-Examination Procedures

a) Completion of Workpapers in accordance with Workpaper Standards

Examiners are responsible for the completion of workpapers in accordance with the Office of Supervision's workpaper standards, which are detailed below:

Introduction

An examiner should document examination findings through a combination of FHLBank source documents, report comments, and other examination workpapers that address both management practices and condition. Examination documentation should provide a clear trail of decisions and supporting logic and provide written support for examination and verification procedures performed and conclusions reached.

Workpapers are the primary supporting documentation for the examination. They include printed and electronically stored information prepared or obtained during the examination and are important for:

a) Documenting the findings and conclusions of the examination;
b) Providing a means for the organization, control, administration, and review of the work performed;
c) Providing evidence of work performed;
d) Providing explanations of or changes in scope;
e) Assuring that examination objectives are achieved;
f) Supporting agency positions in enforcement actions and litigation;
g) Evaluating quality of work performed and examiner performance;
h) Providing training; and
i) Planning and conducting future examination and supervisory activities.

The examiner should include in his or her workpapers only what is essential to support the work performed and the conclusions drawn. Typically, workpapers consist of documents drafted by examination staff such as off-site activity reports, planning documents, meeting and discussion memoranda, analysis memoranda, and findings memoranda. However, workpapers should also include documents supportive of examination conclusions obtained from other sources, such as correspondence and reports from the FHLBank and copies of the FHLBank documents, internal and external audit reports, and reports of consultant(s).

An examiner should exercise particular care to fully document the work performed and conclusions in situations of significant supervisory concern, particularly if the initiation of an enforcement action is being contemplated.

Office of Supervision requirements for workpaper content, preparation, security, retention, and supervisory review are discussed below.

1) Workpaper Content

In all cases, examiners should prepare and organize workpapers in a manner designed to facilitate review by the examiner-in-charge or other reviewer of the basis for the examiner's findings and conclusions. Accordingly, examiners should ensure that their workpapers address the following attributes:

a) Objectives (purpose of review);
b) Scope and source, such as testing performed, identification of source of information, and interviews with FHLBank personnel, and similar considerations;
c) Procedures performed; and
d) Results, conclusions and proposed corrective action (if warranted).

Examiners may vary the extent of workpaper documentation based upon factors such as examination scope, risk profile of the FHLBank or Office of Finance, and experience level of examiners. In some situations, it may be appropriate for an examiner to customize procedures or perform procedures outside the examination program to achieve the most efficient and effective evaluation. An examiner proposing to deviate from agreed-upon scope should document the proposed modification and obtain the approval of the examiner-in-charge.

2) Workpaper Preparation

a) Workpaper Indexing, Cross-Referencing and Hyperlinking

Examiners should prepare a workpaper index listing all workpapers for the function or activity he or she has reviewed, including a table of contents for quick reference. The workpaper index should be hyperlinked or cross-referenced to the applicable workpapers to afford quick access to the information contained in the workpapers, thereby expediting any workpaper review as well as the preparation of the report of examination.

b) Hardcopy Workpapers

To the extent possible, examiners should use hardcopy workpapers only for documents that are not available in electronic format. To enhance the efficiency and effectiveness of the examination, examiners should complete workpapers in electronic format and secure them on the Local Area Network.

If hardcopy workpapers are to be used, they should contain the following:

i. Descriptive Heading

The preparer should identify each hardcopy workpaper by a heading. The heading should include the name of the entity being reviewed, a description of the contents or purpose of the workpaper, and the date of the examination.

ii. Initialing and Dating

The preparer should initial and date the first page of numbered, hardcopy workpapers to signify that these workpapers are complete and are available for review.

c) Tickmarks

An examiner may use "tickmarks" in his or her workpapers to explain repetitive work performed or data included in them. If an examiner uses tickmarks, he or she should clearly explain them in a tickmark legend. A well written tickmark explanation should generally include a brief description of the item or examination procedure performed, such as "traced to general ledger subsidiary report" or "recalculated, no exception noted."

3) <u>Security of Workpapers (Hardcopy and Electronic)</u>

Workpapers are the property of the Finance Board and should be secured at all times. Examiners should retain hardcopy workpapers in a locked file or desk overnight. Electronic workpapers require additional measures to alleviate security concerns. To minimize risk, access and function capabilities should be restricted to authorized Office of Supervision staff.

4) Workpaper Retention Requirements

Examiners should retain all workpapers (hardcopy and electronic) in accordance with the guidelines outlined in the Finance Board Office of Management records management schedule.

5) Workpaper Review

Quality control over the examination work is crucial to the integrity of the examination. Workpaper review is an important part of the examination. In all cases the examiner-in-charge and portfolio manager should ensure that they, or another person(s) designated by them, review all completed workpapers to determine whether the intended scope of the examination was carried out, adequate evidential material is contained to support the work performed, and conclusions are accurate and adequately supported. The findings and conclusions contained in the final report of examination should be adequately supported by the workpapers.

b) Preparation and Transmittal of Report of Examination

1. ***Report of Examination Preparation***

The examiner-in-charge prepares a report of examination that contains examiners' conclusions, assessments and recommendations and assigns component and composite ratings under the FHLBRS based upon the proposed ratings contained in the Conclusions Memoranda.

The report of examination should be directed to the institution's board of directors and should reflect a level of analysis and detail appropriate to those audiences to describe and explain examination conclusions. In preparing the report of examination, the examiner should remember that the board of directors will generally not have day-to-day involvement in the operation of the institution or the detailed knowledge such involvement would normally confer. Consequently, the report of examination should provide broad, high-level, institution-wide conclusions and assessments, arranged by rating component factor under the FHLBRS, without unnecessary detail or length. Discussions should focus upon root causes of problems rather than upon symptoms.

Principal examination findings that support the assessment of an institution's corporate governance, market, credit and operational risk, condition and performance, and affordable housing and community investment activities should be presented in a separate section at the end of the report of examination, arranged by assessment factor. Examiners should cite and discuss specific examination findings in the body of the

report of examination only if and to the extent that (i) such findings are necessary to the overall conclusion or a supporting assessment regarding the institution and (ii) their importance to the conclusion or assessment cannot be adequately captured through reference to a findings memorandum alone.

The report of examination should include critical financial information upon which the assessment of the condition, performance and future prospects of the institution is principally based and present it in a separate section. It is important that examiners discuss the implications of the information for the institution's condition, performance and future prospects.

2. ***Report Transmittal***

The Office of Supervision should send a signed hardcopy of, and pdf. file containing, the completed report of examination to the president of the FHLBank or managing director of the Office of Finance, as appropriate, with a request to distribute copies of the report of examination to all members of the institution's board of directors. The report of examination should be accompanied by a transmittal letter addressed to the chairman of the board of directors of the institution. The transmittal letter should advise the board of directors that a written response is required to be submitted to the Office of Supervision within 15 days of the board of directors meeting that follows the Office of Supervision's presentation of examination findings to the board. The report of examination should specifically address items requiring board attention. Approval of the written response by the institution's board of directors should be evidenced in minutes of the meeting at which the action took place.

The Office of Supervision should also provide a transmittal letter and a copy of the report of examination to the Board of Directors of the Finance Board.

3. ***Report of Examination Format***

Examiners should complete the report of examination in accordance with the attached format.

B. Security of Examination Records

Introduction

All internal papers, files and other records of the Finance Board are property of the United States and should be considered confidential. Records and workpapers developed by examiners as a part of any examination conducted pursuant to the authority of the Finance Board are particularly sensitive and must be adequately secured and protected. Except for discussions with FHLBank System personnel concerning the contents of a report of examination, no examiner is authorized to disclose to any unauthorized person the contents of any files or to otherwise permit any such persons to have any form of access to any of the Finance Board's records.

Further, all Finance Board employees have a duty and responsibility to prevent access to the Finance Board's records by unauthorized persons. Unauthorized persons include both individuals who are not directors, employees or agents of the Finance Board as well as Finance Board-affiliated individuals who are not authorized to have access to examination records.

Protection of Agency Records

To facilitate the examination process, it is customary and necessary that the examined entity furnish examiners with files, records and other documents of a confidential or business proprietary nature.

Examiners should ensure that all documents relating to or stemming from examinations are secured adequately to ensure against improper public release. The examiner-in-charge is principally responsible for maintaining adequate security over all such files and prevent access by unauthorized persons. Although released to the board of directors of an institution examined at the end of an examination, a report of examination remains the property of the Finance Board. The contents of the report of examination are confidential and may not be released except as authorized by the Finance Board in Part 911 of its regulations or otherwise.

Examiners should pay particular attention to securing information stored in their portable computers. Examiners should immediately notify the examiner-in-charge or other supervisor of any instance where adequate security cannot be maintained or where security appears to have been breached. The examiner-in-charge should, in turn, take immediate steps to notify his or her portfolio manager.

Office of Supervision

REPORT OF EXAMINATION

Federal Home Loan Bank of [City]

<u>Prohibition of Disclosure or Release</u>

This document is the property of the Federal Housing Finance Board and is furnished to the Bank for its confidential use. Access is limited to persons and organizations permitted under Part 911 of the Rules and Regulations of the Federal Housing Finance Board under the circumstances authorized in that part, including those authorized in Advisory Bulletin 2006-AB-03.

In accordance with Section 20 of the Federal Home Loan Bank Act of 1932, as amended, the Federal Housing Finance Board conducted an examination of the Federal Home Loan Bank of [City] as of [Exam Commenced Date]. This report of examination presents the results of the Federal Housing Finance Board's examination. It was prepared for supervisory purposes and should not be considered an audit report.

_____
[Name of Examiner]
Examiner-in-Charge
Office of Supervision
Federal Housing Finance Board
[ROE "Signed" Date]

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Summary and Conclusions

	CURRENT EXAMINATION	PRIOR EXAMINATION
Examination Date		
Composite Examination Rating		
Corporate Governance		
Market Risk		
Credit Risk		
Operational Risk		
Financial Condition and Performance		

Financial Condition and Performance - Data

$ Billions (except net income)				
				System
	4Q XXXX	**4Q XXXX**	**2Q XXXX**	**2Q XXXX**
Assets				
Advances				
Net Mortgages				
MBS				
Non-MBS Investments				
MBS as a Multiple of Capital				
Consolidated Obligations				
Bonds				
Discount Notes				
Total GAAP Capital				
Regulatory Capital				
Retained Earnings				
YTD Net Income				
As Percent of Total Assets				
Advances				
Mortgages				
MBS				
Non-MBS Investments				
Regulatory Capital				
Retained Earnings				
As Percent of Consolidated Obligations				
Bonds				
Discount Notes				
Advances plus Mortgages				
Leverage (GAAP) (times)				
YTD (percent)				
Return on Assets				
Return on Equity				
Yield on Advances				
Yield on Investments				
Yield on Earning Assets				
Cost of Interest-Bearing Liabilities				
Net Spread				
Dividend Rate (quarterly ave)				
Number of Members				
Top 10 Borrower Percent				

Abbreviations

AB ..... Advisory Bulletin
AHP ..... Affordable Housing Program
ALCO ..... Asset Liability Committee
AMA ..... Acquired Member Assets
ARM ..... Adjustable Rate Mortgage
Bank ..... Federal Home Loan Bank of Seattle
BVE ..... Book Value of Equity
CFI ..... Community Financial Institution
CID ..... Community Investment Department
CO ..... Consolidated Obligation(s)
DN ..... Discount Note
DOE ..... Duration of Equity
FAS ..... Financial Accounting Standard
FASB ..... Financial Accounting Standards Board
FICO ..... Fair Isaac & Co.
Finance Board ..... Federal Housing Finance Board
GAAP ..... Generally Accepted Accounting Principle(s)
IDC ..... FT Interactive Data Corporation
LLR ..... Loan Loss Reserve
IAD ..... Internal Audit Department
IT ..... Information Technology
LIBOR ..... London Interbank Offered Rate
MPF ..... Mortgage Partnership Finance
MPP ..... Mortgage Purchase Program
MVE ..... Market Value of Equity
OAS ..... Option Adjusted Spread
OF ..... Office of Finance
OGC ..... Office of General Counsel
OS ..... Office of Supervision
PFI ..... Participating Financial Institution
RMBS ..... Residential Mortgage Backed Securities
RMP ..... Risk Management Policy
ROE ..... Report of Examination
S&P ..... Standard and Poor's

Examiners use the following findings categories:

Unsafe or Unsound Practice or Condition: Any action or inaction that is contrary to prudent operation that has resulted in, or if continued could result in, abnormal loss or risk or damage to the Bank or the OF. Immediate corrective action is required. A Bank's condition need not deteriorate to the brink of insolvency before a practice or condition may be found to be unsafe or unsound.

Violation: Non-compliance with statute, regulation, or agency rule. Corrective action is required.

Weakness: An inadequate or otherwise unacceptable policy, procedure, or practice, or a lack of sufficient internal controls or risk management. Corrective action is required.

Recommendation: A suggested change to a policy, procedure, practice, or control to improve performance or operations.

Referral: A matter that raises a legal or policy issue requiring guidance from or development of a position by Finance Board staff.

Examiners use the following composite rating categories:

Composite 1 – An institution that is rated "1" is considered to be operating in a safe and sound manner in every respect. It exhibits no material deficiencies in corporate governance, risk management, or financial condition, performance, and prospects. It is in substantial compliance with laws, regulations, and supervisory guidance.

Composite 2 – An institution that is rated "2" is considered to be operating in a satisfactory or acceptable manner. It may exhibit some moderate deficiencies in corporate governance, risk management, or financial condition and performance. The institution's board of directors and senior management have demonstrated the ability and willingness to address deficiencies in a timely manner. It is in substantial compliance with laws, regulations, and supervisory guidance. ***The general policy is that examiners will monitor the correction of identified deficiencies or weaknesses through the normal supervisory process.***

Composite 3 – An institution that is rated "3" raises supervisory concern due to deficiencies in its corporate governance, risk management, or its financial condition or performance. Taken alone or in combination, these deficiencies are moderate to severe. The organization may be in substantial noncompliance with laws, regulations, or supervisory guidance. The institution's board of directors or management do not demonstrate the ability or willingness to address deficiencies. A composite "3" rated institution requires more than normal supervision. ***The general policy is that supervisory action will be taken to address identified deficiencies or weaknesses.***

Composite 4 – An institution that is rated "4" is operating in an unacceptable manner. It may exhibit serious deficiencies in corporate governance, risk management, or financial condition and performance. It may be in substantial noncompliance with laws, regulations, or supervisory guidance. It requires close supervisory attention. Institutions in this group are considered to be operating in an unsafe or unsound condition or with unsafe and unsound practices. ***The general policy is that a formal enforcement action will be taken to address identified deficiencies or weaknesses.***

Report of Examination Form and Content

The report of examination should articulate all examination conclusions and the analysis supporting those conclusions in a clear and persuasive fashion. The report of examination should contain three narrative sections: the **Preface,** the **Body**, and the **Supplement**. The content of each section is described below. Examiner Guidance Bulletin 07-01 and the Federal Home Loan Bank Rating System provide additional guidance.

1) Preface

Scope of the Examination Page

The scope should identify all areas examined that are related to corporate governance, market risk, credit risk, operational risk, financial condition and performance, and, if applicable, affordable housing and community investment activities. Specific areas not examined should be listed.

2) Body

A) Summary And Conclusions Page

The Summary and Conclusions page should include a table at the top that depicts the date and ratings (both composite and component ratings) for the current examination and the previous examination. The definition of the composite rating should also be provided there.

Examiners should describe the basis of the composite rating and any changes to the rating since the previous examination. Issues relevant to the rating assigned should be reported in the order of their importance. The discussion should clearly articulate the conclusion regarding the overall condition and practices of the FHLBank and the analysis used to reach that conclusion. Not every rating component must be discussed.

B) Corporate Governance Rating Page

All conclusions must be supported and positive as well as negative results should be discussed. Examiners should provide an assessment of:

1) The board of directors and senior management;
2) Risk management policies and controls;
3) Compliance with laws, regulations and supervisory guidance; and
4) Governance and administration of the Bank's affordable housing and community investment activities.

C) Market Risk Rating Page

All conclusions must be supported and positive as well as negative results should be discussed. Discuss the level of market risk and the quality of market risk management. Also discuss practices that influence the future direction of risk (if known). Any discussion of trends should describe the applicable timeframe of the review.

Discussion of the level of market risk should address:

1) The sensitivity of the Bank's earnings and market value of equity to changes in interest rates and other market risk factors.
2) The sensitivity of the Bank's earnings and market value of equity to changes in interest rates and other market risk factors in relation to its retained earnings and capital.

Discussion of the quality of market risk management should address the quality and effectiveness of:

1) Board and senior management oversight of market risk;
2) Risk management policies, procedures, and internal controls;
3) Risk measurement, monitoring, and reporting systems, and;
4) Hedging activities.

D) Credit Risk Rating Page

All conclusions must be supported and positive as well as negative results should be discussed. Discuss the level of credit risk and the quality of credit risk management. Also discuss factors that influence the future direction of risk (if known). Any discussion of trends should describe the timeframe of the review.

Discussion of the level of credit risk should address:

1) The level and trend of nonperforming and non-accrual assets;
2) The overall quality and diversification of the advance, investment and acquired member assets portfolios; and
3) The volume and nature of credit documentation exceptions.

Discussion of the quality of credit risk management should address the quality and effectiveness of:

1) Credit reviews;
2) Credit risk management policies and procedures;

3) Credit underwriting policies and procedures;
4) Collateral valuation and testing procedures;
5) Methodologies for evaluating and maintaining credit loss reserves;
6) Credit risk self-assessments and internal risk ratings; and
7) Credit information systems.

E) Operational Risk Rating Page

All conclusions must be supported and positive as well as negative results should be discussed. Discuss the level of operational risk and the quality of operational risk management. Also discuss factors that influence the future direction of risk (if known). Any discussion of trends should describe the applicable timeframes of the review.

Discussion of the level of operational risk should address:

1) The level and frequency of losses resulting from inadequate or failed internal processes or systems, fraud or human error, or from external events;
2) The severity and frequency of accounting, financial, and regulatory reporting errors;
3) Whether the level of operational risk losses are increasing, decreasing or stable;
4) The degree to which processes are automated to minimize errors; and
5) The level of operational risk arising from the administration of the Bank's principal lines of business and its affordable housing and community investment activities.

Discussion of the quality of operational risk management should address the quality and effectiveness of:

1) Policies, procedures, systems in place to measure, manage, and control operational risk;
2) The measurement, monitoring and control of operation risks;
3) Policies and procedures to ensure secure, efficient and effective information and data processing;
4) Contingency and business continuity planning;
5) Operational risk reports;
6) Processes for identifying and controlling risk to business activities;
7) The operational risk self-assessment; and
8) Operational risk management in the administration of the Bank's affordable housing and community investment activities.

F) Financial Condition and Performance Rating Page

All conclusions must be supported and positive as well as negative results should be discussed. The Bank's financial condition, performance, and prospects should be discussed and include an assessment of:

1) Earnings and profitability
2) Operating efficiency
3) Capital and retained earnings
4) Liquidity

G) Financial Condition and Performance Data Page

Include information relevant to the financial condition and performance of the Bank that supports the conclusion set forth in the Financial Condition and Performance section. The examiner possesses discretion to determine the information that will be included in this section. A default example of this page has been included in the sample report of examination. This information can be obtained from the financial analyst assigned to the Bank.

H) Affordable Housing and Community Investment Activities Page

Provide an evaluation of whether the Bank's affordable housing and community investment activities are effective and comply with law and regulations. This discussion should address significant supervisory concerns and whether and how the Bank responds to supervisory criticism. Supporting paragraphs may include discussion of such areas as:

1) The level of engagement and oversight;
2) The existence of a comprehensive a comprehensive and accurate management information system;
3) Accurate scoring of applicants and the award and disbursement of the proper amount of AHP subsidy;
4) Adequate monitoring of compliance of approved projects and set-aside programs with requirements and prompt remedial action of problems found; and
5) Eligibility of projects and households for community investment cash advance funding.

I) Disposition of Findings from Previous Examination Page

This section should include a brief overview regarding the disposition of findings identified at the previous examination. If the Bank has not properly addressed prior examination findings, consider whether this comment should be placed on the Summary and Conclusions pages instead.

3) Supplement

A) Principal Findings Page

Discuss all findings that are considered to be a "weakness," "unsafe and unsound," "violations," and "referrals." Recommendations are included in the report of examination only on an exception basis at the discretion of the examiner in charge. See Examiner Guidance Bulletin 07-01 for presentation of findings.

Introduction

All areas of an FHLBank's operations, including asset structure, capitalization, earnings, liquidity and internal compliance and control structure are directly influenced by the institution's board of directors and senior management. An FHLBank's board of directors and senior management must have a clear understanding of the interrelationships among the FHLBank's activities and how they affect the prudential operation of the institution and its ability to fulfill its housing finance and community lending mission. The board of directors and senior management must also be familiar with the external environment and how factors outside the FHLBank may affect the operations of the institution.

Corporate governance begins with engaged, capable, and experienced directors and senior management, a coherent strategy and business plan, and clear lines of responsibility and accountability. The board of directors oversees the development of the overall business strategy for the FHLBank and the decisions made by senior management in the pursuit of strategic objectives. The board of directors assesses both the appropriateness of the strategy and decisions and the success with which they are implemented. Senior management, with input and approval by the board of directors, develops the business strategy, makes significant decisions to implement that strategy, and oversees day-to-day decisions and actions by subordinate staff, to ensure that these decisions support the long-term objectives and policies as determined by the board of directors.

The achievement of the strategic and operational objectives of the FHLBank must be supported by the development and maintenance of a strong system of internal controls and effective risk management. An effective internal control and risk management environment is essential to provide reasonable assurance that assets are adequately safeguarded, critical information is relevant, reliable and timely, and resources are utilized in an effective and efficient manner, as well as to evaluate compliance with management policies, standards, laws, regulations and sound fiduciary principles.

The assessment of the quality of corporate governance of an FHLBank by its board of directors and senior management should be ongoing throughout the examination process as the examiners perform an evaluation of all critical activities of the FHLBank. While the board of directors and senior management are collectively responsible for management of the FHLBank, it is important to recognize the differences between the duties and responsibilities of the board of directors and senior management. These differences are particularly important in evaluating the various processes and systems established to direct and control an FHLBank's operations. A description of the key duties and responsibilities of the board of directors and senior management, generally, is set forth below.

Board of Directors Responsibilities-General

Under Section 7 the FHLBank Act, the management of each FHLBank is vested in its board of directors. In the broadest sense, the board of directors of an FHLBank determines the strategic direction for the institution, formulates policies and provides supervision over the affairs and senior management of the FHLBank. It is also responsible for promoting the FHLBank's welfare and mission, even when the promotion of these interests may conflict with the interests of member institutions, including the interests of members whose representatives serve as directors of the FHLBank. The board of directors may delegate oversight of day-to-day activities to senior management, but cannot delegate its fiduciary duty to manage the institution nor its responsibility for the consequences of unsound or imprudent policies and practices.

The duties of FHLBank directors are set out in Section 917.2 of the Finance Board's regulations. Each director has the duty to:

1) Carry out his or her duties as director in good faith, in a manner such director believes to be in the best interests of the FHLBank, and with such care, including reasonable inquiry, as an ordinary prudent person in a like position would use under similar circumstances;

2) Administer the affairs of the FHLBank fairly and impartially and without discrimination in favor of or against any member;

3) At the time of appointment or election, or within a reasonable time thereafter, have a working familiarity with basic finance and accounting practices, including the ability to read and understand the FHLBank's balance sheet and income statement and to ask substantive questions of management and the institution's internal and external auditors; and

4) Direct the operations of the FHLBank in conformity with the requirements of the FHLBank Act and the Finance Board's regulations.

In making an overall assessment of the adequacy of oversight by an FHLBank's board of directors, examiners should evaluate the competence of the board of directors and its effectiveness in directing the affairs of the FHLBank. Specific responsibilities include, but are not limited to, those that follow below.

1) Hire and retain competent executive management

It is a primary duty of the board of directors of an FHLBank to ensure that the chief executive officer (CEO) and other members of senior management have the necessary skills, knowledge, and experience to manage the FHLBank's affairs in a sound and responsible manner. An FHLBank's board of directors or designated board

committee should be actively involved in the selection of a CEO. Selection criteria should include technical competence, character, education and experience in the financial services industry or other related fields.

The board's policies should address the CEO selection process, as well as the board's plans for management succession in the event of a loss of the CEO and other key senior management.

The ongoing evaluation by the FHLBank's board of directors of the CEO and senior management is critical to the success of the institution. A CEO's performance and compensation should be tied to and measured against clearly defined duties and responsibilities, as well as standards of performance and measurable performance targets. Performance standards and targets should be directly linked to the FHLBank's success in implementing its strategic and operational plans, including the achievement of both long- and short-term financial performance goals, maintenance of a safe and sound condition, and the carrying out of its housing finance and community lending mission. All significant areas of an FHLBank's operations should be covered, including investments, loans, asset and liability management, profitability, strategic planning and risk management.

An effective board of directors establishes a process for monitoring the CEO's success in satisfying applicable performance standards and achieving performance targets, as well as for evaluating the performance of the CEO. The board or a committee thereof should monitor the CEO's performance throughout the year and provide periodic assessments. The board or a committee of the board should conduct a formal review of the CEO's performance at least annually.

An FHLBank's board of directors is responsible for taking disciplinary action, including dismissal, against the CEO or members of senior management who prove unable to meet the performance standards and targets or who commit violations of law, breaches of fiduciary duty or otherwise place the FHLBank or its reputation at risk. Failure by the board of directors to act deliberately yet decisively when the need arises may constitute a serious breach of the board's fiduciary responsibilities.

2) Establish a risk management structure

The risk management process is intended to identify an FHLBank's exposure to risk and determine whether risks are appropriately managed to ensure they are consistent with the desired risk profile established for the FHLBank by the board of directors and senior management. A qualitative and quantitative evaluation of all material risks and the system of controls for managing them should be reflected in an annual risk assessment as required by Section 917.3 of the Finance Board's regulations.

There are three components to the risk management process: (i) risk identification, reporting and analysis; (ii) risk control; and (iii) risk treatment. Risk identification, reporting and analysis requires a review of all aspects of an FHLBank's current and future operations to determine where there is potential exposure to loss and reporting of identified risks to management and the board of directors of the FHLBank. Risk control is a function of the strength of the FHLBank's internal controls, policies, and procedures. Risk treatment is the selection of appropriate measures or methods to manage a particular risk, such as a hedge.

An effective board of directors must have a fundamental understanding of the FHLBank's business activities and associated risks. While the members of the board may not be expert in the risks attendant to all of an FHLBank's activities, they must ensure that such expertise is available to them and that the FHLBank's risk management system undergoes appropriate reviews by suitably qualified professionals.

The board of directors is responsible for taking reasonable steps to ensure that management has established strong management information systems (MIS) to accurately identify, measure, monitor, and control risks. The system should:

1) Facilitate the assessment and management of risks within the FHLBank, including their identification, monitoring, measurement, and limitation;
2) Provide management with an adequate decision support system by providing information that is timely, accurate, complete, relevant, and consistent;
3) Deliver complex or technical information to multiple users throughout the FHLBank;
4) Provide a means to monitor the achievement of the organization's goals and objectives;
5) Reduce expenses related to labor-intensive manual activities; and
6) Allow for communication with employees and customers.

An FHLBank's board of directors has primary responsibility for establishing and maintaining a robust risk management process for the institution. The FHLBank's safe and sound operation is dependant upon identification and management of its risk exposures. Examples of specific risk management responsibilities of the board of directors include:

a) Establishing a sound risk management culture and overall risk tolerances for the FHLBank;
b) Reviewing and approving policies, standards, and procedures that clearly quantify acceptable risk and that define responsibility and authority;
c) Evaluating and approving compensating policies and controls to mitigate risks;
d) Reviewing deviations and exceptions that exceed established risk standards and limits;

e) Reviewing current and potential litigation and other legal claims initiated or asserted by the FHLBank, or by third parties against the institution, including an evaluation on the potential impact of any adverse determination upon the FHLBank's financial condition and performance;
f) Requiring independent audits of the key risks and internal controls, policies and procedures that are applicable to the FHLBank environment;
g) Ensuring that corrective action is taken to eliminate material exceptions, issues or deficiencies reported by the FHLBank's external or internal auditors or regulatory examiners;
h) Reviewing and approving of the FHLBank's strategic and operational plans;
i) Formally delegating to management of the authority to formulate and implement the FHLBank's strategic and operational plans;
j) Specifying content and frequency of reports provided to the FHLBank's board of directors;
k) Ensuring sound staffing and compensation practices, as well as a positive working environment that emphasizes the importance of regulatory and policy compliance in the FHLBank's achievement of its strategic and operational objectives and employees' success and longevity at the institution;
l) Performing an annual evaluation of the performance of the CEO;
m) Evaluating the degree and consistency of the FHLBank's compliance with applicable laws and regulations; and
n) Taking reasonable steps to ensure that the FHLBank's financial statements are transparent and accurate.

3) Develop and maintain an understanding of the FHLBank's business environment

An FHLBank's directors should have an understanding of the FHLBank's business environment and the legal and regulatory framework within which the FHLBank operates, as well as of their duties as FHLBank directors. Directors should be familiar with applicable laws and regulations so that they may determine that the FHLBank has appropriate policies and procedures in place to maintain compliance with them. Through interaction with FHLBank management, as well as independent inquiry, directors are required to remain informed regarding FHLBank System issues and FHLBank matters. Moreover, as described previously, Section 917.2 of the Finance Board's regulations requires that each director have a working familiarity with basic finance and accounting policies, including the ability to understand the FHLBank's financial statements and ask substantive questions of management and the FHLBank's internal and external auditors.

An effective tool to assist new board members in the discharge of their duties is an orientation program. That program should explain the operation of the FHLBank and the business environment and legal and regulatory framework in which the FHLBank operates. The orientation program also should clearly emphasize the responsibilities of board members both individually and as a group as well as provide ethics training

for new directors.

The board of directors should conduct a survey of director skills to assist in the development of programs that enable any director that does not have a working familiarity with basic finance and accounting to gain such knowledge within a reasonable time after being elected or appointed to the board. Educational programs covering FHLBank activities, risks, hedging, modeling, emerging issues, and legal/regulatory updates also should be provided regularly.

By virtue of their positions, FHLBank directors have a fiduciary duty of loyalty to the FHLBank on whose board of directors they sit. When acting in their capacity as FHLBank directors, they must place the interests of the FHLBank before their own interests or those of the institution's members, including the interests of a member with which they are employed or are otherwise affiliated, where those interests diverge. FHLBank directors are responsible for dealing fairly with the FHLBank in business transactions and for ensuring that their personal or other business interests do not influence their decisions as directors. An FHLBank director should not participate in any decision by the FHLBank's board of directors to enter into a transaction between an FHLBank and the director, or between an FHLBank and a member with which the director is employed or otherwise affiliated.

Directors must structure their dealings with the FHLBank to comply with legal requirements and avoid even the appearance of a conflict of interest. Likewise, they must administer the affairs of FHLBank fairly and impartially, without discrimination in favor of or against any member. In addition, directors must take reasonable action to prevent FHLBank employees from abusing their positions with the FHLBank. The board of directors should adopt a written code of conduct including ethical conduct applicable to FHLBank directors, management and subordinate employees, including provisions setting forth requirements for confidentiality of information, employee treatment and safety, and conflicts of interest. Part 915 of Finance Board's regulations establishes specific requirements for the FHLBank's conflicts of interest policy.

4) Establish an effective board of directors structure to oversee the activities of the FHLBank

The stewardship responsibilities of FHLBank directors include the establishment of an effective organizational structure that ensures that relevant and accurate information concerning the FHLBank's activities is brought to its attention. These responsibilities include the authorization committees to perform specific tasks and supervise certain phases of the FHLBank's operations. All committees should have written charters that clearly address their mission, authority, responsibility, and duration. Standing committees address continuing areas of responsibility, such as a loan committee or an audit committee, while *ad hoc* committees may be established

to accomplish special projects, allowing in-depth consideration of one-time issues.

Each board committee must keep minutes of its meetings documenting the discussions of each item considered at the meeting and, if applicable, procedures that should be established to address issues or concerns without the presence of FHLBank senior management, including the convening of executive sessions. Committees must report regularly to the full board of directors. The board may rely upon information provided to it by committees, but the full board retains responsibility for all decisions.

Section 918.7 of the Finance Board's regulations requires FHLBank boards of directors to meet a minimum of six times per year. However, above that minimum, boards should meet as frequently as the business and affairs of the FHLBank require. Board meeting packages should focus directors' attention on important issues or concerns. Priorities should be clear and requested board action, identified. Explanatory materials should accompany relevant data and information.

The board or directors should identify the type and frequency of reports necessary to oversee the FHLBank's financial performance and activities. The FHLBank's information technology should be aligned with the board's expectations and requirements and be able to provide relevant, accurate, and useful reports in a timely manner. Key performance reports enable the board to evaluate the FHLBank's financial performance in accordance with the FHLBank's strategic goals and mission, financial trends, risk profile, compliance with established risk tolerances and standards, and the adequacy of its risk management processes.

The board of directors should ensure that an accurate record of its actions is maintained in the form of minutes of each board and committee meeting, including any executive sessions and any telephonic meetings, and fully executed forms of director consent for any actions taken by unanimous written consent in lieu of meeting. Minutes should document the board's review and discussion of all agenda items. The minutes also should record the attendance/absence of each director and abstentions by any director from any vote.

Examiners should review the minutes of board of directors and committee meetings, as well as typical packages sent to board members in preparation for the meeting, to determine if directors are receiving appropriate information to make informed decisions. Examiners also should assess whether board meeting frequency is appropriate to oversee the FHLBank's activities.

Section 917.7 of the Finance Board's regulations requires the board of directors of each FHLBank to establish an audit committee of the board. The audit committee is responsible for monitoring, overseeing, and evaluating the extent to which an FHLBank's management, internal audit function, and the external auditors successfully carry out their duties and responsibilities to maintain the FHLBank's

processes for controlling its operations, ensure the reliability and integrity of the organization's accounting, financial reporting and disclosure practices, and ensure that all issues reported by the organization's internal audit function external auditor, and other outside auditors have been satisfactorily resolved.

The specific duties and responsibilities of an FHLBank's audit committee include, but are not limited to, the following:

1. Directing senior management to maintain the reliability and integrity of the FHLBank's accounting policies and financial reporting and disclosure practices;
2. Reviewing the basis for the FHLBank's financial statements and the external auditor's opinion rendered with respect to such financial statements and ensuring that policies are in place that are reasonably designed to achieve disclosure and transparency regarding the FHLBank's true financial performance and governance;
3. Conducting oversight of the FHLBank's internal audit function by:
   a. Reviewing the scope of audit services required, significant accounting policies, significant risks and exposures, audit activities and findings;
   b. Monitoring the adequacy and timeliness of internal audit follow-up on findings;
   c. Assessing the performance, and determining the compensation, of the audit director; and
   d. Reviewing and approving the audit director's work plan.
4. Conducting oversight of the external audit function by:
   a. Approving the external auditor's annual engagement letter;
   b. Reviewing the performance of the external auditor; and
   c. Making recommendations to the board of directors regarding the appointment, renewal, or termination of the external auditor.
5. Providing an independent, direct channel of communication between the board of directors and the internal and external auditors;
6. Conducting or authorizing investigations into matters within the audit committee's scope of responsibilities;
7. Providing reasonable assurance that senior management has established and is maintaining an adequate internal control system by:
   a. Reviewing FHLBank's internal control system and the resolution of identified material weaknesses and reportable conditions in the internal control system; and
   b. Reviewing FHLBank's programs and policies designed to provide reasonable assurance of compliance with applicable laws, regulations, and policies and monitoring the results of the compliance efforts.
8. Reviewing the policies and procedures established by senior management to assess and monitor implementation of the FHLBank's strategic business plan and the operating goals and objectives;
9. Reporting its findings to the FHLBank's board of directors;

10. Determining the extent to which the FHLBank's internal and external auditors review the security for computer systems, facilities, and backup systems;
11. Evaluating responses by management to audit findings and reports and monitoring management implementation of audit recommendations; and
12. Monitoring compliance with FHLBank's conflict of interest policy and oversight of investigations of conflicts of interest and unethical conduct.

An FHLBank's audit committee is required to adopt, and the board of directors approve, a formal written charter that specifies the scope of the committee's powers and responsibilities, as well as its structure, processes, and membership requirements.

The charter must provide the following:

a. That the audit committee have the responsibility to select, evaluate and where appropriate, replace the audit director and ensure that the audit director be removed only with the approval of the audit committee;
b. That the internal auditor or audit director report directly to the audit committee on substantive matters and that the auditor or audit director be accountable to the audit committee and board of directors; and
c. That both the internal and external auditors have unrestricted access to the audit committee without the need for any prior management knowledge or approval.

The audit committee and board of directors must review, assess the adequacy of, and, where appropriate, amend, the audit committee's charter on an annual basis, amend the charter at other times as appropriate, and re-adopt and re-approve, respectively, the audit committee charter not less than every three years.

Examiners should perform a close evaluation of the audit committee's processes since the inability of the FHLBank's external or internal audit function to identify significant internal control deficiencies indicates potential weaknesses in the FHLBank's corporate governance and external/internal audit function.

Management Responsibilities-General

There is a direct relationship between the overall safety and soundness of an FHLBank and the quality of its management. In assessing management, examiners should consider management's qualifications, its fulfillment of its duties and responsibilities, and its performance related to strategic goals and objectives. In addition, examiners should consider whether management has established satisfactory risk controls over operations and business, and complied with applicable laws and regulations.

While the board of directors and management must work in concert to ensure the safe and sound operation of the FHLBank, each has its own distinct role and responsibilities to

fulfill. The CEO and other members of the senior management team must have the expertise necessary to assist the board in managing the FHLBank. All members of the senior management team should possess the same fundamental qualifications as the CEO: integrity, financial and management experience, technical competence, and character. Effective senior management must also possess and demonstrate the leadership qualities necessary to coordinate and organize resources and guide and motivate personnel to achieve the institution's objectives.

Senior management of an FHLBank should regularly advise the board of directors as to the FHLBank's activities and corresponding risks to ensure that directors are fully informed about activities and potential operational or financial problems. This advisory role is critical to the success of the board of directors since the board is removed from the day-to-day operations of the FHLBank and accurate, relevant, useful, and timely information is necessary for sound decision-making by the board.

Senior management of an FHLBank is also responsible for implementing any corrective actions specified by the board of directors. This includes management's willingness and ability to take timely corrective action in response to audit, review, and examination findings and recommendations. Supervisory authorities look to management to implement corrective action directed by the board and regulatory requirements. Procedures should be established to ensure continuing compliance with applicable law, regulation and Finance Board policy, as well as those of the FHLBank. A corrective action must be responsive to the cited criticism, and implementation of appropriate action must be timely and effective.

Examples of specific senior management responsibilities include, but are not limited to, the following:

1. Develop strategic and operational plans and risk management policies for approval by the board of directors;
2. Implement strategic and operational plans and risk management policies following approval by the board of directors;
3. Assess and implement an effective internal control environment and risk management process to address and monitor critical processes and mission activities of the FHLBank;
4. Establish procedures and controls to address compliance with key laws and regulations applicable to the FHLBank;
5. Develop and implement management information systems that adequately address the FHLBank's business environment and risk profile;
6. Develop written policies, procedures, and standards to address critical processes and mission activities and controls of the FHLBank;
7. Establish procedures to identify, report, assess and correct deviations from key standards, risk tolerances, and controls in a timely manner; and
8. Implement timely corrective action on significant control deficiencies and issues that

were reported by the FHLBank's external or internal auditors, and governmental authorities.

Senior management must ensure that all FHLBank functions are carried out in accordance with policies established by the board of directors and that the FHLBank has adequate systems in place to effectively monitor and manage risks. In addition, senior management must ensure that the FHLBank maintains internal risk controls appropriate for its size, activities, and business and that the FHLBank's MIS produces information that is timely, accurate, and complete.

The responsibilities of senior management also include maintaining an organizational structure that clearly assigns responsibility, authority, and relationships, establishing adequate performance incentives and personnel management systems; and hiring middle managers with appropriate professional skills, experience, and integrity.

In making an overall assessment of FHLBank's senior management, examiners should evaluate whether senior management has provided adequate guidance in the critical activities of the institution and has established adequate processes to manage, monitor, and control key risks. Specific responsibilities include, but are not limited to the following:

Management processes

Examiners must assess the effectiveness of the board of directors' and senior management's oversight of the FHLBank and evaluate the quality of their decision-making processes. In making such an assessment, examiners should evaluate the processes established by the FHLBank's board of directors and senior management to manage the organization. Those processes include strategic planning, policies and procedures, internal control systems, MIS, and human resource management. The examiner's review should focus on the level of involvement of directors and senior management in these processes.

a) Strategic and operational planning. Strategic and operational planning is an organized and continuous process ensuring that projections of the future operating environment influence current decisions. In its simplest terms, strategic and operational planning is the process of determining where the FHLBank is, where the board of directors and senior management believe it should be, and how the board and senior management plan to get there. Planning can be divided into two components: strategic planning, which is an ongoing process that focuses on long-term deployment of resources to achieve goals and operational planning, which concentrates on short-term actions that flow logically from the strategic plan and are revised periodically, and includes an annual operating budget.

   Well-developed and executed strategic business plans represent projections about

the future of the FHLBank. In order to be effective, planning must be dynamic and well-supported. Projections must be revised periodically as circumstances change and new strategies must be devised to meet stated objectives. The board of directors' and senior management's attention to this area and the extent to which plan objectives are met are two of the best indicators of board and management capability. The most important ingredient in an effective planning process is the commitment and involvement of the FHLBank's board of directors and senior management to this process.

Effective planning provides other benefits for the FHLBank. By minimizing the element of surprise and maximizing the institution's ability to manage change effectively, planning provides an approach to decision-making that best assures the continuing and consistent health and growth of an FHLBank. Effective planning also provides a basis for monitoring and measuring the performance of the institution.

The quality of the strategic business plan is dependent on the effectiveness of the planning process. While the planning process is continuous, it begins with the formulation of the board of directors' overall philosophy and vision for the FHLBank's future. Planning that is integrated into the management process can assist managers in accomplishing their work and benefit the entire organization. Frequently, deficiencies noted in the plan are the result of flaws in the planning process. Attention to details in the design and implementation of the plan should reduce the risk of failure. The following elements enhance planning and should be incorporated into the planning process:

1. Complete endorsement from both senior management and the board of directors;
2. Full participation at the board of directors and all management levels; the planning process should identify who should be involved, determine the appropriate form and timing of the involvement, provide an opportunity for participation, and ensure that participation occurs;
3. A planning policy that is formally documented and outlines the steps for completing the planning process;
4. Assigned responsibilities for developing and implementing the plan;
5. Effective communication of expectations and planned actions to those responsible;
6. An adequate information system that provides management and the board of directors with timely, accurate, consistent, and appropriate information needed to allow for monitoring performance in accordance with the strategic business plan;
7. Measurable goals, objectives, strategies, and action plans;
8. Contingency plans that identify probable emergency or contingency conditions and their expected impact;

9. Flexibility to reflect changes to the institution's operational environment;
10. Review and follow-up to determine completeness, consistency, and accuracy; the board should review and approve the final plan;
11. Effective implementation, including prudent decision-making, commitments of resources, and consistent and clearly stated performance standards based on planned goals and objectives; and
12. Formalized monitoring and control systems that evaluate progress against the plan and identify weaknesses in the implementation of the plan.

The success of business planning is dependent on strategic planning for all significant areas of the FHLBank's operations, and includes effective planning and utilization of human resources and MIS.

b) Policies and procedures. Policies and procedures are an essential ingredient in any management system. The FHLBank Act and Finance Board regulations require the FHLBanks to adopt policies and procedures for all key critical activities of the institution. The extensiveness of an FHLBank's policies and procedures governing any function or activity should depend upon the significance of the function or activity, and the degree of risk its presents, as well as the organization of the FHLBank. Examiners should consider both the costs and the benefits of requiring the adoption of more extensive policies and procedures when assessing these.

Evaluating the FHLBank's policy-making process involves assessing policies and procedures of the FHLBank as a whole, as well as policies and procedures of specific FHLBank activities and operations. The review of the FHLBank's policy-making process should be closely coordinated with the examiners' reviews of other areas of examination interest at the FHLBank. Significant deficiencies in specific policies or procedures may result in adverse financial or other conditions and generally indicate weaknesses in the FHLBank's policy-making process.

Policies are guides for achieving the established objectives and strategies of the institution. Procedures are the steps taken to implement policies. Both policies and procedures are necessary to ensure sound business practices. The board of directors is responsible for formulating sound policies. The board must ensure that policies and procedures are appropriate for the FHLBank and consistent with strategic goals, objectives, and risk tolerances. Senior management is responsible for implementing the board's policies through the development of procedures.

Although the board of directors usually delegates the day-to-day conduct of the FHLBank's business to senior management, the board is fully and ultimately accountable for the consequences of unsound or imprudent policies and the lack of policy guidance.

The purpose of policy-making is to provide guidance to FHLBank staff for making decisions and taking actions. Policies prescribe a course of action that is expected to achieve a particular goal. The anticipated effects of those goals on the organizational structure, financial condition and performance, product and service offerings, and marketing, as well as consistency with FHLBank's strategic direction and risk tolerance limits, should be considered in policy development.

Policies provide for future planning, taking into account the unique characteristics of the FHLBank and the board of director's goals and objectives. Policies must establish responsibility for managerial decisions and provide a mechanism for the necessary coordination between different departments within the institution. The board of directors must provide a clear framework of policies within which executive management must operate and administer the FHLBank's activities. Policies should be stated in broad terms to allow for varying situations, and periodically reevaluated and modified when necessary.

Policies generally should incorporate the following six principal elements:

1. Purpose and objective – the purpose of the policy should be clearly defined. The policy should also define the objectives that are to be accomplished.
2. Operating parameters – the policy should specify the parameters within which management and staff are expected to operate. The parameters should be consistent with Finance Board regulations, federal and state law, and Generally Accepted Accounting Principles. The parameters should also ensure the safety and soundness of the FHLBank, adequately control risk, and be compatible with the FHLBank's risk profile.
3. Authorities delegated to management – the authorities delegated to management should be clearly defined, consistent with the risk profile of the FHLBank, and within the operating parameters, regulations, and laws.
4. Authorities retained for board of directors approval or action – the authorities not delegated to senior management and retained by the board of directors should be clearly stated in the policy.
5. Process for addressing exceptions – the policy should provide a clearly defined process to address exceptions to the operating parameters.
6. Reporting requirements – the policy should describe what is to be reported to the board of directors, the frequency and content of the reports, and the individual responsibilities for preparing the reports.

Procedures detailing the planned implementation of policies should be developed and include steps for obtaining appropriate board approval for exceptions. Procedures should be reevaluated and modified when necessary. Procedures should be consistent with adopted policies and generally establish the following:

1. Purpose and objective;

2. Tasks to be performed;
3. Responsibilities of positions involved;
4. Appropriate departmental interactions;
5. A clear sequence of actions or steps to be taken to accomplish the objectives of the procedures and provide adequate controls; and
6. Sufficient detail to provide adequate direction to intended users.

The board of directors and senior management are responsible for ensuring that policies and procedures are thoroughly understood at all levels of the FHLBank. Without adequate communication, polices and procedures may not be properly implemented.

c) Internal controls. Internal controls represent measures undertaken by FHLBank management to enhance the likelihood that established objectives and goals will be achieved. FHLBank management should ensure that it plans, organizes, directs, and controls a sufficient number of actions to reasonably assure that the organization's goals and objectives will be achieved. Internal controls may be preventive (to deter undesirable events from occurring), detective (to detect and correct undesirable events which have occurred), or directive (to cause or encourage a desirable event to occur).

FHLBank senior management is responsible for the identification and evaluation of the institution's risk exposures and establishing an effective and efficient internal control environment that promotes the following:

1. Reliability and integrity of financial and operational information;
2. Effectiveness and efficiency of operations;
3. Safeguarding of assets; and
4. Compliance with laws, regulations and contracts.

The internal control environment represents the collective effect of various factors that establish, enhance, or mitigate the effectiveness of specific management processes. The evaluation of the internal controls provides the examiner a basis for assessing FHLBank management's effectiveness in overseeing the activities of the institution.

The evaluation of the internal control environment is a key factor in assessing a board of directors' and senior management's oversight of the FHLBank's activities. Examiners should consider the following factors when performing this assessment:

1. Management philosophy and operating style. Management's philosophy and operating style encompass a broad range of characteristics applicable to both the board of directors and executive management which could affect the

internal control environment. Specific examples include the approach to taking and monitoring the FHLBank's risks exposures, attitudes and actions with respect to financial reporting, adequacy of and compliance with policies and procedures, and emphasis on planning, budget, earnings, housing finance and community investment activities, and other financial and operating goals.

2. Organizational structure. Organizational structure provides the overall framework for the internal control needed to ensure effective planning, organizing, directing and controlling of the FHLBank's activities. The institution's size, diversity, and complexity of operations affect the level of control required. An organizational structure also includes consideration of the form and nature of an FHLBank's major business units and related management functions and reporting relationships. In addition, an organizational structure should provide the framework for the assignment and responsibility within the FHLBank in an appropriate manner.

3. Methods of assigning authority and responsibility. Methods of assigning responsibility affect the understanding of reporting relationships and responsibilities established within the FHLBank. Specific methods of assigning responsibility include consideration of:

   a) Policies regarding such matters as acceptable business practices, conflicts of interest, and codes of conduct;
   b) Assignment of responsibility and delegation to address matters that relate to organizational goals and objectives, operating functions and regulatory requirements;
   c) Employee job descriptions delineating specific duties, reporting relationships and constraints;
   d) Performance standards; and
   e) Computer systems documentation indicating the procedures for authorizing transactions and approving system changes.

   In assessing the methods of assigning authorities and responsibilities, consideration should be given to how certain duties are assigned. Generally, no one person should have the authority to perform or approve all aspects of a particular function. For example, the duties associated with the requisition, approval, recording and reconciliation of a particular transaction should not be assigned to the same employee. Also, duties should be periodically rotated and/or performed by other employees during leave of absences. Limiting and rotating duties can control the ability of one person to make significant errors or perpetrate significant irregularities without timely detection.

4. Human resources management (HRM). HRM focuses on effective personnel management and involves placing and employing personnel in an

organization's structure through selection, appraisal, compensation, and development programs. HRM is not an isolated element of organizational management and it is integral to other corporate processes such as planning, organizing, directing and controlling. An effective HRM program should include the following:

a) Board of directors-approved personnel policies and practices that address the FHLBank's ability to employ competent personnel to accomplish the FHLBank's goals and objectives. Personnel policies and practices should address compliance with laws and regulations, hiring, evaluating, training, promoting, compensating and retaining employees, as well as providing the necessary resources to enable them to properly discharge their responsibilities.

   An FHLBank should have a board of directors-approved equal employment opportunity (EEO) policy that addresses the following practices:

   1. Hiring and disciplinary action;
   2. Compensation, assignment, or classification of employees;
   3. Transfer, promotion, layoff, or recall;
   4. Job advertising and recruitment;
   5. Testing;
   6. Use of company facilities;
   7. Training and apprenticeship programs;
   8. Fringe benefits;
   9. Pay, retirement plans, and disability leave; and
   10. Other terms and conditions of employment.

   Examiners should verify that compliance with the FHLBank's EEO policy and operating practices is evaluated by the FHLBank's internal auditors and periodic reports are made to the board of directors as to the status of policy compliance. Examiners should be alert to any current or potential litigation or other claims implicating the FHLBank's EEO policy that may indicate weaknesses in the institution's risk management, governance and internal control structure.

b) Employee performance accountability that requires management to evaluate and review job performance, usually through a performance evaluation system. Evaluating and reviewing performance provides an internal control to promote, monitor, and evaluate adherence to policies, procedures, laws and regulations. The process also allows for the detection and correction of weaknesses in operating systems and records and provides management with a means of establishing and maintaining

control over delegated duties.

5. External influences. External influences are influences established and exercised by parties outside the FHLBank that affect the institution's operations and practices. These influences include the Finance Board and external auditors. While external influences are outside the FHLBank's authority, such influences can heighten management's consciousness of, and attitude toward, the conduct and reporting of the FHLBank's activities. They may also affect management's attitude toward compliance with law, regulation and policy. Outside parties may also prompt management to establish specific internal control structure policies or procedures.

   External influences also can adversely affect the effectiveness of internal controls. For example, competitive pressures may result in lending staff relaxing or even circumventing certain credit standards. Additionally, key officers or employees may take inappropriate actions when their personal financial interests (bonuses, performance awards) depend unduly upon short-term operating results or financial condition of the FHLBank. Examiners should be alert to circumstances outside the FHLBank that may lead employees, officers, and even directors, to pursue activities and actions that could adversely affect the interests of the FHLBank.

6. Management Information Systems. MIS comprises the system(s) that the FHLBanks employ to obtain, generate, and report information needed to make decisions, plan, monitor, and oversee the institution's risk exposures and activities effectively. MIS incorporates both automated and manually operated systems, as well as the manner in which information flows through the institution and is reported to the board of directors and management.

   The board of directors is responsible for determining the FHLBank's information needs and the most effective means of fulfilling them. Consequently, the board should communicate its expectations as to the reporting of information to management through formal written policies. The policies should identify what information is to be reported, with what frequency, and when. In addition, sufficient policy direction should be in place to ensure that the information is accurate, complete, and presented in usable format. Policies also should address the extent to which automation and integration of the various information sources and systems should be employed to enhance reliability, usability, and efficiency.

   Direction by an FHLBank's board of directors should specifically address the information needed to monitor and oversee the FHLBank's risk exposures and activities. Monitoring and oversight is required to ensure that the FHLBank is progressing toward stated objectives and that failure to comply with or

weaknesses in operating standards and risk tolerances are identified and corrected. The board should periodically assess the adequacy of MIS meeting these objectives. The review should determine whether MIS provides sufficient information to:

a) Review and assess performance relative to the strategic business plan and policy objectives;
b) Evaluate compliance with the operating policies, delegated authorities, and reporting requirements outlined in policies;
c) Assess compliance with laws, regulations, and sound business practices;
d) Determine the financial condition and performance of the institution;
e) Determine the condition of the loan portfolio, other major assets, as well as liabilities;
f) Identify and evaluate operational deficiencies that increase the risk of loss or reduce efficiencies; and
g) Evaluate the status or corrective actions on previously identified weaknesses.

Examiners should evaluate the specific information needs and reporting requirements for each area of the FHLBank. The amount of information and frequency of reporting should be dependent upon the risk exposures and overall effect on the safety and soundness of the institution.

7. Litigation and other legal matters

Current or threatened litigation, or other legal claims, can pose significant costs to the FHLBanks. Whether legal issues give rise to unenforceable contracts, lawsuits, adverse judgments, forgone business opportunities, loss of mission/strategic focus, or diminished reputation, they can disrupt the operations of an FHLBank, possibly reducing earnings and capital and damaging the FHLBank's image in the marketplace. FHLBank boards of directors and senior management must properly assess and manage the risks associated with litigation and other legal matters.

Litigation exposure can result from either FHLBank-initiated or third-party-initiated litigation. FHLBank-initiated litigation results when the institution's management initiates legal proceedings and may involve proceedings to enforce the FHLBank's contract rights, recover debts or obligations; foreclose on property; or recover damages caused by insiders or third parties. In some cases, FHLBank-initiated litigation gives rise to countersuits. Third-party litigation occurs when an action has been threatened or commenced against an FHLBank and may involve allegations of errors, omissions, violations of law, or damages.

Examiners should assess the potential impact of current or threatened litigation or other legal claims upon the financial condition, performance and reputation of the FHLBank, as well as determine whether the issues indicate weaknesses with the FHLBank's risk profile, governance and internal control structure.

8. External and internal audit programs. External and internal audit programs are integral components of an FHLBank's internal control environment. Internal audit is an independent appraisal function that contributes to the effectiveness and improvement of risk management, control, and governance systems. The objective of internal auditing is the evaluation of the adequacy and effectiveness of the internal control structure. These evaluations are used by management at all levels in the effective discharge of their responsibilities.

   The role of an FHLBank's internal audit function is to assist management in attaining the FHLBank's goals by providing an independent and objective assurance and consulting service designed to add value and improve operations through independently reviewing and evaluating the effectiveness of operations and controls and by providing objective analyses and constructive recommendations. Management retains full control over the implementation of these recommendations.

   The responsibility of the internal audit function extends beyond that of external auditors with respect to the reliability and integrity of information. External auditors are primarily concerned with the internal control structure relevant to a financial statement audit, which includes an evaluation of the FHLBank's ability to record, process, summarize, and report financial data consistent with the assertions in the financial statements, while the internal audit function is also concerned with controls over the effectiveness, economy, and efficiency of management decision-making processes that do not relate to a financial statement audit.

Regulatory Environment

The primary authorities governing, or relevant to, the structure, duties and responsibilities of FHLBank boards of directors and senior management are set forth below. The discussion below does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) Federal Home Loan Bank Act.

Section 7 of the FHLBank Act states that "…the management of each FHLBank shall

be vested in its board of directors," and that "the board of directors shall administer the affairs of the bank fairly and impartially without discrimination in favor or against any member borrower...." Section 7 also addresses the size and composition of the board of directors, the selection of directors, directors' terms, and director compensation. *(See* discussion of Section 7 in FHLBank Environment, below.)

2) ***Rules and Regulations of the Federal Housing Finance Board,*** which include the following parts and sections relevant to board of directors and senior management oversight:

Part 915 of the Finance Board regulations sets forth the responsibilities of the FHLBanks and Finance Board in the election and appointment of FHLBank directors as well as director eligibility requirements.

Part 917 of the Finance Board regulations addresses the powers, responsibilities and accountability of FHLBank boards of directors and senior management by prescribing standards for a corporate governance framework.

Part 918 of the Finance Board regulations requires each FHLBank to annually adopt a written compensation policy that adheres to standards prescribed in the regulation.

Part 933 of the Finance Board regulations requires each FHLBank board of directors to submit a capital structure plan to the Finance Board that complies with Parts 931 and 932.

Part 951 of the Finance Board regulations requires, among other things, the board of directors of each FHLBank to adopt a written affordable housing program (AHP) implementation plan that contains the information specified in Section 951.3.

Section 955.6 of the Finance Board regulations establishes risk-based capital requirements applicable to acquired member assets (AMA) acquired by FHLBanks that have not yet converted to their capital structure plans under Part 933.

Section 956.4 of the Finance Board regulations establishes risk-based capital requirements applicable to certain investments acquired by FHLBanks that have not yet converted to their structure capital plans under Part 933.

Section 966.9(b)(1) of the Finance Board regulations requires, among other things, written quarterly certifications from the president of each FHLBank as to compliance with the liquidity requirements set forth in Section 11(g) of the FHLBank Act and the Financial Management Policy For The Federal Home Loan Bank System adopted by Finance Board or any Finance Board regulation (*see* Section 932.8).

Part 980 of the Finance Board regulations requires the FHLBanks not undertake any

new business activities, as defined in the regulation, except in accordance with the procedures set forth in Part 980 of the Finance Board regulations.

Part 989 of the Finance Board regulations establishes audit and related requirements applicable to financial statements of the FHLBanks, Office of Finance and Financing Corporation.

Part 998 of the Finance Board regulations requires each FHLBank, among other things, to register a class of its equity securities pursuant to the provisions of Section 12(g) (1) of the Securities Exchange Act of 1934 and thereafter to comply with the periodic disclosure requirements of that act.

3) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of oversight by the board of directors and senior management are the following**:**

Advisory Bulletin 01-4, dated February 14, 2001, provides guidance on the avoidance by FHLBank boards of directors and staff of conflicts of interests. In addition to Finance Board regulations, FHLBanks should consider authoritative industry guidance and guidance provided by other bank regulators.

Advisory Bulletin 01-8, dated October 4, 2001, provides guidance regarding asset review, classification and reporting.

Advisory Bulletin 02-2, dated February 13, 2002, provides guidance regarding the annual report required from each FHLBank under Section 917.5 that analyzes and describes the FHLBank's performance in achieving quantitative performance goals for products related to multi-family housing, small business, small farm and small agri-business lending.

Advisory Bulletin 02-3, dated February 13, 2002, and Advisory Bulletin 03-2, dated February 10, 2003, provide guidance on the considerations that FHLBank boards of directors should address in the formulation of their business continuity plans.

Advisory Bulletin 02-5, dated April 8, 2002, provides guidance on the role of the internal auditor in an FHLBank's development of its annual risk assessment.

Advisory Bulletin 02-6, dated April 9, 2002, provides guidance on the quarterly liquidity certification that the president of each FHLBank is required to file with the Finance Board under Section 966.9(b)(1).

Advisory Bulletin 02-7, dated August 27, 2002, provides guidance on unsecured credit reporting requirements by the FHLBanks.

Advisory Bulletin 02-8, dated October 7, 2002, provides guidance on the manner in which an FHLBank should respond to the placement by an NRSRO of an unsecured credit counterparty on "credit watch" for a potential rating downgrade.

Advisory Bulletin 03-1, dated January 3, 2003, provides guidance on the acceleration of filing dates for FHLBank System combined financial reports and FHLBank call reports.

Advisory Bulletin 03-03, dated March 6, 2003, provides guidance to the FHLBanks that permits expanded disclosure in their financial statements under certain circumstances. .

Advisory Bulletin 03-4, dated March 18, 2003, provides guidance on what FHLBanks should include in capital plan amendment submissions for Finance Board approval. The Advisory Bulletin also explains the amount of time that will likely be necessary to complete the Office of Supervision's review of the FHLBank's submission.

Advisory Bulletin 03-5, dated April 16, 2003, provides guidance on annual risk assessments required by Section 917.3(c).

Advisory Bulletin 03-6, dated May 9, 2003, provides guidance regarding the FHLBank's use of NRSRO models for certain loans that may be secured by real property located in Georgia and instructs FHLBanks to evaluate the possible effect that state laws on abusive or predatory practices may have on other assets.

Advisory Bulletin 03-7, dated May 9, 2003, provides guidance regarding requirement in Section 932.5(c) that each FHLBank that that has implemented its capital structure plan under Part 933, annually conduct an independent validation of its internal market risk model.

Advisory Bulletin 03-08, dated August 18, 2003, provides guidance regarding capital management and retained earnings. Among other things, the Advisory Bulletin requires the board of directors of each FHLBank to maintain a complying formal retained earnings policy and to annually assess the adequacy of its retained earnings in the manner described therein.

Advisory Bulletin 03-09, dated October 3, 2003, provides FHLBanks with a uniform methodology for calculations of duration-of-equity in "designated low-rate environments," as defined in the Advisory Bulletin.

Advisory Bulletin 03-13, dated December 1, 2003, provides guidance to the FHLBanks on providing financial information to the Office of Finance for inclusion in the FHLBank System combined financial reports the Office of Finance prepares.

Advisory Bulletin 04-01, dated March 10, 2004, provides guidance on FHLBank use of service organizations to perform critical activities for the FHLBank's operations, particularly AMA programs.

Advisory Bulletin 04-2, dated May 13, 2004, establishes a minimum standard for minutes of board of directors and board committee meetings, including all general and executive sessions and board committee meetings.

Advisory Bulletin 04-5, dated September 29, 2004, provides guidance on interest rate risk management. Among other things, the Advisory Bulletin describes the policies, procedures, and internal controls, as well as risk measurement monitoring and reporting systems, that an FHLBank should maintain to measure and manage its interest rate risk exposure.

Advisory Bulletin 05-04, dated April 21, 2005, provides guidance related to regulatory reporting and REFCORP and AHP assessment calculations in connection with the adoption of Statement of Accounting Standards Number 150, "Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity."

Advisory Bulletin 05-05, dated May 18, 2005, provides guidance as to the risk management oversight responsibilities of the board of directors and senior management.

Advisory Bulletin 05-06, dated June 10, 2005, provides guidance on the process through which an FHLBank may obtain approval to make changes to a previously approved internal market risk model.

Advisory Bulletin 05-08, dated August 25, 2005, provides guidance concerning the Finance Board's assessment of required FHLBank anti-predatory lending mortgage purchase and advance policies. The Advisory Bulletin sets out required contents for such policies and processes for their establishment and dissemination to members.

Advisory Bulletin 06-02, dated March 20, 2006, provides guidance on the documentation and validation of quantitative financial models by the FHLBanks and Office of Finance. The Advisory Bulletin establishes standards for governing policies, documentation, validation programs and market value reporting.

Advisory Bulletin 06-03, dated July 18, 2006, provides guidance on the circumstances under which an FHLBank may disclose "unpublished information," as defined in Part 911, in SEC filings.

4) ***Regulatory Interpretations of the Federal Housing Finance Board*** are the following:

2000-RI-6, Accounting Issues: Independent Auditor's Review of Quarterly Financial Information, dated June 23, 2000, is an interpretation of the Section 985.6(b)(1) that, among other things, requires each FHLBank and the combined FHLBanks to comply with an SEC rule requiring quarterly reviews by independent auditors of financial information the FHLBanks provide to the preparer of the FHLBank System's combined quarterly financial reports, as well as of the resulting financial reports.

2000-RI-24, Accounting Issues: Audit Committee Disclosures, dated September 19, 2000, notes adoption of an SEC rule requiring companies' inclusion in their proxy statements of audit committee reports and certain disclosures set forth in the rule. The Regulatory Interpretation requires FHLBanks to include in their annual reports the report of their audit committees and certain disclosures set forth in the Regulatory Interpretation.

5) ***Sarbanes-Oxley Act and regulations and interpretations of the Securities and Exchange Commission thereunder.***

   The statute was enacted in response to various corporate scandals, and addresses various corporate governance requirements that relate to the responsibilities of corporate boards of directors, the external and internal audit function, and the quality of a corporation's internal controls and the accuracy of its financial reporting.

6) ***Foreign Corrupt Practices Act of 1977*** makes it unlawful for a U.S. and certain foreign persons to make a corrupt payment to a foreign official for the purpose of obtaining or retaining business for or with, or directing business to, any person. The Act also requires companies whose securities are listed in the United States to make and keep books and records that accurately reflect the transactions of the companies and to devise and maintain an adequate system of internal accounting controls.

7) ***Reports and other issuances of the Basel Committee on Banking Supervision (Basel Committee).*** The Basel Committee is a committee of banking supervisory authorities established by the central bank Governors of the Group of Ten countries in 1974. It includes senior representatives of banking supervisory authorities and provides guidance and recommendations on sound supervisory standards worldwide, including those related to capital standards, risk management, internal controls, internal audit, corporate governance, and other areas central to the safe and sound operation of banks and other financial institutions.

8) ***Statements of Financial Accounting Standard adopted by the Financial Accounting Standards Board*** establish standards of financial accounting and reporting governing the preparation of financial reports and are officially recognized as authoritative by the SEC and the American Institute of Certified Public Accountants (AICPA).

9) ***Regulations and interpretations of the Securities and Exchange Commission.*** The SEC is the federal agency that is principally responsible for enforcing the federal securities laws and regulating the United States securities markets. The federal securities laws require issuers of securities to disclose meaningful information about their business and financial condition.

10) ***Professional standards adopted by the American Institute of Certified Public Accountants Professional Standards.*** The AICPA is the national, professional organization for certified public accountants. Its mission is to provide members with the resources, information and leadership that enable them to provide professional services to benefit the public as well as employers and clients. In fulfilling its mission, the AICPA works with state certified public accountant organizations and gives priority to those areas where public reliance on certified public accountant skills is most significant.

11) ***Government Auditing Standards*** provides standards for audits of government organizations. The standards pertain to auditors' professional qualifications, the quality of the audit effort, and the characteristics of professional and meaningful audit reports.

12) ***Reports and other issuances of Committee of Sponsoring Organizations of the Treadway Commission***. The Treadway Commission is a private sector initiative established in 1985 and intended to provide guidance on improving the quality of financial reporting by focusing on corporate governance, ethical practices, and internal control.

13) ***Professional standards adopted by the Institute of Internal Auditors***. The Institute of Internal Auditors (IIA) was organized in 1941 to develop and promote the professional status of internal auditing. The organization provides certification, education, research and technological guidance for the profession. The IIA serves as the profession's resource on significant auditing issues worldwide.

FHLBank Environment

The FHLBank Act provides for the management of each FHLBank to be vested in the FHLBank's board of directors and states that each FHLBank is a body corporate. In addition to authorizing certain enumerated corporate and banking powers, the FHLBank Act grants each FHLBank all such incidental powers as are consistent with the provisions of the FHLBank Act and customary and usual in corporations generally. Attendant to the exercise of customary and usual corporate powers, FHLBank boards of directors are subject to the same general fiduciary duties of care and loyalty to which the board of directors of a state-chartered business or banking corporation would be subject.

The duties and responsibilities of an FHLBank director derive from a source different

from that of a director of a state-chartered business or banking corporation. Each FHLBank is created in accordance with federal law to further public policy, and its statutory powers and purposes are not subject to change except by the Congress. An FHLBank's board of directors has neither the right nor the duty to alter the purpose of the FHLBank, whereas an ordinary corporate board of directors may approve mergers, consolidations and changes in the corporate charter that could alter the objectives and nature of the business of the corporation. The directors of an FHLBank are responsible for ensuring that the FHLBank achieves the statutorily-mandated mission of promoting housing finance and community lending, and meeting the FHLBank's statutory obligations of making contributions to its AHP and paying a portion of the interest on REFCORP obligations. The board of directors is also expected to ensure that the FHLBank operates in a financially safe and sound manner that is in compliance with law and policy.

In addition to establishing a distinct mission for the FHLBanks and a federally-derived source of duties and responsibilities for each FHLBank director, the FHLBank Act contains other provisions that may distinguish certain features of corporate governance at the FHLBanks from those encountered at a state-chartered business or banking corporation. Thus, Section 7 of the FHLBank Act governs the size and composition of FHLBank boards of directors, the manner of selection of board members, and the terms and compensation of directors. While such differences may influence the manner in which the principles of sound corporate governance, described previously, apply at the FHLBanks, they do not reduce the continuing application of these principles to the FHLBanks.

Examination Guidance

A work program for Board of Directors and Senior Management Oversight accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. The evaluation of the adequacy of the board of directors' and senior management's oversight and management of the FHLBank's business and activities should be coordinated with evaluations being conducted by examiners responsible for the review of other FHLBank functions and activities in order to avoid duplication of effort.

1) Organizational structure and communication

Evaluate the effectiveness of the FHLBank's organizational structure and reporting lines, the quality and timeliness of its management reporting, the appropriateness of its staffing and the expertise of its staff. This evaluation may include: the roles and responsibilities of board of directors committees; roles and responsibilities of management and management committees; board of directors and management reports; technical competence of staff; efficiency and effectiveness of the organizational structure; appropriateness of reporting lines; segregation of duties;

communication between business lines; approved and actual staffing levels; human resource policies; and information technology support. Specific examples include, but are not limited to, the following:

a) FHLBank's organizational documents, including organizational certificate and bylaws;
b) FHLBank's organizational chart and approved staffing charts;
c) Roles and responsibilities of business lines and managers;
d) Composition and role of formal and informal board of directors, management and staff committees, including membership, composition, expertise, duties and responsibilities, frequency of meetings, attendance, minutes, holding of executive sessions, periodic reporting, and other matters;
e) Adequacy of monitoring reports that are provided to the board of directors and management committees to enable them to formulate decisions and monitor the FHLBank's performance and compliance with established policies, procedures regulatory requirements and internal controls;
f) Adequacy of management information systems to identify, measure, monitor and control risks;
g) Human resource policies, including the establishment of performance objectives for management and staff;
h) Information technology project initiatives, standards and performance;
i) Status of development or implementation of new products, services and business activities;
j) Reporting and analysis of local and national economic conditions that may affect the FHLBank's business and operations; and
k) Reporting and analysis of FHLBank System and legislative issues that may affect the FHLBank's business and operations.

An examiner may gain insight into an FHLBank's internal communication and the decision-making process by observing management and working committee meetings during the examination. If possible, the examiner should consider attending portions of board of directors and board and management committee meetings during the examination. The examiner should arrange his or her attendance at any such meetings in advance with the presiding officer.

2) Board of Directors

Assess the abilities of the directors of the FHLBank and the effectiveness of the board of directors in establishing an appropriate strategic direction for the FHLBank, retaining capable senior management and overseeing management's performance in the safe, sound and lawful operation of the FHLBank and achievement of the its financial and mission-related goals and objectives.

This assessment may include: the degree of active involvement by the board of

directors in determining a strategic direction for the FHLBank that promotes its long-term financial health, safety and soundness and statutory mission; formulating plans and policies in furtherance of that strategic direction; providing supervision over the affairs and senior management of the FHLBank; ensuring that the interests of the FHLBank are paramount, even where the promotion of these interests may conflict with the interests of member institutions (including the interests of members whose representatives serve as directors of the FHLBank); and ensuring that the CEO and other members of senior management have the necessary skills, knowledge, experience and sense of judgment to manage the FHLBank's affairs in a safe and sound manner. The following attributes may be considered in evaluating performance of the board of directors:

a) Mission statement of the FHLBank;
b) Definition of the risk tolerance philosophy for the FHLBank;
c) Adequacy of materials provided to the board of directors and board committees in preparation for board or committee meetings and minutes of such meetings *(see* Section 1, above);
d) Adequacy of established policies, procedures and internal controls to address potential conflicts of interest or undue influence by a director or senior officer upon decisions of the FHLBank's board of directors or any committees thereof, or upon the institution's activities (*see* Section 5, below);
e) FHLBank survey of director experience and skills to identify training needs; assess the adequacy of training programs provided to the board of directors for new director orientation and for assistance in understanding and monitoring the FHLBank's activities as well as for understanding the duties and responsibilities of FHLBank directors;
f) Adequacy of and compliance with the FHLBank's process for fulfilling its responsibilities related to the nomination of appointive directors under Part 915, including procedures for identifying potential appointive directors, assessing their eligibility and qualifications, and nominating them to Finance Board within the timeframes established in Section 915.10;
g) Board of directors oversight of FHLBank management's performance and compensation, including:
    i) The establishment and periodic review of performance goals for management that are specific and measurable and are consistent with the FHLBank's achievement of the goals and objectives contained in its strategic and operational plans as well as the requirements of laws and regulations and principles of safety and soundness;
    ii) The establishment and periodic review of compensation which is reasonable in view of an officer's performance and the condition, operating performance and risk profile of the FHLBank;
    iii) The establishment and periodic review of employment agreements (including any "golden parachute" provisions thereof) with members of management that are consistent with the performance and compensation standards established

by the FHLBank;

iv) The review of officer promotions to ensure that these are reasonable in light of professional qualifications and demonstrated performance of the individuals involved as well as reflective of the needs of the FHLBank.

h) The degree of the board of directors' involvement in the strategic and operational planning process, such as active participation in plan formulation or active dialogue with management on the management-generated plan (versus passive acceptance and approval of management-generated plan) (*see* Section 7, below); and

i) Oversight of the FHLBank's affordable housing and community investment activities.

In order to fully the evaluate the effectiveness of governance by the FHLBank's board of directors, the examiner should consider interviewing the chairman of the board of directors, the chairman of the audit committee, and at least one other director who is an appointed director to evaluate their understanding of the FHLBank's business and operations (including its affordable housing and community investment activities), business strategy, legal environment, internal policies and processes to monitor compliance with such policies, and their duties and obligations as FHLBank directors.

3) Senior Management

Assess the abilities and performance of senior management staff and its performance in the safe, sound and lawful operation of the FHLBank and achievement of financial and mission-related goals and objectives. This assessment may include: the qualifications of management; the extent to which management has fulfilled its duties and responsibilities; management's performance in achieving financial and mission-related goals and objectives established in the FHLBank's strategic and operational plans; and the extent to which management adequately controls risks presented by the FHLBank's business and operations, as well as complies with laws and regulations. The following should be considered in evaluating this area:

a) Experience and technical competence;
b) Character and integrity;
c) Engagement and cooperation among business lines;
d) Depth and succession (*see* Section 1, above);
e) Consistency of action with corporate mission objectives, or "tone at the top";
f) Risk tolerance philosophy;
g) Compliance with the requirements of law and regulation, and as well as with prudent safety and soundness parameters (*see* Section 9, below);
h) Development of strategic and operational plans, and risk management policies (*see* Section 7, below);
i) Accountability for the achievement of strategic and operational goals, including

adequate review and discussion of the status of plan implementation at board of directors and committee meetings, and of any failure to achieve plan targets and of action proposed either to overcome obstacles to achievement or to revise plans (*see* Section 7, below);

j) Development and implementation of an effective internal control environment and risk management process appropriate for the size, activities and business risks of the FHLBank (*see* Section 6, below);
k) Development and implementation of management information systems that are adequate in light of the FHLBank's business environment and risk profile (*see* Sections 1, above, and 6, below);
l) Development of written policies, procedures and standards to address critical processes and mission activities (*see* Section 5, below);
m) Establishment of procedures to identify, report, assess and correct deviations from standards, risk tolerances and controls in a timely and effective manner (*see* Section 6, below);
n) Willingness and ability to take timely corrective action in response to audit, review and examination findings and recommendations (*see* Section 8, below);
o) Establishment of performance goals and objectives for the administration of employee salary and incentive programs (*see* Section 1, above);
p) Reliability and integrity of financial information (*see* Section 7, below);
q) Effectiveness and efficiency of operations (*see* Section 1, below); and
r) Supervision of and involvement in administration of the FHLBank's affordable housing and community investment activities.

4) Key policies, procedures and approved practices

Evaluate the adequacy of the FHLBank's key policies, procedures and approved practices, their implementation, and the FHLBank's compliance with these.

The following policies have a direct relationship to corporate governance activities and may be considered by the examiner in making this evaluation:

a) Board of directors governance policies;
b) Code of business conduct and ethics;
c) Conflicts of interest and indemnification policies;
d) Directors and senior management compensation, expenses and travel policies;
e) Equal employment opportunity policy;
f) Human resources policies, including the evaluation of hiring and employment practices that include employee-related issues, such as background checks, leave policies, disciplinary actions, staff turnover and salary surveys;
g) Management succession plans;
h) Retained earnings and dividend policies; and
i) Training policy.

The following policies are also be reflective of corporate governance strengths and weaknesses, but may receive primary review in connection with the examination of other FHLBank functions or activities**:**

a) Allowance for loan loss policy;
b) Anti-fraud policy;
c) Anti-predatory lending policy; and
d) Asset review and classification policy;
e) Business continuity plan;
f) Credit and collateral policies;
g) Information security policy;
h) Member product policy;
i) Market risk policies;
j) Model validation policy;
k) Policies governing the FHLBank's affordable housing and community investment activities; and
l) Vendors' risk policy.

5) Management and control processes

Assess the adequacy of the FHLBank's risk management, internal and external audit, information technology and general internal control processes. Specific examples include, but are not limited to, the following:

a) Adequacy of the annual risk assessment report and annual risk assessment process;
b) Effectiveness of the enterprise risk management structure and process;
c) Adequacy of the risk management policy;
d) Adequacy and appropriateness of delegations of authority;
e) Effectiveness of the internal audit program, including coverage of the board of directors' and senior management's oversight and management of the FHLBank's business and operations (refer to conclusions derived from the review of the FHLBank's internal and external audit functions);
f) Effectiveness of procedures implemented to periodically attest to the adequacy of the control environment, as required under the Sarbanes-Oxley Act;
g) Adequacy of evaluation and periodic testing of the FHLBank's internal control structure by the internal audit and external audit functions, outside consultants, risk management function, as well as through SAS 70 reports and self-assessments (refer to conclusions derived from the review of the FHLBank's internal and external audit functions);
h) Potential impact of pending or threatened litigation; and
i) Adequacy of testing of the FHLBank's business continuity plan.

6) Financial reporting and planning processes

Evaluate the accuracy and reliability of the FHLBank's financial statements, the effectiveness of its financial planning process and the adequacy of financial condition and performance. The following should be considered in evaluating financial management of the FHLBank:

a) Accuracy and reliability of financial statements, including issues and comments raised by the FHLBank's external auditors and the SEC (refer to conclusions derived from the review of the FHLBank's financial reporting operations);
b) Accounting expertise and philosophy;
c) Adequacy of financial condition and performance, including performance relative to internal targets and FHLBank System averages (refer to conclusions derived from the review of the FHLBank's financial condition and performance);
d) Adequacy and appropriateness of dividend and retained earnings policies;
e) Appropriateness of the business model and business plan;
f) Validity of the strategic plan and budget (refer to conclusions derived from the review of the FHLBank's strategic planning process); and
g) Strategies for the management of member and asset concentrations.

7) Responsiveness to previous examination and audit findings

Evaluate the promptness and effectiveness of actions by the FHLBank's board of directors and senior management to address findings made by regulatory authorities or the FHLBank's risk management function, internal and external audit functions, or outside consultants.

8) Compliance with laws, regulations and supervisory policies and guidance

Assess the adequacy of the FHLBank's compliance with laws, regulations and supervisory policies and guidance.

9) Assessment of Board of Directors and Senior Management Oversight

Summarize the results of the activity or function examined in a separate memorandum. The memorandum should clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the quality and effectiveness of oversight by the board of directors and senior management (strong, satisfactory, supervisory concern, unacceptable) based upon the assessments made in Sections "1" through"8," above.

In addition, the examiner should consider the implications of examiners' evaluations of market, credit, and operational risk, and risk management, financial condition and performance, and affordable housing and community investment administration when developing the memorandum. A memorandum must be prepared irrespective of

whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next examination or visitation.

Identify key issues that have been communicated to management or the board of directors (oral or written) that require follow-up during the next on-site visitation.

Examination Work Program
Board of Directors and Senior Management Oversight
As of XXXXXX

1) Organizational structure and communication

Evaluate the effectiveness of the FHLBank's organizational structure and reporting lines, the quality and timeliness of its management information reporting, the appropriateness of its staffing and the expertise of its staff.

2) Board of Directors

Assess the abilities of the directors of the FHLBank and the effectiveness of the institution's board of directors in establishing an appropriate strategic direction for the institution, retaining capable management and overseeing management's performance in the safe, sound and lawful operation of the institution and achievement of the institution's financial and mission-related goals and objectives.

3) Senior Management

Assess the abilities of senior management staff and its performance in the safe, sound and lawful operation of the FHLBank and achievement of the institution's financial and mission-related goals and objectives.

4) Key Policies, procedures and approved practices

Evaluate the adequacy of the FHLBank's key policies, procedures and approved practices, their implementation, and the FHLBank's compliance with these.

5) Management and control processes

Assess the adequacy of the FHLBank's risk management, internal and external audit, information technology and general internal control processes.

6) Financial reporting and planning processes

Evaluate the accuracy and reliability of the FHLBank's financial statements, the effectiveness of its financial planning processes, and the adequacy of its financial condition and performance.

7) Responsiveness to previous examination and audit findings

Evaluate the promptness and effectiveness of actions by the FHLBank's board of directors and senior management to address findings made by regulatory authorities or the institution's risk management function, internal and external audit functions, or outside consultants.

8) Compliance with laws, regulations and supervisory policies and guidance

Assess the adequacy of the FHLBank's compliance with laws, regulations and supervisory policies and guidance.

9) Assessment of Board of Directors and Senior Management Oversight

Summarize the results of the activity or function examined in a separate memorandum. The memorandum should clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the quality and effectiveness of oversight by the board of directors and senior management (strong, satisfactory, supervisory concern, unacceptable) based upon assessments made in Sections "1" through "8," above.

In addition, the examiner should consider the implications of examiners' evaluations of market, credit, and operational risk, and risk management, financial condition and performance, and affordable housing and community investment administration when developing the memorandum. A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management or the board of directors (written or oral) that require follow-up during the next on-site visitation.

Introduction

Examination of the preparation, results, and uses of the FHLBank's strategic plan is essential to: (a) gauge the future financial performance of the FHLBank; (b) assess the future change in the value in FHLBank stock; (c) review the likelihood of the FHLBank achieving its future dividend and retained earnings targets; (d) assess the future changes in the market, credit, and operational risk of the FHLBank necessary to achieve its financial objectives; and (e) understand the commitment of management and board of directors to the strategic planning process. Key insights that can be reached with respect to examining the planning process of an FHLBank include, among others things:

1) Future FHLBank performance given its operating strategy and its operations, market, and credit risk.

2) Future performance of business lines such as advances, investments, and mortgages, and how they contribute to overall profitability.

3) The likelihood of an FHLBank attaining its future financial objectives.

4) Whether dividend rates paid by the FHLBank are sustainable and whether retained earnings targets are attainable.

5) Quality of management. Use of the strategic plan to benchmark FHLBank financial performance and in corporate governance generally.

Methodology of Analysis

There are three primary steps to complete the analysis of an FHLBank's strategic planning process.

1) Off-site data collection and analysis. Most analysis of an FHLBank's strategic planning process including document review, data collection and analysis, and coordination with the examiner-in-charge and FHLBank staff can and should be completed off-site. This "groundwork" ought to comprise the bulk of the examiner's time and is essential to formulating initial conclusions regarding the strategic plan of the FHLBank. As detailed later, the examiner should use sufficient judgment to distill the primary issues driving the future performance of the FHLBank.

2) Testing initial conclusions on-site. Once the offsite financial analysis has been completed and initial conclusions reached, the examiner should use the time on-site at the FHLBank to ask questions, enter into more detailed discussions, and formalize conclusions regarding the FHLBank's strategic plan. Key areas to review in this stage include: (a) the strategic planning process including the development, assessment, and implementation processes used by management to create the strategic plan, and (b) the use of the strategic plan by the FHLBank's management and board

of directors.

3) **Preparation of memorandum for report of examination.** Once the off-site and on-site analysis is complete, the examiner should prepare a formal memorandum outlining the strategic planning process of the FHLBank for the report of examination. This memorandum should reflect the key issues regarding the strategic planning process including the rigor of the analysis, reasonableness of the assumptions and the content of the narrative.

In judging the strategic planning process of an FHLBank, there are no clear or absolute metrics. Rather, the FHLBank's future performance needs to be compared with its own past performance and the performance of other FHLBanks with similar operating strategies. The examiner should give more weight in the evaluation to future performance measures that are either low or declining. A sample of potential "warning signs" that could indicate problems at an FHLBank is listed below. An examiner must use caution in reading too much into a particular statistic or analyses; rather, the examiner should use a variety of analyses to test a particular initial conclusion.

Issue	Indication of Analysis
1. Commitment to Planning Process	• Lack of evidence of board of directors' involvement in process, such as the strategic planning process does not reflect the board's overall philosophy and vision for the FHLBank's future as discussed at board meetings and/or planning retreat. • Strategic plan not updated as needed and discussed with board of directors. • Actual results not benchmarked regularly against plan and reported to board of directors. • Narrative accompanying financials not detailed enough to understand plan
2. Lack of Rigor	• No integrated balance sheet and income statement • Financial statements in the strategic plan not prepared in accordance with Generally Accepted Accounting Principles (GAAP) • Annual or quarterly figures not based on monthly data • Effective date of plan does not match interest rate curve used • Forecasted performance varies significantly from historical performance with inadequate explanation of change

	• Limited/no operational or interest-rate sensitivities • Banding of sensitivities vs. base case too wide • Key financial assumptions not well supported
3. Communication of Plan	• Financial assumptions are not well documented or supported. • Key financial ratios are not provided during projection period • Risk factors of plan not well documented • The adopted plan is not widely disseminated throughout the Bank
4. Reasonableness	• Trend of projected financial ratios differs significantly from historical performance • Banding of sensitivities vs. base case too wide and/or not well supported • Implied spreads on business lines vary significantly from historical performance with inadequate explanation of change • Assumptions predicated on the actions of one or a small number of members

Regulatory Environment

The primary authorities governing, or relevant to, FHLBank strategic planning are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to strategic planning:

Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4 Bank Member Products Policy, and Section 917.6, Internal Control System, are pertinent.

Section 917.5 requires each FHLBank board of directors to have in effect at all times a strategic business plan that describes how the business activities of the institution will achieve its mission consistent with Part 940, Core Mission Activities, of the

Finance Board's regulations. Specific requirements are as follows:

a) Enumerate operating goals and objectives for each major business activity and new business activity;

b) Discuss how the FHLBank will address credit needs and market opportunities identified through ongoing market research and consultations with members, associates and public and private organizations and notify members and associates of relevant programs and initiatives;

c) Establish quantitative performance goals for FHLBank products related to multi-family housing, small business, small farm and small agri-business lending;

d) Describe any new business activities or enhancements of existing activities; and

e) Be supported by appropriate and timely research and analysis of relevant market developments and member demand for FHLBank products and services.

Section 917.5 requires the board of directors to: (a) review the strategic business plan at least annually; (b) amend the plan as appropriate; (c) readopt the plan at least every three years; and (d) establish management reporting requirements and monitor implementation of the strategic business plan and the operating goals and objectives contained in it. In addition, Section 917.5 requires the FHLBank to submit annually to the Finance Board a report and describing the FHLBank's performance in achieving the goals related to multi-family housing, small business activities, small farm and small agri-business lending.

Part 940, Core Mission Activities – As part of its statutory duty to ensure that the FHLBanks carry out their housing finance mission, the Finance Board adopted a regulatory requirement, set forth in section 917.5 of its regulations, that each FHLBank's board of directors have in effect at all times a strategic business plan that describes how the FHLBank's business activities will achieve the mission of the FHLBank consistent with part 940 of the Finance Board's regulations. Section 940.2 of the regulation states the mission of the FHLBanks in its broadest terms and, by way of cross-reference, gives meaning to the strategic business plan requirement of section 917.5 of the regulations. Section 940.3 of the regulation enumerates the specific FHLBank activities that qualify as core mission activities.

Part 980, New Business Activities – requires the FHLBanks not to undertake any new business activities, as defined in the regulation, except in accordance with the procedures set forth in this part of the Finance Board's regulations.

2) Advisory Bulletins of the Federal Housing Finance Board that provide supervisory guidance relating to the topic of strategic planning are the following:

Advisory Bulletin 02-2, dated February 13, 2002, which offers guidance regarding the annual report analyzing and describing the FHLBank's performance in achieving the quantitative performance goals established in the FHLBank's strategic business plan for products related to multi-family housing, small business, small farm and small agri-business lending. (Section 917.5(c)). FHLBanks should submit that report to the Finance Board no later than March 31 of the year following the performance year.

Advisory Bulletin 03-08, dated August 18, 2003, which requires the board of directors to adopt a retained earnings policy and to review the FHLBank's analysis of the adequacy of its retained earnings.

Advisory Bulletin 03-13, dated December 1, 2003, which offers guidance as to the form, content, and timeliness of the financial reports that are completed by the FHLBanks pursuant to Finance Board regulations.

Advisory Bulletin 04-2, dated May 13, 2004, which offers guidance on a minimum standard that Finance Board examiners will expect each FHLBank to satisfy for minutes of board meetings, including all general and executive sessions and board committee meetings.

Advisory Bulletin 05-05, dated May 18, 2005, which seeks to ensure that the board of directors and senior management of each FHLBank should ensure that the FHLBank's risk management process is effective and that the risk management oversight responsibilities of the board of directors, senior management, and other Bank personnel are clearly defined. Moreover, the board of directors and senior management should ensure that the FHLBank's risk management is undertaken on an enterprise-wide basis and the FHLBank's organizational structure is consistent with sound risk management practices.

3) ***Sarbanes-Oxley Act and regulations and interpretations of the Securities and Exchange Commission thereunder.***

The statute was enacted in response to various corporate scandals, and addresses various corporate governance requirements that relate to the responsibilities of corporate boards of directors, the external and internal audit function, and the quality of management's attestation of internal controls pertaining to the accuracy of financial reporting.

4) ***Statements of Financial Accounting Standards adopted by the Financial Accounting Standards Board*** establish standards of financial accounting and reporting governing the preparation of financial reports and are officially recognized as authoritative by the Securities and Exchange Commission and American Institute of Certified Public Accountants (AICPA).

5) ***Securities and Exchange Commission*** is the primary regulator of the United States securities markets and requires public companies to disclose meaningful financial information to the public and enforces the securities laws.

6) ***American Institute of Certified Public Accountants Professional Standards (AICPA)*** is the national, professional organization for Certified Public Accountants (CPA). Its mission is to provide members with the resources, information and leadership that enable them to provide professional services to benefit the public as well as employers and clients. In fulfilling its mission, the AICPA works with state CPA organizations and gives priority to those areas where public reliance on CPA skills is most significant.

FHLBank Environment

Each of the FHLBanks has a strategic planning program. An FHLBank may designate a specific board committee to oversee the development of the strategic plan in addition to a management committee charged with overseeing the development process. The FHLBank should produce multi-year plans with scenario analyses.

In late 2002 and early 2003, the Finance Board conducted a series of targeted reviews to assess the effectiveness of board governance at each of the FHLBanks. One of the areas reviewed was strategic planning. The final report included a list of effective practices observed during the reviews. Those practices include:

1) Surveying directors concerning strategic issues;

2) Holding off-site meetings of directors for the sole purpose of strategic planning;

3) Conducting a comprehensive risk/reward analysis before engaging in new activities;

4) Incorporating scenario analysis into strategic planning, including base-, best-, and worst-case scenarios; and

5) Preparing periodic board reports comparing actual performance to plan and explaining variances.

The report also included the following recommendations for promoting effective strategic planning at all of the FHLBanks:

1) Formally monitoring the FHLBank's actual performance relative to strategic plan goals and objectives quarterly;

2) Integrating executive compensation with achievement of strategic plan goals and objectives; and

3) Formalizing processes to elicit strategic plan input from directors, including an annual strategic planning session with the board of directors.

Risks Associated with Strategic Planning Process

The primary risks relating to strategic planning are as follows:

1) Lack of Sound Corporate Governance (Board of Directors' and Management Oversight)

a) The board of directors and/or senior management does not have an adequate understanding of, and involvement in, the FHLBank's strategic planning process.
b) Key policies and procedures pertaining to the strategic planning process have not been developed and/or implemented.
c) Monitoring of the FHLBank's actual performance relative to the strategic plan is not formalized and reported to the board/senior management on at least a quarterly basis.
d) Material variances are not presented to and discussed by the board of directors.
e) Executive compensation is not integrated with achievement of strategic plan goals and objectives.
f) There is no formal process to elicit strategic plan input from directors.
g) Development of the strategic plan does not include a "bottom-up" exercise that solicits and uses input from line managers.
h) Financials used in the strategic plan do not reflect most current available actual financial and portfolio information.
i) The board of directors and/or management does not view the strategic plan as a useful "roadmap" for running the FHLBank.
j) Assumptions underlying the strategic plan are not adequately supported by historical data or otherwise.
k) The strategic plan does not present reasonable alternative scenarios that are helpful to the board/senior management in making strategic choices.

2) Operational Risk

a) Management information systems do not adequately meet the needs of the strategic planning process.
b) The strategic plan has not been adequately developed and communicated to key personnel to ensure that they are aware of and working towards the goals and objectives of the plan.

Examination Guidance

A work program for Strategic Planning accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of

review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the portfolio of the FHLBank and its tolerance for risk along with the quality and effectiveness of corporate governance, and risk management as they pertain to strategic planning.

1) Document Analysis

Objective: Identify issues which were previously noted and require follow-up during the current examination.

a) Review the prior report of examination and work papers with respect to: (1) governance; (2) strategic planning; (3) operating performance; and (4) financial condition and performance. Identify issues or concerns that require follow-up or closer review.

b) Review prior quarterly reviews and correspondence that have been received since the last examination. Identify issues or concerns that require follow-up or closer review.

c) Review current strategic plan of the FHLBank including all back-up schedules and worksheets. The back-up analysis/model of the strategic plan may be more detailed than what is submitted to senior management and the board of directors. Note if any significant information was not included in the strategic plan information provided to the board of directors/senior management.

d) Review the minutes of meetings of the FHLBank's board of directors and relevant board and management committees.

2) Review Strategic Planning Process

Objective: Review development, assessment, implementation and updating/revision processes by management to create the strategic plan.

a) Interview key personnel which may include the senior management, staff member in charge of planning, staff member in charge of modeling, and other FHLBank staff as required to determine:

(1) Timeline of development of strategic plan;
(2) Timeline of, and events that may trigger, updates/revisions to the strategic plan;
(3) Plan review process by senior management and the board of directors; and
(4) Date plan was approved by the board of directors and became effective.

b) Determine the modeling software and other computer systems used to create the

strategic plan.

c) Review the key inputs used to develop the strategic plan including, among other things:

   (1) Growth of key business lines (asset categories), including advances, investments and mortgages;
   (2) Growth of liabilities and other operating costs;
   (3) Net spreads of key asset categories;
   (4) Growth of retained earnings and shareholders' equity; and
   (5) Projected dividend rates.

d) Develop a general understanding of the process by which the key inputs to the strategic plan are developed including: (1) FHLBank staff/group that developed key assumptions, and (2) how key assumptions were developed.

3) Use of the Strategic Plan

Objective: Assess the use of the strategic plan by the FHLBank's management and board of directors.

a) Interview key personnel that may include senior management, staff member in charge of planning, and other FHLBank staff as required to determine how strategic plan is used by senior management and the board of directors. Potential uses could include, among other things: (1) benchmarking FHLBank operating performance, (2) determining incentive compensation for senior management, and (3) evaluating strategic initiatives of the FHLBank.

b) Review minutes of meetings of the board of directors and relevant board and management committees and other relevant internal documents, ALCO committee minutes, minutes of the financial operating committee, etc. to determine whether the strategic plan is included or discussed, and in what context.

4) Output of the Strategic Plan

Objective: Review the quality/rigor of the output of the strategic planning process.

a) Determine the time series projected in the strategic plan, specifically: (1) the number of years of financial information projected forward and (2) the increments projected such as monthly, quarterly, or annually. If the financial information is projected quarterly or annually, determine whether the information is based on monthly projections.

b) Assess whether the strategic plan projections include a sufficiently detailed balance sheet, income statement, and listing of key financial ratios for each year of the planning horizon.

Consider whether the line items in the projected financial statements are sufficient to forecast the future operations of the FHLBank in reasonable detail. Note that the back-up analysis/model of the strategic plan may be more detailed than what is submitted to senior management and the board of directors.

c) Review the key financial ratios for reasonableness for the projection period such as leverage ratio, return on assets (ROA), return on equity (ROE), net interest spread, and net interest spread by business line (asset class).

d) Assess whether the narrative included in the strategic plan is sufficient to adequately explain the key trends and assumptions included in the strategic plan. Particular attention should be paid to the narrative regarding strategic initiatives or changes in strategy of the FHLBank.

e) Review the scenario analyses included in the strategic plan. Determine whether the strategic plan includes both: (1) interest-rate sensitivities and (2) operational sensitivities for key assumptions such as advances, investments, and mortgage growth.

5) Financial Standards of the Strategic Plan

Objective: Assess whether the financial statements included in the strategic plan are produced according to GAAP or a different financial standard.

a) Determine whether the projected balance sheet and income statement are produced according to GAAP. If not, determine the standard to which the projected financial statements are produced by interviewing FHLBank staff.

b) It is potentially problematic if an FHLBank does not use GAAP financials for its strategic plan. Non-GAAP figures make it more difficult to project future retained earnings levels as well as dividend payouts. In addition, non-GAAP financials tend to mask net income volatility. If the financial statements are not produced in accordance with GAAP, interview senior management, staff member in charge of planning, and other FHLBank staff as required and inquire as to the rationale for use of other than GAAP financial statements. Determine any adjustments made to the financial statements for the purposes of calculating retained earnings or dividend payouts.

6) Effective Date of the Strategic Plan

Objective: Determine whether the strategic plan was prepared using the most

recent financial information.

a) Determine the date that the strategic plan was approved by the board of directors or otherwise became effective.

b) Assess the interest-rate curve such as forward interest rates, used in the strategic plan and whether it is dated similarly to the effective date of the strategic plan.

c) Determine whether the "benchmark" balance sheet and income statement from which the financial projections are built coincide with the effective date of the strategic plan.

d) If the effective dates of the strategic plan, interest-rate curve, and baseline balance sheet and income statements are significantly different, determine the rationale through discussion with appropriate FHLBank staff to determine if the financial projections are in any way compromised.

7) Communications

a) Determine whether the plan once approved by the board is widely disseminated throughout the Bank.

b) Does the adopted plan serve as a guide in the development of plans by the FHLBank's business units?

8) Advance Growth Assumptions

Objective: Assess the degree of rigor used to create advance growth assumptions.

a) Determine how advances growth assumptions were created. There are generally two methodologies used to develop these assumptions:

(1) **Bottom-up.** Taking into account the roll-off of the existing advance book, the FHLBank analyzes future potential advance demand on a member-by-member basis (or grouping-by-grouping basis) based on, among other things, likely member demand, existing stock holding, and availability of qualifying collateral. The bottom-up methodology is generally the more rigorous approach.

(2) **Top down.** The FHLBank applies a fixed net advances growth rate such as $100 million per month, to its existing advance book.

If the top-down approach is used, carefully assess the appropriateness and

sufficiency of the assumptions.

b) Create a historical time series of advance balances with the same time increments (monthly, quarterly) as the strategic plan, for at least five years or the length of one interest rate cycle, whichever is greater. Note the historical trend and volatility of advance balances.

c) Compare the historical growth of advance balances to the projected growth rate. Assess the reasonableness of the forecasted assumptions given historical trends. In particular, review the rationale for significant increases/decreases from historical trend. If the plan embodies a high advances growth rate, does the plan indicate the source of this growth such as significant new members or significant expansion of advances by particular members?

d) Create the following statistic for all periods in the historical and projected time series: advances/total assets. Note the historical trend and volatility of the ratio. Determine whether the historical trend and volatility change over the projection period. If so, review the narrative to the strategic plan and determine whether the change is adequately explained.

9) Net Interest Income from Advances

Objective: Review the reasonableness of forecasted income generated by advances.

a) Determine methodology used to estimate net interest income generated by advances. Generally, an FHLBank will estimate this by applying a fixed spread to the cost of funds associated with future forecasted advances.

b) If applicable, review how the fixed advance spread used in the projections was generated. Consider the reasonableness of the fixed spread assumption. This is especially critical if the FHLBank does not track spread by product line.

c) Create a projected time series of advance net interest income/ total net interest income from the strategic plan over the projection period. Note the trend and projected volatility of advance net interest income. Determine whether the percentage of net interest income derived from advances increases of decreases over the projection period. If so, review the narrative to the strategic plan and determine whether the change is adequately explained.

10) Investment Growth Assumptions

Objective: Assess the degree of rigor used to create investment growth assumptions.

a) Determine how investment growth assumptions were created. There are several steps required to review investment assumptions:

(1) **Review investment line items.** Investment line items may include agency MBS, private-label MBS, agency securities, and liquidity investments, among others.

(2) **Determine roll-off of existing investment book.** The payoff/expiration of certain investments such as a large tranche of agency securities, could affect the FHLBank's investment profile. Assess whether the roll-off of existing investments is used in the strategic planning process. Review of the expiration schedule for short-term investments is not required.

(3) **Review growth projections by line item**. Generally investment balances are projected using: (a) a straight-line growth rate such as a $100 million/quarter, (b) a multiple of capital such as 3-times total regulatory capital, (c) a percentage of total assets, or (d) a residual.

b) Create a historical time series of investments with (1) the same time increments (monthly, quarterly) as the strategic plan for at least five years or the length of one interest rate cycle, whichever is greater and (2) the same line items as the strategic plan. Note the historical trend and volatility of investment balances.

c) Compare the historical growth rate of investments to the projected growth rate. Assess the reasonableness of the forecasted assumptions given historical trends. In particular, review the rationale for significant increases/decreases from historical trend.

d) Determine whether regulatory investment limitations are met throughout the projection period, such as the 3-times regulatory total capital limit on MBS securities.

e) Create the following statistic for all periods in the historical and projected time series: investment line item/total investments and investment line item/total assets for all investment line items. Note the historical trend and volatility of the ratios. Compare the ratios from the historical time series to the end of the projections. Determine whether the ratios increase of decrease over the projection period. If so, review the narrative to the strategic plan and determine whether the change is adequately explained.

11) Net Interest Income from Investments

Objective: Review the reasonableness of forecasted income generated from investments.

a) Determine methodology used to estimate net interest income generated by investments. Generally, an FHLBank will estimate this by applying a fixed spread to the cost of funds associated with each type of investments.

b) If applicable, review how the fixed spread used in the projections was generated and determine the reasonableness of the fixed spread assumption. This is especially critical if the FHLBank does not track spread by product line.

c) Create a projected time series of investment net interest income/total assets from the strategic plan over the forecast period. Note the trend and projected volatility of investment net interest income. Determine whether the percentage of net interest income derived from investments increases of decreases over the projection period. If so, review the narrative to the strategic plan and determine whether the change is adequately explained.

12) Mortgage Growth Assumptions

Objective: Assess the degree of rigor used to create mortgage growth assumptions.

a) Determine how mortgage growth assumptions were created. There are two key steps required to review investment assumptions:

(1) **Determine roll-off of existing mortgage book.** Assess whether the FHLBank takes into account prepayment of the existing mortgage book when creating mortgage growth assumptions. Determine the "as of date" for interest rates used to estimate the pay down schedule.

(2) **Review growth assumptions.** There are generally two methodologies use to develop these assumptions**: (a) Bottom-up.** Taking into account the roll-off of the existing mortgage book, the FHLBank analyzes future potential mortgage sales on a member-by-member basis (or grouping-by-grouping basis). The bottom-up methodology is generally the more rigorous approach, (b) **Top down.** The FHLBank applies a fixed net mortgage growth rate such as a $100 million per month, to its existing mortgage book.

If the top-down approach is used, carefully assess the appropriateness and sufficiency of the assumptions.

b) Create a historical time series of mortgage balances with the same time increments (monthly, quarterly) as the strategic plan for at least five years or the length of one interest rate cycle, whichever is greater. Note the historical trend and volatility of mortgage balances.

c) Compare the historical growth rate of mortgages to the projected growth rate.

Assess the reasonableness of the forecasted assumptions given historical trends. In particular, review the rationale for significant increases/decreases from historical trend.

d) Create the following statistic for all periods in the historical and projected time series: mortgages/total assets. Note the historical trend and volatility of the ratio. Determine whether the ratio increased of decreased over the projection period. If so, review the narrative to the strategic plan and determine whether the change is adequately explained.

e) Determine whether the strategic plan addresses the relative volume of mortgage product provided by individual members. If a few members are responsible for providing the majority of mortgage product, does the strategic plan include any sensitivity analysis that shows projected volumes without those few members?

13) Net Interest Income from Mortgages

Objective: Review the reasonableness of forecasted income generated from mortgages.

a) Determine methodology used to estimate net interest income from generated by mortgages. For the existing mortgage book, the FHLBank will generally forecast a net mortgage spread (keep in mind that portfolio mortgage spreads tend to decline over time). For new mortgage product, an FHLBank will generally estimate net spread by applying a fixed spread to the cost of funds associated with the new pool.

b) If applicable, review how the fixed spread used in the projections was generated and determine the reasonableness of the fixed spread assumption. This is especially critical if the FHLBank does not track spread by product line.

c) Create a projected time series of mortgage net interest income/total net interest income from the strategic plan over the projection period. Note the trend and projected volatility of investment net interest income. Determine whether the percentage of net interest income derived from mortgages increases of decreases over the projection period. If so, review the narrative to the strategic plan and determine whether the change is adequately explained.

14) Net Interest Income Trend

Objective: Assess the reasonableness of forecasted net interest income.

a) Create a historical time series of net interest income with the same time increments (monthly, quarterly) as the strategic plan for at least five years or the length of one interest rate cycle, whichever is greater. Note the historical trend

and volatility of net interest income.

b) Compare the historical growth rate of net interest income to the projected growth rate. Assess the reasonableness of the forecasted net interest income growth given historical trends. Review the narrative of the strategic plan to determine whether significant net interest income volatility is adequately explained.

15) Overhead Growth Assumptions

Objective: Assess the degree of rigor used to create overhead growth assumptions.

a) Determine methodology used to estimate overhead expense.

b) Compare annual overhead expense to that of other FHLBanks by comparing: (1) nominal amount of overhead expense; (2) overhead expense/total assets; and (3) overhead expense/net interest income. Determine the level of FHLBank overhead expense relative to its peers.

c) Create a historical time series of overhead expense with the same time increments (monthly, quarterly) as the strategic plan for at least five years or the length of one interest rate cycle, whichever is greater. Note the historical trend and volatility of overhead expenses.

d) Create the following statistic for all periods in the historical and projected time series: overhead expense/total assets, and overhead expense/net interest income. Review the future growth rate of overhead expenses.

e) Assess the reasonableness of overhead expense assumptions. In particular review strategic initiatives or other projects of the FHLBank to determine if staffing levels are appropriate.

16) Other Gains/Losses Assumptions

Objective: Determine whether assumptions related to net gains/losses from the sale of securities and derivatives and hedging are supported.

a) Determine whether the projected balance sheet and income statement are produced according to GAAP. If so, determine whether income statement includes line items for other gains/losses.

b) Create a historical time series of other gains/losses with the same time increments (monthly, quarterly) as the strategic plan for at least five years or the length of one interest rate cycle, whichever is greater. Note the historical trend and volatility of overhead expenses.

c) Compare the historical trend of other gains/losses to the projected trend. Assess the reasonableness of the forecasted assumptions given historical trends. Should particularly large gain/loss arise from sale of securities or derivatives and hedging assess narrative for explanation.

17) Net Income Trend

Objective: Assess the reasonableness of forecasted net interest income.

a) Create a historical time series of net income with the same time increments (monthly, quarterly) as the strategic plan for at least five years or the length of one interest rate cycle, whichever is greater. Note the historical trend and volatility of net income.

b) Compare the historical growth rate of net income to the projected growth rate. Assess the reasonableness of the forecasted net income growth given historical trends. Review the narrative of the strategic plan to determine whether significant net income volatility is adequately explained.

18) Dividend Assumptions

Objective: Assess dividend and dividend payout assumptions.

a) Review the FHLBank's current dividend policy from minutes of the board of directors meetings or other sources. Note how the quarterly dividend is determined such as LIBOR plus margin. Note when the quarterly dividend is declared and when it is paid. This information is on the dividend schedule in CRS.

b) Create a historical time series of: (1) quarterly total dividend payout ($ millions); (2) quarterly annualized dividend yield; (3) quarterly dividend payout ratio (total dividend payout/net income); and (4) if dividend is indexed, quarterly index level for at least five years or the length of one interest rate cycle, whichever is greater.

c) Compare the historical growth of the quarterly total dividend payout to its projected growth. Assess whether projected growth is due to higher net income or higher dividend payout ratio. In particular, review the rationale for significant increases/decreases from historical trend.

d) Compare the historical spread of the quarterly annualized dividend yield to its index (if not indexed, use fed funds) relative to the projected spread. Assess the rationale for significant increases/decreases from historical trend.

e) Compare the historical trend of the FHLBank's dividend payout ratio relative to the projected trend. Assess the rationale for significant increases/decreases from

historical trend. Note if the payout ratio exceeds 1.

19) Retained Earnings Assumptions

Objective: Assess the degree of rigor used to create retained earnings assumptions.

a) Review the retained earnings policy of the FHLBank. Determine whether the FHLBank has achieved its retained earnings benchmarks.

b) Create a historical time series of retained earnings with the same time increments (monthly, quarterly) as the strategic plan for at least five years or the length of one interest rate cycle, whichever is greater.

c) Compare the historical trend of retained earnings to the projected trend in the strategic plan. Assess the reasonableness of the forecasted assumptions given historical trends.

d) Create the following statistic: retained earnings/total assets, for both the historical and projected time series. Note the long-and short-term trend of this metric.

e) Note if: (1) FHLBank does not achieve its retained earnings benchmarks as stated in its policy during the projection period; (2) retained earnings decline during the projection period; and (3) unusual deviance from historical trends not explained in the narrative.

20) Interest-Rate Sensitivity Analysis

Objective: Review the interest rate sensitivity analysis, if applicable.

a) Determine methodology used to create interest-rate sensitivities such as 50 basis point parallel shock, etc.

b) Compare interest rate curve used when strategic plan became effective to current curve. Note the relative increase/decrease in rate when analyzing sensitivities.

c) Note whether any of the "shocked" cases produce projections that: (1) significantly reduce net interest income or income; (2) affect ability to pay dividends at current level; or (3) affect ability to meet retained earnings targets.

d) Assess the reasonableness of the "shocked" cases. Note if modest interest rate shocks create significant changes in the strategic plan financials. Assess the narrative review of scenario analysis.

21) Operational Sensitivity Analysis

Objective: Review the operational sensitivity analysis, if applicable.

a) Determine which operational variables are sensitized such as the advance growth rate. Assess whether the variables chosen are the drivers of FHLBank growth in the strategic plan. Review the sensitivities used such as the advance growth rate increased 5 percent. Assess the narrative review of scenario analysis.

b) Note whether any of the sensitized cases produce projections that: (1) significantly reduce net interest income or income; (2) affect ability to pay dividends at current level; or (3) affect ability to meet retained earnings targets.

22) Trend of Financial Ratios

Objective: Assess projected financial ratios.

a) Review the financial ratios provided by the strategic plan during the projection period. These may include leverage ratio, ROA, ROE, net interest spread, and net interest spread by business line (asset class). Note if key projected financial ratios are not included in the strategic plan.

b) Create a historical quarter time series of leverage ratio, ROA, ROE, net interest spread, and net interest spread by business line or asset class for at least five years or the length of one interest rate cycle, whichever is greater. Note the trend of the financial ratios.

c) Compare the historical trend of financial ratios to the projected trend. Assess the reasonableness of the forecasted trends.

23) Assessment of Strategic Planning

Objective: To summarize the results of the review and complete a memorandum.

Summarize the results of strategic planning examined in a separate memorandum. The memorandum should clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the quality and effectiveness of strategic and operational planning within the context of corporate governance (strong, satisfactory, supervisory concern, unacceptable). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

24) Items requiring follow-up at the next on-site visitation

Objective: To identify key issues that require follow-up at the next on-site visitation.

Identify key issues that have been communicated to management or the board of directors (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Strategic Planning
As of XXXXXX

1) Development

Is the strategic plan broadly developed? Was the development of the plan a "bottom-up" exercise that solicited and used the input of line managers? Were there active discussions of the strategic plan by staff and the board of directors before the plan was adopted? Was the board of directors fully engaged in the discussions concerning the adoption of the plan? Does the current plan reflect only incremental changes from the previous plan?

2) Benchmarking

Does the plan tie to the FHLBank's financial statements? Does the plan use the most recent available financial and portfolio information at the FHLBank? Is the format and presentation of the plan such that line managers can compare actual performance to the strategic plan?

3) Followed

Has the plan been widely disseminated throughout the Bank? Is the strategic plan followed? Does the management of the FHLBank use the strategic plan as a useful roadmap or does management treat the strategic plan as a perfunctory exercise? Does the board of directors use the strategic plan as a useful roadmap or does the board treat the strategic plan as a perfunctory exercise?

4) Reporting

Does management make periodic reports to the board of directors showing progress relative to the strategic plan? Does the board discuss material variances from the strategic plan?

5) Reasonableness

Are the implied growth rates for balance sheet categories in the strategic plan reasonable? Are the implied spreads in the strategic plan reasonable? Does the plan take into account likely as well as worst-case compositional shifts in membership that may affect the attaining of goals set forth in the strategic plan? Are the assumptions underlying the strategic plan supported by historical data or otherwise?

6) Usefulness

Does the strategic plan present most-likely and alternative scenarios based on business changes? Does the strategic plan present a most-likely interest rate scenario along with alternative interest-rate scenarios that present meaningful shocks? Does the strategic plan present to the board of directors information that shows the likely effect of strategic choices they are making?

7) Assessment of Strategic Planning

Summarize the results of strategic planning examined in a separate memorandum. The memorandum should clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the quality and effectiveness of strategic and operational planning within the context of corporate governance (strong, satisfactory, supervisory concern, unacceptable). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

8) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management or the board of directors (written or oral) that require follow-up during the next on-site visitation.

Introduction

The board of directors and senior management have the ultimate responsibility for the design, implementation, and monitoring of the FHLBank's risk management and internal control environment. The control environment provides the discipline and structure for the achievement of the primary objectives of the system of internal control. Specific examples of internal control are as follows:

1) Integrity and ethical values;
2) Management's philosophy and operating style;
3) Organizational structure;
4) Assignment of authority and responsibility;
5) Human resource policies and procedures; and
6) Competence of personnel.

Broadly defined, internal control is a process that and encompasses all activities of the FHLBank, reflects the attitude of the board of directors and senior management, and is designed to:

1) Provide reasonable assurance that assets are safeguarded, and financial and operational information is timely and reliable;
2) Detect and correct errors and irregularities in a timely manner;
3) Ensure compliance with policies, plans, procedures, laws and regulations; and
4) Promote the economical and efficient use of resources.

Control is an integral part of managing operations, and is any action taken by a manager to enhance the probability that established goals and/or objectives will be achieved. Those actions may be either preventive (to deter undesirable events from occurring), detective (to detect and correct undesirable events which have occurred), or directive (to cause or encourage a desirable event to occur).

It is the responsibility of FHLBank management at all levels to:

1) Identify and evaluate the exposures related to the conduct of the FHLBank's operations;
2) Specify and establish the policies, operating standards, procedures, systems, and other disciplines to be used to limit the risks associated with the exposures identified;
3) Establish practical controlling processes that require and encourage employees to perform their tasks in a manner that achieves a positive control result; and
4) Maintain the adequacy and effectiveness of the control processes that have been established.

Internal audit is an independent and objective assurance activity designed to add value and improve the organization's operations. It assists an organization in accomplishing its objectives by bringing a systemic, disciplined approach to evaluate and improve the

effectiveness or risk management, control, and governance processes by providing objective analysis and constructive recommendations. For example, internal audit assists FHLBank management in maintaining effective internal controls by evaluating their effectiveness and efficiency and by promoting continuous improvement. .

Internal audit activities are performed in diverse legal and cultural environments; within organizations that vary in purpose, size, complexity, and structure. While differences may affect the practice of internal auditing in each environment, compliance with the International Standards for the Professional Practice of Internal Auditing (Standards) is essential if the responsibilities of internal auditors are to be met. If internal auditors are prohibited by laws or regulations from complying with certain parts of the Standards, they should comply with all other parts of the Standards and make appropriate disclosures.

Assurance services involve the internal auditor's objective assessment of evidence to provide an independent opinion or conclusions regarding a process, system, or other subject matter. The nature and scope of the assurance engagement are determined by the internal auditor. There are generally three parties involved in assurance services: (1) the person or group directly involved with the process, system, or other subject matter, *i.e.*,, the process owner, (2) the person or group making the assessment, *i.e.*, the internal auditor, and (3) the person or group using the assessment, *i.e.*, the user. Examples may include financial, performance, compliance, system security, and due diligence engagements.

From time to time, the internal audit function might provide advisory or consulting services which are generally performed at the specific request of an engagement client. The nature and scope of the consulting engagement are subject to agreement with the engagement client. Consulting services generally involve two parties: (1) the person or group offering the advice, *i.e.*, the internal auditor, and (2) the person or group seeking and receiving the advice, *i.e.*, the engagement client. When performing consulting services the internal auditor should maintain objectivity and not assume management responsibility. Examples include counsel, advice, facilitation, and training. Notwithstanding, the examiner should closely review consulting activities of the internal audit department to ensure that such activities are not operational in nature and might compromise independent auditor objectivity and independence.

The purpose of the Standards is to:

1) Delineate basic principles that represent the practice of internal auditing as it should be;
2) Provide a framework for performing and promoting a broad range of value-added internal audit activities;
3) Establish the basis for the evaluation of internal audit performance; and
4) Foster improved organizational processes and operations.

The responsibility of internal audit extends beyond that of external auditors with respect to the reliability and integrity of information. External auditors are primarily concerned with the internal control structure relevant to a financial statement audit, which includes an evaluation of the financial institution's ability to record, process, summarize, and report financial data consistent with the assertions in the financial statements, while internal audit is also concerned with controls over the effectiveness, economy, and efficiency of management decision-making processes that do not relate to a financial statement audit.

Audit Committee

The audit committee is a committee of the board. Its function is to promote the independence of the external and internal auditors, and ensure that the directors exercise due care.

The audit committee is responsible for monitoring, overseeing, and evaluating the duties and responsibilities of management, internal audit, and the external auditors as those duties and responsibilities relate to the organization's processes for controlling its operations, and that all issues reported by the internal audit department, the external auditor, and other outside auditors have been satisfactorily resolved.

The specific powers, duties and responsibilities of the audit committee are detailed in a charter which should include, but is not limited to, the following:

1) Detailing committee composition, membership, terms of service, independence, qualifications, and meetings;

2) Reviewing and approving the audit committee charter periodically;

3) Direction of senior management to maintain the reliability and integrity of the accounting policies and financial reporting and disclosure practices of the FHLBank;

4) Reviewing the basis for the FHLBank's financial statements and the external auditor's opinion rendered with respect to such financial statements; and

5) Conducting oversight of the internal audit function by:

    a) Selecting, evaluating and, where appropriate, replacing the audit director and ensuring that the audit director be removed only with the approval of the audit committee;
    b) Requiring that the audit director report directly to the audit committee on substantive matters, and that the audit director shall be accountable to the audit committee and board of directors;

c) Requiring that both the internal and external auditors have unrestricted access to the audit committee without the need for any prior management knowledge or approval;
d) Reviewing the scope of audit services required, significant accounting policies, significant risks and exposures, audit activities, and findings;
e) Monitoring the adequacy and timeliness of internal audit follow-up on findings;
f) Assessing the performance and determining the compensation of the audit director; and
g) Reviewing and approving the audit director's work plan.

6) Conducting oversight of the external audit function by:

a) Approving the external auditor's annual engagement letter;
b) Reviewing the performance of the external auditor; and
c) Making recommendations to the board of directors regarding the appointment, renewal, or termination of the external auditor.

7) Providing an independent, direct channel of communication between the board of directors and the Bank's internal and external auditors;

8) Determining the extent to which internal and external auditors review the security for computer systems, facilities, and backup systems;

9) Evaluating responses by management to audit findings and reports, and monitoring management implementation of audit recommendations;

10) Conducting or authorizing investigations into any matters within the audit committee's scope of responsibilities;

11) Monitoring of compliance with FHLBank's conflict of interest policy and oversight of investigations of conflicts of interest and unethical conduct;

12) Providing reasonable assurance that senior management has established and is maintaining an adequate internal control system by:

a) Reviewing the FHLBank's internal control system and the resolution of identified material weaknesses and reportable conditions in the internal control system, including the prevention or detection of management override or compromise of the internal control system; and

b) Reviewing the FHLBank's programs and policies designed to provide reasonable assurance of compliance with applicable laws, regulations, and policies and monitoring the results of the compliance efforts.

13) Review of the policies and procedures established by senior management to assess and monitor implementation of the FHLBank's strategic business plan and the operating goals and objectives; and

14) Periodic reporting of its findings to the FHLBank's board of directors.

Evaluation of the Internal Audit Function

To determine the adequacy and effectiveness of the internal audit function, and its compliance with the Standards, the examiner should evaluate specific standards that pertain to organizational status, professional competency and due professional care, management of the internal audit activity, nature and performance of internal audit activities and communication. These are detailed as follows:

1) Organizational Status

Organizational status relates to the internal audit department's purpose, authority and responsibility within the organization to address board of director oversight and corporate governance, and to ensure the internal auditor's independence and objectivity. The organizational status of internal audit must be sufficient to permit accomplishment of the objectives. Proper organizational status enhances the independence and objectivity of internal audit. Without the support of the board of directors and senior management, the internal auditors may not receive the cooperation necessary to perform their tasks.

The purpose, authority, and responsibility of the internal audit should be formally defined in a charter, consistent with the Standards, and approved by the board of directors. The charter should (a) establish the internal audit activity's position within the organization; (b) authorize access to records, personnel, and physical properties relevant to the performance of engagements; and (c) define the scope of internal audit activities. Internal auditors may provide consulting services relating to operations for which they had previous responsibilities. The nature of assurance and consulting services provided to the organization should be defined in the charter.

Internal audit should be independent and objective in the performance of its work. Internal auditors should be free from interference in determining the scope of an audit, performing work, and communicating results. The audit director should report functionally and administratively to the audit committee. However, in some instances, the audit director may report functionally to the audit committee and administratively to the Chief Executive Officer.

Objectivity is an independent mental attitude which internal auditors should maintain in performing audits. Internal auditors should perform their work in such a manner that significant compromises are not made, or be placed in situations where they are unable to make objective professional judgments.

Internal auditors should refrain from assessing specific operations for which they were previously responsible. Objectivity is presumed to be impaired if an auditor provides assurance services for an activity for which the auditor had responsibility within the previous year. Assurance engagements for functions over which the internal audit director has responsibility should be overseen by a party outside the internal audit activity.

If independence or objectivity is impaired in fact or appearance, the details of the impairment should be disclosed to appropriate parties. The nature of the disclosure will depend upon the impairment. If internal auditors have potential impairments to independence or objectivity relating to proposed consulting services, disclosure should be made to the engagement client prior to accepting the engagement.

2) Professional Competency and Due Professional Care

The audit engagement should be performed with proficiency and due professional care. Internal auditors should possess the knowledge, skills, and other competencies needed to perform their individual responsibilities. Internal audit, collectively, should possess or obtain the knowledge, skills, and other competencies needed to perform their responsibilities.

Internal auditors should have knowledge of key information technology risk and controls and available technology-based audit techniques to perform their assigned work. However, not all internal auditors are expected to have the expertise of an internal auditor whose primary responsibility is information technology auditing.

The internal audit director should decline the consulting engagement or obtain competent advice and assistance if the internal audit staff lacks the knowledge, skills, or other competencies needed to perform all or part of the engagement.

Due professional care does not imply infallibility. The internal auditor needs to consider:

a) Extent of work needed to achieve the engagement's objectives;
b) Relative complexity, materiality, or significance of matters to which assurance procedures are applied;
c) Adequacy and effectiveness of risk management, control, and governance processes;
d) Probability of significant errors, irregularities, or noncompliance; and
e) Cost of assurance in relation to potential benefits.

In exercising due professional care, the internal auditor should consider the use of computer-assisted audit tools and other data analysis techniques. An internal auditor needs to be alert to the significant risks that may impact objectives, operations, and

resources. However, assurance procedures alone, even when performed with due professional care, do not guarantee that all significant risks have been identified.

An evaluation of the experience and technical expertise of the internal auditors includes the following attributes:

a) The internal auditors' knowledge, skills, and other competencies that are needed to perform their individual responsibilities such as education, work experience, and professional certifications.

b) Enhancement of the auditors' knowledge, skills, and other competencies through continuing professional development such as informal or formal training seminars, and the obtainment of professional certifications.

c) The development and maintenance of a quality assurance and improvement program that covers all aspects of the internal audit activity and continuously monitors its effectiveness.

   The internal audit director should develop and maintain a quality assurance and improvement program that covers all aspects of the internal audit activity and continuously monitors its effectiveness. This program includes periodic internal and external quality assessments and ongoing internal monitoring. Each part of the program should be designed to help the internal audit activity add value and improve the organization's operations and to provide assurance that the internal audit activity is in conformity with the Standards and the Code of Ethics**.**

   The process should include internal and external assessments. Internal assessments include ongoing reviews of the performance of the internal audit activity and periodic reviews performed through self-assessments by other persons within the organization, with knowledge of internal audit practices and the Standards.

   External assessments, such as quality assurance reviews, should be conducted at least once every five years by a qualified, independent reviewer from outside the organization. The results of the external assessment should be reported to the audit committee and the board of directors.

3) <u>Management, Nature and Performance of Internal Audit Activities</u>

The evaluation of the management, nature and performance of internal audit activities should consider the following attributes:

a) *Planning-development of the annual audit plan*

The audit director should develop risk-based plans to determine the priorities of internal audit, consistent with the organization's goals. The annual audit plan should be based on a risk assessment. The input of senior management and the board should be considered in the process. The audit director should consider accepting proposed consulting engagements based on the engagement's potential to improve management of risks, add value, and improve the organization's operations. Those engagements that have been accepted should be included in the plan.

The frequency of the audit should be determined by reference to factors affecting risk. Specific examples include, but are not limited to identified weaknesses, organization environment and change, management oversight, adequacy of internal controls, policies and procedures, significance to the balance and income statements, transaction volume, adequacy of systems, regulatory requirements, change in market/business environment, and the adequacy of business contingency plans.

Audit work schedules should include:

i) What activities are to be audited;
ii) When they will be audited;
iii) The audit work planned, and the nature of audit work performed by others; and
iv) Reporting types and timeframes.

Matters to be considered in establishing audit work schedule priorities should include:

i) The date and results of the last audit;
ii) Financial exposure;
iii) Potential loss and risk;
iv) Requests by management;
v) Major changes in operations, programs, systems, and controls;
vi) Opportunities to achieve operating benefits;
vii) Changes to and capabilities of the audit staff; and
viii) New programs.

The work schedules should be sufficiently flexible to cover unanticipated demands on the internal auditing department. Internal audit staffing resources should be appropriate, sufficient, and effectively deployed to achieve the approved plan. The internal audit's plan and resource requirements, including significant interim changes should be reported to senior management and the audit committee for review and approval. Also, the impact of resource limitations should be reported.

b) Policies and Procedures

The audit director is responsible for the development and implementation of policies and procedures to guide the internal audit activity. The format and content should be appropriate to the size and structure of the internal audit department, and the complexity of its work. The following are examples of attributes that should be addressed:

i) Corporate operating policies

(1) Governance-responsibilities of the board of directors and senior management;
(2) Audit committee responsibilities and charter; and
(3) Reporting to the audit committee.

ii) Overview of the Internal Audit Department

(1) Internal audit department charter;
(2) International Standards for the Professional Practice of Internal Auditing;
(3) Code of Ethics;
(4) Annual risk assessment and audit planning;
(5) Coordination with external auditors;
(6) Participation on management committees;
(7) Quality assurance program;
(8) Reports for management and the audit committee; and
(9) Responsibilities of the audit director, audit manager, audit supervisor, and the auditor-in-charge.

iii) Audit Projects

(1) Financial/operational audit;
(2) Information technology audit;
(3) System development audits;
(4) Special projects;
(5) Fraud/special investigations;
(6) Interim reviews and key indicator systems;
(7) Assistance to external auditors and regulatory examiners;
(8) Budget assignment, tracking, and reporting;
(9) Pre-planning of the audit engagement;
(10) Engagement letter to management and opening conference;
(11) Development and completion of internal control questionnaires;
(12) Preliminary evaluation of internal controls;
(13) Audit program;
(14) Sampling techniques;
(15) Testing of internal controls;

(16) Evaluation of findings;
(17) Workpaper Standards;
(18) Security of workpapers;
(19) Supervisory review;
(20) Record retention;
(21) Exit and closing conference;
(22) Audit reports and follow-up;
(23) Project staff appraisals;
(24) Post-audit feedback to the internal audit director; and
(25) Post-audit survey with management.

iv) Staff Development and Evaluation

(1) Position descriptions;
(2) Interviewing;
(3) Professional certifications and training; and
(4) Performance appraisals.

v) Audit Administration

(1) Personal conduct and independence;
(2) Personal computer responsibilities;
(3) Time reporting;
(4) Travel and expense requirements;
(5) Reference materials; and
(6) Record retention.

c) Coordination of Audit Activities

The audit director should share information and coordinate activities with other internal and external providers of relevant assurance to ensure proper coverage and minimize duplication of efforts.

d) Reporting to the Audit Committee and Senior Management

The audit director should report periodically to the audit committee and senior management on the internal audit's purpose, authority, responsibility, and performance relative to its plan. Reporting should also include significant risk exposures and control issues, corporate governance issues, and other matters needed or requested by the board and senior management. The following are examples of attributes to be included and subjects to be addressed in the report:

i) The status of the current audit plan and other audit matters such as audit department performance, personnel, training, and financial budgets;
ii) Prior audit reports and management's responses;

iii) Summaries of significant risk exposures and control issues, corporate governance issues, and other matters needed or requested by the board and senior management such as new regulatory and/or accounting requirements, employee related issues, and contingent litigation;
iv) Tracking of previous reported findings and management's response; and
v) External auditor's reports, third-party examination reports and presentations, and SAS 70 reviews on key/critical outside service providers.

4) Nature of Audit Work (Risk Management, Control and Governance)

Internal audit should evaluate and contribute to the improvement of risk management, control, and governance processes using a systematic and disciplined approach.

a) Risk Management and Control

Internal audit assists the organization in maintaining effective internal controls by evaluating their effectiveness and efficiency and by promoting continuing improvement. Based on the results of the risk assessment, internal audit evaluates the risk exposures and applicable controls relating to FHLBank's risk management, governance, operations, and information systems responsible for:

i) Reliability and integrity of financial and operational information;
ii) Compliance with policies, laws, regulations and contracts;
iii) Safeguarding of assets; and
iv) Effectiveness and efficiency of operations.

During advisory engagements, internal auditors should address risks and controls consistent with the engagement's objectives and be alert to the existence of other significant risks or control weaknesses. In addition, internal auditors should incorporate knowledge of risks and controls gained from advisory engagements into the process of identifying and evaluating significant risk exposures of the organization.

Internal auditors evaluate the extent to which operating and program goals and objectives have been established and conform to those of the organization. In addition, the review should include the extent to which results are consistent with established goals and objectives to determine whether operations and programs are being implemented or performed as intended.

Adequate criteria are needed to evaluate controls. Internal auditors should ascertain the extent to which management has established adequate criteria to determine whether the objectives and goals have been accomplished. If adequate, internal auditors should use such criteria in their evaluation. If inadequate, internal auditors should work with management to develop appropriate evaluation criteria.

b) Governance

Internal auditors should assess and make appropriate recommendations for improving the governance process in its accomplishment of the following objectives:

i) Promoting appropriate ethics and values within the organization;
ii) Ensuring effective organizational performance management and accountability;
iii) Effectively communicating risk and control information to appropriate areas of the organization; and
iv) Effectively coordinating the activities of and communicating information among the board, external and internal auditors and management.

Internal auditors should evaluate the design, implementation, and effectiveness of the organization's ethics-related objectives, programs and activities.

5) Performance of Audit Work

An evaluation of the effectiveness and efficiency of internal audit work includes the following attributes:

a) Planning Considerations

The internal auditor is responsible for the planning and conducting the internal audit, subject to supervisory review and approval. The preplanning process includes an evaluation of various attributes that include, but not limited, to the following:

i) In planning the engagement, internal auditors should consider the objectives of the activity being reviewed and the means by which the activity controls it performance.
ii) The internal auditor's identification and assessment of the significant risks and controls relevant to the activity under review and the means by which the potential impact of the risks is kept to an acceptable level.
iii) The adequacy and effectiveness of the activity's risk management and control systems compared to a relevant control framework or model, and opportunities for making significant improvements to the activity's risk management and control systems.

Internal auditors should establish an understanding with engagement clients that address objectives, scope, respective responsibilities, and other client expectations. For significant engagements, this understanding should be documented.

b) Engagement Objectives

Objectives should be established for each engagement. Internal auditors should conduct a preliminary assessment of the risks relevant to the activity under review. Engagement objectives should reflect the results of the risk assessment. The internal auditor should consider the probability of significant errors, irregularities, noncompliance and other exposures when developing the engagement objectives. The engagement objectives should address risks, controls and governance processes to the extent agreed upon by the client.

c) Engagement Scope

The established scope should be sufficient to satisfy the objectives of the engagement. The scope of the engagement should include consideration of relevant systems, records, personnel, and physical properties, including those under the control of third parties.

If significant consulting opportunities arise during an assurance engagement, a specific written understanding as to the objectives, scope, respective responsibilities and other expectations should be reached and the results of the consulting engagement communicated in accordance with consulting standards.

In performing consulting engagements, internal auditors should ensure that the scope of the engagement is sufficient to address the agreed-upon objectives. If internal auditors develop reservations about the scope during the engagement, these reservations should be discussed with the client to determine whether to continue with the engagement.

d) Engagement Resource Allocation

A determination of staffing resources necessary to achieve the engagement objectives should be performed. Staffing should be based on the complexity of the engagement, time constraints, and available resources.

e) Engagement Work Programs

Internal auditors should develop work programs that achieve the engagement objectives. The audit programs should be recorded and establish the procedures for identifying, sampling, analyzing, evaluating, and recording information during the engagement. The audit program should be approved prior to its implementation, and any adjustments approved in a timely manner. Work programs for engagements may vary in form and content depending upon the nature of the engagement.

f) Performing the Engagement

Internal auditors should identify and record information or produce evidence that achieves the engagement's objectives and supports the auditors' analyses, conclusions, and results. Specific information or evidence includes the following:

i) *Sufficient information*-is factual, adequate, and convincing so that a prudent, informed person would reach the same conclusions as the auditor;
ii) *Competent information*-is reliable and attainable through the use of appropriate audit techniques;
iii) *Relevant information*-supports audit findings and recommendations and is consistent with the objectives for the engagement; and
iv) *Useful information*-helps the organization meet its goals.

The audit director should control access to the workpapers. Approval should be obtained from senior management and/or legal counsel prior to the releasing such records to external parties, as appropriate. Record retention procedures should be established that are consistent with the organization's and industry guidelines and regulatory requirements.

g) Engagement Supervision

The engagement should be supervised to ensure the objectives are achieved, quality is assured, and the experience and competency of the internal audit staff is developed. Evidence of supervisory review should be documented in the workpapers.

h) On-going monitoring and key business activities

The audit director should implement a process to monitor critical business activities and key performance indicators continuously such as exception reports and interim reviews, coordinating with other risk management functions, developing the audit plan based on risk priorities and being involved in technology projects.

6) <u>Communication</u>

a) Audit Reports

Audit reports are a culmination of the work that was performed. Although audit reports do not have a prescribed format, there are several types of reports that could be utilized, which include:

i) *Formal*-with carefully structured formats;
ii) *Informal*-in letters or memoranda to operating management; and,

iii) *Interim*-with brief statements of conditions requiring immediate action.

The audit report should be accurate, objective, clear, concise, constructive, complete, and timely. If appropriate, satisfactory performance should be acknowledged. The report should include the engagement's objectives and scope as well as applicable conclusions, recommendations, action plans, and where appropriate, contain the internal auditor's overall opinion. The audit director or designee is responsible to review and approve the final audit report before issuance and should decide to whom the report will be distributed.

Communication of the progress and results of engagements will vary in form and content depending upon the nature of the engagement and the needs of the client. In addition, risk management, control and governance issues may be identified. Whenever, these issues are significant to the organization, they should be communicated to senior management and the board.

If a final communication contains a significant error or omission, the internal audit director should communicate corrected information to all parties who received the original information. When noncompliance with the Standards impacts a specific engagement, communication of the results should disclose the:

i) *Standard(s)* with which full compliance was not achieved;
ii) *Reason(s)* for noncompliance; and,
iii) *Impact* of noncompliance on the engagement.

b) Monitoring Results and Follow-up

The audit director must establish a process to monitor and follow-up on the findings that were communicated to ensure that corrective action has been effectively implemented or that senior management has acknowledged and accepted the risk of not taking action. If the audit director believes that senior management has accepted a level of risk that is unacceptable to the organization, a discussion must be held with senior management. If the decision regarding residual risk is not resolved, the matter must be reported to the audit committee and the board of directors.

Regulatory Environment

The primary authorities governing, or relevant to, external and internal audit activities of the FHLBanks are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) ***Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to external and internal audit activities:***

   Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4 Bank Member Products Policy, and Section 917.6, Internal Control System, are pertinent.

   Section 917.5 requiring the FHLBank's board of directors to have a strategic business plan that describes how the business activities of the FHLBank will achieve its mission consistent with Part 940 (Core mission activities).

   Section 917.7, addresses the powers, duties, composition, and responsibilities of the audit committees. These responsibilities should be detailed in a charter and approved by the board of directors. The charter should be re-approved at least every three years.

   Section 917.8, requires the board of directors to be responsible for the adoption of the FHLBank's annual operating expense budget and capital expenditures, and with the FHLBank's responsibility to protect both its members and the public interest by keeping its costs to an efficient and effective minimum.

   Section 989.3, addresses the preparation and completion of the FHLBank's financial statements, and the distribution of financial information and other information to the Finance Board and the Office of Finance.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide guidance relating to the topic of internal audit are the following:

   Advisory Bulletin AB 96-1, dated February 29, 1996, provides that to maintain independence; the audit committee is responsible for the selection, compensation, and performance evaluation of the audit director.

   Advisory Bulletin AB 02-5, dated April 8, 2002, provides that to maintain independence; the internal audit function should not take an ownership role and manage or coordinate the annual risk assessment of the FHLBank.

   Advisory Bulletin 05-05 dated May 18, 2005, which provides guidance on the risk management responsibilities of the board, senior management and risk management.

3) ***Federal Housing Finance Board Resolution*** numbered 92-568.1, dated July 22, 1992, which sets forth minimum standards for the functioning of the internal audit department, the audit committees, and minimum standards for the audit director.

4) ***Statements of Financial Accounting Standards adopted by the Financial Accounting Standards Board (FASB)*** establish standards of financial accounting and reporting governing the preparation of financial reports and are officially recognized as authoritative by the Securities and Exchange Commission and American Institute of Certified Public Accountants (AICPA).

5) ***Securities and Exchange Commission*** is the primary regulator of the United States securities markets and requires public companies to disclose meaningful financial information to the public and enforces the securities laws.

6) ***American Institute of Certified Public Accountants Professional Standards*** is the national, professional organization for certified public accountants. Its mission is to provide members with the resources, information and leadership that will enable them to provide professional services to benefit the public as well as employers and clients. In fulfilling its mission, the AICPA works with state accountants' organizations and gives priority to those areas where public reliance on accounting skills is most significant. The AICPA Auditing Standards Board issues Statements of Auditing Standards (SAS) utilized by the auditing profession. Specific examples include, but are not limited to, the following:

   SAS 55, Consideration of Internal Control in a Financial Statement Audit, requires external auditors to obtain an understanding of internal control on every engagement. This includes an evaluation of the control environment, risk assessment, control activities, information and communication, and monitoring.

   SAS 65, The Auditor's Consideration of the Internal Audit Function in an Audit of Financial Statement, encourages external auditors to consider internal audit activities such as organizational status, audit plans, scope of audit work, competence, objectivity, professionalism, and providing assistance to the external auditors when planning and performing the financial statement audit.

   SAS 90, Audit Committee Communications, establishes a requirement that certain matters related to the conduct of an audit are communicated to the audit committee, and requires the external auditor to ensure that the audit committee receives additional information regarding the scope and results of the audit that may assist the audit committee in overseeing the financial reporting and disclosure process for which management is responsible.

   SAS 99 (Consideration of Fraud in a Financial Statement Audit) establishes procedures and provides guidance to external auditors in fulfilling their responsibility, as it relates to fraud, in an audit of financial statements.

7) ***Sarbanes-Oxley Act and regulations and interpretations of the Securities and Exchange Commission thereunder.***

The statute was enacted in response to various corporate scandals and addresses various corporate governance requirements that relate to the responsibilities of corporate boards of directors, the external and internal audit function, and the quality of management's attestation of internal controls pertaining to the accuracy of financial reporting.

8) ***Public Company Accounting Oversight Board (PCAOB)*** is a private-sector, non-profit corporation, created by the Sarbanes-Oxley Act to oversee the auditors of public companies in order to protect the interests of investors and further the public interest in the preparation of informative, fair, and independent audit reports.

9) ***Government Auditing Standards*** provides standards for audits of government organizations. The standards pertain to auditors' professional qualifications, the quality of audit effort, and the characteristics of professional and meaningful audit reports.

10) ***Institute of Internal Auditing (IIA)*** was organized in 1941 to develop and promote the professional status of internal auditing. The IIA recently adopted a Professional Practices Framework (PPF) that updates and expands previous IIA guidance for internal auditors. The internal audit activity is part of a system of internal control, and contributes significantly to the overall governance structure of the corporation. Management, directors, investors, and external auditors will be affected by the new framework. The PPF includes both new and updated audit standards and provides a framework for internal audit activities to engage with other mechanisms of corporate governance.

    The IIA's definition of internal auditing reflects the broad duties of internal auditors in their organizations. The definition's encompassing nature allows for future development of the role of the internal audit. The new definition is as follows:

    "Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes."

    The IIA adds consulting activities to the more traditional assurance services in characterizing the work that internal auditors perform. In addition, the definition emphasizes the concept that internal auditing should add value to the organization. Finally, besides the familiar topic of internal control, two additional areas, risk management and governance are specifically mentioned.

    The IIA Code of Ethics has two components: "principles" and "rules of conduct." The four principles are: *integrity, objectivity, confidentiality, and competency.* The

rules of conduct amplify the principles and detail specific internal audit behaviors that are either mandated or prohibited. These principles are defined as follows:

a) *Integrity*-The integrity of internal auditors establishes trust and provides the basis for reliance on their judgment. Their work is to be performed with honesty, diligence and responsibility.

b) *Objectivity*-Internal auditors are to exhibit the highest level of professional objectivity in gathering, evaluating, and communicating information about the activity or process being examined. Internal auditors make an assessment of all relevant circumstances and should not be unduly influenced by their own interests or by others in forming judgments;

c) *Confidentiality*-Internal auditors are to respect the value and ownership of information they receive and should not disclose information without appropriate authority, or use the information for personal gain.

d) *Competency*-Internal auditors are to apply the knowledge, skills, and experience needed in the performance of their duties and responsibilities that are necessary to comply with the International Standards for the Professional Practice of Internal Auditing.

The International Standards for the Professional Practice of Internal Auditing (Standards) is a group of specific standards and guidelines that address audit methodology and practices such as purpose, authority, responsibility, independence, objectivity, scope of work, professional proficiency, quality assurance, management of the internal audit department, nature of work, and performance of audit work.

There are three sets of mandatory standards for both assurance and consulting work which are as follows:

a) Attribute standards describe appropriate features of individuals and units performing internal audit work.

b) Performance standards pertain to the execution of each individual internal audit engagement.

c) Implementation standards elaborate on the attribute and performance standards and relate those standards to specific types of audits. Implementation standards may address issues associated with particular industries, regions, or types of services.

Practice advisories (PAs) provide internal auditors with guidance that is endorsed by the IIA but not mandatory. The PAs describe best practices that may aid the internal auditor in implementing the ISPPIAs. Development and practice aids constitute the

largest element of the PPF. The aids offer training and education to internal auditors through continuing education courses, research reports, and other products and services.

FHLBank Environment

Within the FHLBanks, to ensure adequate coverage of the major risks and to minimize duplication of effort, the external and internal auditors coordinate the timing and scope of their audits. In many cases, external auditors rely on the work of the internal auditor to gain comfort on the control environment and gain efficiencies over the number and depth of substantive tests needed to perform its audit.

The specific number of internal auditors, reporting structure of the audit function, background, experience, education and professional certifications, audit methodologies and practices may vary. In addition, due to staffing limitations and required technical expertise, specific engagements such as the audit of computer systems may be outsourced.

If an internal audit engagement is outsourced, examiners should consider reviewing the objectives detailed in the engagement letter, scope of review, audit committee approval, coordination with internal auditors and senior management, testing and the reporting the results to senior management, corrective action, and reporting to the audit committee and the board of directors. Examiners should also consider the number and type of outsourced audits when assessing the adequacy of resources and expertise of the internal audit function.

When evaluating the adequacy of the internal audit function, examiners should consider reviewing the internal auditor's procedures against actual practices. The examiners should be alert to potential weaknesses or deficiencies that relate to audit independence, risk assessment, development of the audit universe and annual plan, audit programs, testing methodologies, workpaper documentation, evaluation of findings, supervision of the work performed, audit reports, communication to FHLBank management and the board of directors.

Risks Associated with the External and Internal Audit Programs

1) Lack of Sound Corporate Governance (Board of Directors, Audit Committee, and Senior Management Oversight)

a) The internal audit program is not an integral part of the organization and does not have the full support of or appropriate oversight by the board of directors, the audit committee and senior management. Internal Audit's role is unclear and not considered in overall governance, risk management, new product, service and systems deployment, changes in strategic plans, and organizational and structural changes.

b) The audit committee does not provide sufficient oversight of the external auditor's independence as indemnification clauses are included in the firm's engagement letter.

c) The audit committee is not effective in its oversight of the audit program. Reports and information submitted to the committee are insufficient or not fully understood. The committee fails to follow-up on control and risk weaknesses that were reported by the internal and external auditors or hold senior management accountable.

d) The audit committee has a passive role in audit planning or selection and/or oversight of the external audit engagement, and is not involved in determining the respective roles of the internal and external auditors. Engagement letters describing the work to be performed by the external auditors are incomplete or not understood by the board of directors.

e) Inappropriate influence by senior management on the internal/external audit process which compromises the internal/external auditor's independence and objectivity.

f) The management of the internal audit function is weak, evidenced by lack of competence or independence, or inadequate scope of review, and this risk is not mitigated by strong internal controls. Audit policies and procedures exist, but are inadequate in light of FHLBank's size, complexity, and risk profile.

   Audit programs, processes, reports and information systems are ineffective in addressing significant control or risk issues. Outsourced or co-sourced internal audit duties or assignments are ineffective and have not been appropriately managed. Internal audit does not have the experience/knowledge to understand and review the outsourced audit's report findings.

g) Internal audit ratings or assessment definitions inadequately defined or non-existent. Audit reports are unclear and do not accurately reflect the ratings and assessments based on the work performed. Significant rating and assessment differences exist with the identified findings. Internal audit programs and workpapers do not adequately support the work performed, findings and conclusions, and the final audit report.

h) Internal audit staff is inexperienced or lacks the technical expertise to complete the audit assignments. Audit assignments are not properly supervised. Staff training is inadequate, and significant turnover has impacted the completion of the annual audit plan.

i) Poor reputation in the marketplace due to material losses or fraudulent transactions impacting FHLBank's financial condition, which were the result of

significant exposures and control weaknesses not being properly identified, reported and corrected.

j) Internal audit's work plan does not routinely cover significant risks or programs in the Bank or has not looked at certain areas of Bank operations or risks in number of audit cycles.

Examination Guidance

A work program for External and Internal Audit accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis called for in the work program, the examiner should take into account his or her assessment of the quality and effectiveness of the external and internal audit programs relating to the identification and evaluation of the significant risks facing the FHLBank.

1) External auditor's communications to senior management and the audit committee

Evaluate the effectiveness of external auditor's engagement letters, formal reports, and management letters that have been communicated to senior management in identifying and addressing significant risks to the FHLBank. Assess communications with the audit committee for their effectiveness in focusing the audit program on areas of high risk and the extent and effectiveness of coordination between external and internal audit activities. Specific attributes to consider are as follows:

a) Indemnification clauses which limit or release the external auditor from liability for negligent acts are excluded from the engagement letter;
b) Annual report that discloses the external auditor's opinion on the presentation of the financial statements, and when applicable the external auditor's report on management's assertions over financial reporting;
c) Management letters that address other matters or issues to senior management;
d) Report to the audit committee which includes, but is not limited to, the following:

    (1) Responsibility of the independent external auditors, and communications to the audit committee;
    (2) Scope and results of the annual audit, internal audit reliance and management cooperation;
    (3) Report on compliance with certain laws and regulations and on internal controls over financial reporting as well as significant accounting, auditing and reporting matters;
    (4) Emerging accounting and reporting issues, regulatory matters, and other services rendered; and
    (5) Independence.

e) Summary of required communications to the audit committee that addresses the following subjects:

(1) Significant accounting policies, including the external auditor's judgment of the quality of the accounting policies and the consistency of the application of those policies and alternative accounting treatments with Generally Accepted Accounting Principles (GAAP);
(2) Management judgments and accounting estimates, audit adjustments, potential effects on the financial statements of any significant risks and exposures;
(3) Fraud and other illegal acts and deficiencies in internal control;
(4) External auditor's responsibility under Generally Accepted Auditing Standards and independence;
(5) Material uncertainties related to events and conditions, including going concern issues;
(6) Other information in documents containing audited financial information;
(7) Disagreements with management and difficulties encountered in performing the audit;
(8) Consultations with other accountants;
(9) Major issues discussed with management prior to retention; and
(10) Responsibilities of the audit committee.

2) Significant changes

Identify significant changes that have been implemented or are under consideration relating to the external audit and internal audit programs. Examples of significant changes could include staffing resources, outsourcing specific projects, automating the audit process, postponing planned audits projects, revising the audit universe and risk-based methodology.

3) Purpose, authority and scope of responsibility of internal audit department activities

Evaluate the independence, scope of responsibility and objectivity of internal audit department activities and their adequacy in light of identified risks to the FHLBank. Specific attributes include, but are not limited to, the following:

a) The purpose, authority, responsibility of internal audit has been formally defined in a charter that has been approved by the audit committee;
b) The charter establishes the internal audit department's position within the FHLBank, authorizes unrestricted access to records, personnel, and physical properties relevant to the performance of audits, defines the scope of internal audit activities, addresses consulting activities and is periodically reviewed by the audit committee;

c) The internal auditor reports directly to the audit committee on substantive matters and is ultimately accountable to the audit committee and the board of directors; and
d) A code of ethics has been adopted that adequately addresses the principles and rules of conduct that are relevant to the profession and practice of internal auditing.

4) Internal auditors' professional proficiency

Assess the internal auditors' professional proficiency that pertains to knowledge, skills and other competencies needed to perform their duties and responsibilities and their effectiveness in carrying out those responsibilities. Specific examples to consider include the following:

a) Current backgrounds such as education, experience, training and professional certifications of the audit staff;
b) Knowledge of key information technology risks and controls and available technology-based audit techniques to perform their assigned work, which may be short of the level of expertise expected of an internal auditor whose primary responsibility is information technology auditing. This knowledge should include sufficient expertise to review the work of an IT contractor or outsourced audit; and
c) On-going training programs to address the continuing professional development of the audit staff.

5) Management of internal audit department activities

Evaluate the internal audit director's methodology for managing the audit department and whether internal audit contributes materially to the improvement of the organization's risk management, control and governance These activities include, but are not limited to, the following:

a) An audit universe and annual audit plan that are based on a risk assessment, include input of senior management and the board of directors, and consider consulting assignments;
b) Internal audit resources that are appropriate, sufficient and effectively deployed to achieve the audit plan;
c) Policies and procedures to that are an adequate guide the audit staff and the development of the audit staff;
d) The work of the internal audit function is adequately coordinated with that of the external auditors and outside consultants to ensure proper coverage and minimize duplication of efforts;
e) Periodic reports are provided to the board of directors and senior management on the internal audit performance relative to the annual audit plan which set out significant risk exposures and control issues, corporate governance issues, and

other matters needed or requested by the board of directors and senior management; and

f) Audit plan covers significant risks of the Bank and these areas are routinely audited.

6) Internal auditors' work

Assess the adequacy of the internal auditors' work in evaluating the effectiveness of the FHLBank's risk control environment, particularly the identification and management of the principal risks facing the Bank. As part of the assessment, also evaluate preplanning, fieldwork, supervision, reporting, follow-up and consulting services which include, but is not limited to, the following:

a) A systematic and disciplined approach is used to evaluate the institution's risk management, control and governance processes responsible for:

   (1) Reliability and integrity of financial and operational information;
   (2) Accomplishment of established goals and objectives;
   (3) Compliance with policies, laws, regulations and contracts;
   (4) Safeguarding of assets; and
   (5) Effectiveness and efficiency of operations.

b) The audit engagement or consulting service includes the development of a plan that includes the scope, objectives, timing and resource allocations;
c) Fieldwork includes the identification, analysis, evaluation, and recording of sufficient, reliable, relevant and useful information to support the conclusions and the engagement's objectives;
d) The engagement is properly supervised to ensure that the objectives are achieved, quality of work is assured and the staff is developed;
e) The results of the engagement are communicated to appropriate levels of management and include the objectives, scope as well as applicable opinion, conclusions, recommendations and action plans;
f) A follow-up process has been established to monitor and ensure that management actions have been effectively implemented or that senior management has accepted the risk of inaction; and
g) Reporting to the board of directors for resolution of matters posing residual risk that is considered unacceptable for the organization.

7) External and internal assessments of quality assurance and improvement programs for internal audit department activities

Evaluate the development, maintenance, and effectiveness of external and internal quality assurance and improvement programs for internal audit department activities. Contact the Federal Housing Finance Board's accounting policy group to obtain any applicable information from their external auditor workpaper review regarding the

assessment of the internal audit function. Additional attributes to review include, but are not limited to, the following:

a) Internal assessments, including ongoing reviews of the performance of the internal audit or consulting engagement such as the supervision of the engagement, review of workpapers and the final report, and surveys with FHLBank senior management;
b) External assessments, such as quality assurance reviews;
c) External auditor's opinion on internal audit reliance that was reported to the audit committee; and
d) On-going training program to promote the continuing professional development of the audit staff.

8) Audit committee oversight

Assess the audit committee's qualifications, responsibilities and oversight of the external auditors' and internal auditors' activities. Evaluate their role in focusing the audit program on the most significant risks facing the FHLBank as well as implementation and administration of whistleblower policies and procedures to comply with SARBOX requirements.

a) Qualifications of audit committee members;
b) Formal definition of the purpose, authority and responsibility of the audit committee in a charter, approved by the board of directors, complying with Section 917.7 of the Finance Board Section regulations and re-approved at least every three years;
c) Performance and compensation of the internal audit director;
d) Adequacy of information reported to the audit committee which includes, but is not limited to, the following:

    (1) Minutes of the prior meeting that have presented to and approved by the audit committee;
    (2) Status of the current audit plan and other audit matters, such as performance, personnel, training and budgets;
    (3) Prior audit and consulting reports and management's responses;
    (4) Summaries of significant risk exposures and control issues, corporate governance issues and other matters needed or requested by the board of directors or senior management, such as new regulatory or accounting requirements, employee related issues and contingent litigation;
    (5) Tracking and reporting the status of previously reported findings;
    (6) External auditors' and third-party reports, presentations and SAS 70 reviews on key/critical service providers; and
    (7) Performance of executive sessions.
e) Periodic reporting by the audit committee chairman to the board of directors; and
f) Implementation and administration of whistleblower policies and procedures

complying with SARBOX requirements.

9) Assessment of External-Internal Audit Activities

Summarize the results of external-internal audit activities examined in a separate memorandum. The memorandum should clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the quality and effectiveness of external-internal activities within the context of corporate governance (strong, satisfactory, supervisory concern, unacceptable). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to the audit committee chairman and the internal audit director (written or oral) that require follow-up during the next on-site visitation.

1) External auditor's communications to senior management and the audit committee

Evaluate the effectiveness of external auditor's engagement letters, formal reports, and management letters that have been communicated to senior management in identifying and addressing significant risks to the FHLBank. Assess communications with the audit committee for their effectiveness in focusing the audit program on areas of high risk and the extent and effectiveness of coordination between external and internal audit activities.

2) Significant changes

Identify significant changes that have been implemented since the last examination or are being considered that relate to the external audit and internal audit programs.

3) Purpose, authority and scope of responsibility of internal audit department activities

Evaluate the independence, scope of responsibility and objectivity of internal audit department activities and their adequacy in light of identified risks to the FHLBank.

4) Internal auditors' professional proficiency

Assess the internal auditors' professional proficiency (e.g., knowledge, skills and other competencies) needed to perform their duties and responsibilities and their effectiveness in carrying out those responsibilities.

5) Management of internal audit department activities

Evaluate the internal audit director's methodology for managing the audit department and whether internal audit contributes materially to the improvement of the organization's risk management, control, and governance.

6) Internal auditors' work

Assess the adequacy of the internal auditors' work in evaluating the effectiveness of the FHLBank's risk control environment, particularly the identification and management of the principal risks facing the FHLBank. As part of the assessment, also evaluate preplanning, fieldwork, supervision, reporting, follow-up, and consulting services.

7) External and internal assessments of quality assurance and improvement programs for internal audit department activities

Evaluate the development, maintenance, and effectiveness of external and internal quality assurance and improvement programs for internal audit department activities.

8) Audit committee oversight

Assess the audit committee's qualifications, responsibilities and oversight of the external auditors' and internal auditors' activities. Evaluate their role in focusing the audit program on the most significant risks facing the FHLBank as well as implementation and administration of whistleblower policies and procedures to comply with SARBOX requirements.

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Introduction

Market risk reflects the degree to which changes in interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect an institution's earnings or economic capital. For the FHLBanks market risk is typically synonymous with interest rate risk because the FHLBank generally have little or no direct exposure to foreign exchange rates and commodity prices. This examination guidance discusses interest rate risk, which is the primary component of market risk that affects the FHLBank.

Advisory Bulletin 04-5, Interest Rate Risk Management, dated September 29, 2004, defines interest rate risk as the risk that changes in interest rates may adversely affect an institution's financial condition and performance. More specifically, interest rate risk is the sensitivity of an institution's cash flows, reported earnings, and economic value or market value–of-equity (MVE) to changes in interest rates. It arises from differences between the timing of rate changes and the timing of cash flows (repricing risk); from changing rate relationships among yield curves that affect FHLBank activities (basis risk); from changing rate relationships across the spectrum of maturities (yield curve risk); and from interest rate-related options embedded in FHLBank products or that stand-alone (option risk). The movement of interest rates affects an FHLBank's reported earnings and book capital by changing: (1) net interest income; (2) the market value of balance sheet instruments accounted for at market value; and (3) other interest sensitive income and expenses.

It is important that FHLBanks identify, measure, monitor and control repricing risk, basis risk, yield curve risk, option risk, and price risk to minimize their effect on earnings and capital. A brief analysis of these risks and mitigating controls is presented below:

Repricing risk results from differences in the timing of rate changes and the timing of cash flows that occur in the pricing and maturity of an FHLBank's assets, liabilities, and derivatives instruments. Repricing risk is often the most apparent source of interest rate risk for a FHLBank and is often gauged by comparing the volume of a FHLBank's assets that mature or reprice within a given time period with the volume of liabilities that also mature or reprice in this same time frame. Some FHLBanks intentionally take repricing risk in their balance sheet structure in an attempt to improve earnings. Because the yield curve is generally upward-sloping (long-term rates are higher than short-term rates), FHLBanks can often earn a positive spread by funding long-term assets with short-term liabilities. The earnings of such FHLBanks, however, are vulnerable to cost of funds increases as interest rates rise.

FHLBanks whose repricing asset maturities are longer than their repricing liability maturities are said to be "liability sensitive," because their liabilities will reprice more quickly. The earnings of a liability-sensitive FHLBank generally increase when interest rates fall and decrease when they rise. Conversely, an asset-sensitive FHLBank

(repricing asset maturities are shorter than repricing liability maturities) will generally benefit from a rise in rates and be hurt by a fall in rates.

Repricing risk is often, but not always, reflected in the FHLBank's current earnings performance. An FHLBank may be creating repricing imbalances that will not be manifested in earnings until sometime into the future. An FHLBank that focuses only on short-term repricing imbalances may be induced to take on increased interest rate risk by extending maturities to improve yield. When evaluating repricing risk, the FHLBank must consider not only near-term imbalances but also long-term ones. Failure to measure and manage material long-term repricing imbalances can leave an FHLBank's future earnings significantly exposed to interest rate movements. The repricing gap report is the most widely used technique for assessing, monitoring and managing repricing risk.

Basis risk arises from a shift in the relationship of the rates in different financial markets or on different financial instruments. Basis risk occurs when market rates for different financial instruments, or the indices used to price assets and liabilities, change at different times or by different amounts. For example, basis risk occurs when the spread between the three-month U.S. Treasury security (Treasury) and the three-month London inter-bank offered rate (LIBOR) changes. This change affects an FHLBank's current net interest margin through changes in the earned/paid spreads of instruments that are being repriced. It also affects the anticipated future cash flows from such instruments, which in turn affects the underlying net economic value of the FHLBank.

Certain pricing indices have a built-in "lag" feature such that the index will respond more slowly to changes in market interest rates. Such lags may either accentuate or moderate the FHLBank's short-term interest rate exposure. One common index with this feature is the "11th District Federal Home Loan Bank Cost of Funds Index" (COFI) used in certain adjustable rate residential mortgage products (ARMs). The COFI index, which is based upon the monthly average interest costs of liabilities for thrifts in the 11th District, comprising California, Arizona, and Nevada, is a composite index containing both short- and long-term liabilities. Because current market interest rates will not be reflected in the index until the long-term liabilities have been repriced, the index generally will lag market interest rate movements.

Non-linear rate ramp projections can be used to measure basis risk and potential earnings exposure to broad changes in financial market conditions over time. In these tests, each driver rate moves at its appropriate speed relative to other rates once a scenario is defined. The FHLBanks' balance sheet is repriced based on changes in each driver rate, thus properly defining basis risk. To address potential earnings exposures to changes in yield curve shape, non-linear rate ramp type projections, again, can be used to track this exposure. In this case, however, selected short- and long-term Treasury rates are moved to define a flatter or steeper yield curve, with all other driver rates evolving in-line. In either case, the basis risk tests an FHLBank uses needs to be produced by scenario specific forecasts based on advanced statistical analyses of historic interest rates.

Yield-curve risk arises from variations in the movement of interest rates across the maturity spectrum. It involves changes in the relationship between interest rates of different maturities of the same index or market, such as a three-month Treasury versus a five-year Treasury. The relationships change when the shape of the yield curve for a given market flattens, steepens, or becomes negatively sloped or inverted during an interest rate cycle. Yield curve variation can accentuate the risk of an FHLBank's position by amplifying the effect of maturity or repricing mismatches.

Certain types of structured notes can be particularly vulnerable to changes in the shape of the yield curve. For example, the performance of dual index notes is directly linked to basis and yield curve relationships. These bonds have coupon rates that are determined by the difference between market indices, such as the constant-maturity Treasury rate (CMT) and LIBOR. An example would be a coupon whose rate is based on the following formula: 10-year CMT plus 300 basis points less three-month LIBOR. Since the coupon on this bond adjusts as interest rates change, an FHLBank may incorrectly assume that it will always benefit if interest rates increase. If, however, the increase in three-month LIBOR exceeds the increase in the 10-year CMT rate, the coupon on this instrument will fall, even if both LIBOR and Treasury rates are increasing. FHLBanks holding these types of instruments should evaluate how their performance may vary under different yield curve shapes.

Flat or inverted yield curves have historically been associated with narrowing net interest margins and lower earnings. Whether the slope of the yield curve is positive, flat, or negative, FHLBanks can appropriately limit risk with strategies designed to cope with the uncertainty of changing interest rates.

Option risk arises when an FHLBank or an FHLBank's member has the right but not the obligation to alter the level and timing of the cash flows of an asset, liability, or derivatives instrument. An option gives the option holder the right to buy (call option) or sell (put option) a financial instrument at a specified price (strike price) over a specified period of time. For the seller or writer of an option, there is an obligation to perform if the option holder exercises the option.

The option holder's ability to choose whether to exercise the option creates an asymmetry in an option's performance. Generally, option holders will exercise their right only when it is to their benefit. As a result, an option holder faces limited downside risk (the premium or amount paid for the option) and unlimited upside reward. The option seller faces unlimited downside risk (an option is usually exercised at a disadvantageous time for the option seller) and limited upside reward (if the holder does not exercise the option and the seller retains the premium).

Options often result in an asymmetrical risk/reward profile for the FHLBank. If the FHLBank has written or sold options to its members, the amount of earnings or market value that an FHLBank may lose from an unfavorable movement in interest rates may

exceed the amount that the FHLBank may gain if rates move in a favorable direction. As a result, the FHLBank may have more downside exposure than upside reward.

Some FHLBanks buy and sell options on a "stand-alone" basis. The option has an explicit price at which it is bought or sold and may or may not be linked with another FHLBank product. An FHLBank does not have to buy and sell explicitly priced options to incur option risk, however. Indeed, FHLBanks incur option risk from options that are embedded into certain assets, liabilities, or derivative instruments.

Prepayment options are the most prevalent embedded option. Most residential mortgage loans give the borrower an option to prepay with little or no prepayment penalty. A prepayment option is equivalent to having written a call option to the customer. When rates decline, customers are likely to exercise the calls by prepaying loans, and the FHLBank's asset maturities will shorten just when extension would be preferable. Conversely, when rates rise, customers are likely to keep their mortgages, making it difficult for the FHLBank to shorten asset maturities just when shortening would be preferable.

FHLBank products that contain interest rate "caps" or "floors" are other sources of option risk. Such products are often embedded into advances and may have a significant effect on an FHLBank's rate exposure. For the FHLBank, an advance cap is like selling a put option on a fixed income security, and a floor is like owning a call. The cap or floor rate of interest is the strike price. When market interest rates exceed the cap rate, the borrower's option moves "in the money" because the borrower is paying interest at a rate lower than market. Conversely, when market interest rates decline below the floor, the FHLBank's option moves "in the money" because the rate paid on the advance is higher than the market rate.

Option risk results when an FHLBank's cash flow timing or amount is altered due to changes in interest rates. This risk can adversely affect earnings by reducing asset yields or increasing funding costs, and it may reduce the present value of expected cash flows. For example, the rapid and sustained declines in interest rates during 2000 through 2003 resulted in unprecedented prepayments of the FHLBank's option-embedded advances and mortgage assets. FHLBanks funded the mortgage assets primarily with callable bonds; because most of the FHLBank's callable bonds have specific lockout periods, they could not exercise the options to respond timely to the prepayment of mortgage assets.

Consequently, the FHLBanks retained higher priced debt, while the prepayment proceeds were redeployed in lower-yielding assets. Thus, the spread compression experienced by the FHLBanks during those years partially resulted from their inability to fully retire high-priced, long-term debt associated with prepaid assets, as well as the fact that spreads on new assets were narrower than they were when many of the prepaid assets were originally booked.

Price risk results from changes in the value of marked-to-market financial instruments that occur when interest rates change. For example, trading portfolios, held-for-sale portfolios, and mortgage servicing assets contain price risk. Since these assets are marked-to-market, any value loss must be reflected in current earnings or capital account in accordance with Generally Accepted Accounting Principles (GAAP). FHLBanks are also exposed to price risk; however, the amount of this risk is generally not significant as their trading and available-for-sale portfolios are typically not large on a relative basis.

To evaluate the potential impact of interest rate risk on a FHLBank's operations, a well-managed FHLBank will consider the effect on both its earnings (the earnings or accounting perspective) and underlying economic value (the economic or capital perspective). In the following paragraphs, the effects of interest rate risk are analyzed in the context of both earnings and economic perspectives.

The earnings perspective considers how interest rate changes will affect an FHLBank's reported earnings. This perspective focuses on risk to earnings in the near term, typically over the next one or two years. Fluctuations in interest rates generally affect reported earnings through changes in an FHLBank's net interest income. Net interest income will vary with the movement of interest rates because of differences in the timing of accrual changes (repricing risk), changing rate and yield curve relationships (basis and yield curve risks), and options positions. Changes in the general level of market interest rates also may cause changes in the volume and mix of an FHLBank's balance sheet products. Declines in the market values of certain instruments may diminish near-term earnings when accounting rules require an FHLBank to charge such declines directly to current income.

FHLBanks should regularly conduct the income sensitivity analysis in the base case and in the shock scenarios, including changes in the level of interest rates and the slope of the yield curve to forecast how interest rate changes affect their earnings. The FHLBank should able to measure how changes in interest rates affect their GAAP earnings and capital due to accounting principles.

The economic perspective provides a measure of the underlying value of the FHLBank's current position and seeks to evaluate the sensitivity of that value to changes in interest rates. This perspective focuses on how the economic value of all FHLBanks assets, liabilities, and off-balance sheet contracts change with movements in interest rates. The economic value of these instruments equals the present value of their future cash flows. By evaluating changes in the present value of the contracts that result from a given change in interest rates, one can estimate the change to an FHLBank's MVE.

By capturing the impact of interest rate changes on the value of all future cash flows, the economic perspective provides a more comprehensive measurement of interest rate risk than the earnings perspective. The future cash flow projections used to estimate an FHLBank's economic exposure provide a pro forma estimate of the FHLBank's future

income generated by its current position. Because changes in economic value indicate the anticipated change in the value of the FHLBank's future cash flows, the economic perspective can provide an indicator of the FHLBank's future earnings. The growing complexity of many FHLBank advance products and investments heightens the need to consider the economic perspective of interest rate risk. The financial performance of FHLBank instruments increasingly is linked to pricing and cash flow options embedded within those instruments. The impact of some of these options, such as interest rate caps embedded in advances and the prepayment option on fixed rate mortgages, may not be discernable if the impact of interest rate changes is evaluated by simulating earnings over a short-term (earnings perspective) time horizon.

Economic value analysis facilitates risk/reward analysis because it provides a common benchmark, present value, for evaluating instruments with different maturities and cash flow characteristics. Many FHLBanks have found this type of analysis to be useful in decision making and risk monitoring.

Accepting interest rate risk is a normal part of the FHLBank's operations and can be an important source of profitability and shareholder value, but excessive interest rate risk can threaten the FHLBank's earnings, capital, liquidity, and solvency. Management decisions concerning an FHLBank's interest rate risk exposure should take into account the risk/reward tradeoff of interest rate risk positions. Management should compare the potential risk (impact of rate movements) of an interest rate risk position or strategy against the potential reward (the yield or spread that reflects this risk).

An FHLBank can use derivatives to achieve any or all of the following objectives: limit downside earnings exposures, preserve upside earnings potential, increase yield, and minimize income or capital volatility. Although derivatives are used to hedge interest rate risk, they could expose an FHLBank to basis risk if the indices contained in the cash and derivative instruments are different. For example, an FHLBank using interest rate swaps (priced off of LIBOR) to hedge a Treasury note portfolio may face basis risk because the spread between the swap rate and Treasuries may change.

An FHLBank using derivatives instruments such as futures, swaps, and options should consider how the derivatives contract's cash flows may change with changes in interest rates and in relation to the positions being hedged. Derivative strategies designed to hedge a balance sheet position will typically use derivative contracts whose cash flow characteristics have a strong negative correlation with the instrument or position being hedged. The FHLBank will also need to consider the relative liquidity and cost of various contracts, selecting the product that offers the best mix of correlation, liquidity, and relative cost. Even if there is a high degree of negative correlation between the derivative contract and the position being hedged, the FHLBank may be left with residual basis risk because cash and derivative prices do not always completely offset one another.

The adequacy of an FHLBank's interest rate risk management system depends on its ability to identify and effectively capture all material activities and products that expose the FHLBank to interest rate risk and then measure the specific risks presented. The FHLBank should conduct stress tests that identify potential losses under extreme market conditions. That is, an FHLBank should measure its market risk exposures under normal and various alternative scenarios, including the stress scenarios.

Stress testing is designed to provide information on the kinds of conditions under which the FHLBank's strategies and positions would be most vulnerable. Stress testing should not result in implausible relationships. In short, arbitrage conditions should behave as intended. An FHLBank's stress testing should include instantaneous parallel shifts of the yield curve of +/- 50, 100, 150, and 200 basis points. In low interest rate environments, an FHLBank should use the largest parallel down shock that produces post-shock Treasury rates no lower than 35 basis points.

Additional stress scenarios should include changes in the relationships among key market interest rates, changes in the slope of the yield curve, changes in interest rate volatilities, changes in prepayment rates, and changes in spreads. Implied volatilities related to options (stand-alone or embedded) should also be stressed. It may also be appropriate to shock credit spreads. The scenarios should include optimistic, pessimistic, and most likely forecasts. The examiner should review the FHLBank's stress tests to ensure that complex financial instruments, including instruments with exotic option features, are properly valued under stress scenarios and that the risks associated with options exposures are properly understood.

The examiner should determine whether the FHLBank's board of directors considers the results of stress tests when establishing and reviewing its strategies, policies, and limits for managing and controlling interest rate risk. The board of directors and senior management should review periodically the design of stress tests to ensure that they encompass the kinds of market conditions under which the FHLBank's positions and strategies would be most vulnerable.

It is important that the FHLBank establish an independent risk management function for the design and administration of the interest rate risk management. Finance Board regulations and Advisory Bulletins provide sufficient guidance to FHLBanks for identifying, measuring, monitoring, controlling, and reporting interest rate risk exposure.

Regulatory Environment

The primary authorities governing interest rate risk management are set forth below:

1) ***Rules and Regulations of the Federal Housing Finance Board,*** which include the following parts and sections relevant to interest rate risk management:

Part 917 of the Finance Board regulations addresses powers and responsibilities of the FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, is pertinent.

Part 932 of the Finance Board regulations addresses required capital levels. In particular, Sections 932.2, 932.3, 932.5 and 932.7 are pertinent.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of interest rate risk management are the following:

Advisory Bulletin 04-5, dated September 29, 2004, discusses the responsibilities of the board of directors in establishing interest rate risk limits and describes policies, procedures and internal controls that each FHLBank should implement to manage interest rate risk. Advisory Bulletin 04-5 also discusses the risk measurement, monitoring, and reporting systems that an FHLBank should have in place, and sets forth the Finance Board's expectations with respect to stress testing, model validation, model documentation, and back testing.

Advisory Bulletin 05-06, dated June 10, 2005, establishes the process by which an FHLBank may obtain approval to make changes to a previously approved internal market risk model. It sets forth the process and describes the type of documentation that is required from an FHLBank in the notification process.

Advisory Bulletin 06-02, dated March 20, 2006, provides additional guidance on the use of financial models used by the FHLBanks, including interest rate risk models.

FHLBank Environment

Each financial transaction that an FHLBank completes may affect its interest rate risk profile. Nevertheless, the FHLBanks differ in the degree of interest rate risk they are willing to assume. Some FHLBanks seek to minimize their interest rate risk exposure and generally avoid taking positions to benefit from expected movements in interest rates. Instead, they try to closely match the cash flows of their assets and liabilities. Other FHLBanks may deliberately, or from poor interest rate risk management, mismatch interest rate positions that capitalize on certain movements in interest rates. An FHLBank can alter its interest rate risk exposure by changing its balance sheet composition to achieve a desired risk profile. FHLBanks also use off-balance sheet derivatives, such as interest rate swaps, to adjust their interest rate risk profile.

Generally, FHLBanks establish strategies to substantially eliminate interest rate risk in certain lines of business or asset classes. For example, this is the typical strategy for the core business of advances to members. However, FHLBanks generally assume more interest rate risk in the funding of mortgage related assets, such as mortgage backed securities (MBS/CMO) and acquired member assets (AMA)). Borrowers are able to

prepay their mortgage loans at any time without penalty and consequently FHLBanks face the risk that they will experience a return of principal earlier than anticipated and be left to invest that principal at lower yields. Because prepayments on MBS/CMOs and AMA accelerate when interest rates drop, MBS and acquired member assets are said to have "negative convexity." In other words, the rate of price increase for mortgage assets declines as interest rate fall, depending on the underlying coupon(s) and the level of current market rates. As interest rates rise, prepayments tend to slow, creating extension risk. Fully hedging this risk may be too costly relative to the asset's return. The risk and returns in this business line still must represent prudent interest rate risk management.

Embedded options are associated with many other assets, liabilities, and off-balance sheet derivatives, such as callable bonds, structured notes, and advances.

In general, an FHLBank uses a combination of swapped and unswapped callable debt, fixed- and floating-rate bullet debt, and derivative instruments to manage its interest rate risk exposure. Callable and amortizing prepayment-linked bonds are largely used to manage option risk associated with mortgage assets. Some FHLBanks use both the receiver and payer swaptions to hedge volatilities in the value of the mortgage portfolio. Specifically, the receiver swaptions are used to hedge the income volatility as a result of premium amortizations while the payer swaption hedges the decline in value when interest rates increase.

For fixed-rate assets and liabilities, the FHLBank uses interest rate swaps to manage the attendant risk. Particularly in funding fixed-rate advances, the FHLBank typically uses interest rate exchange agreements to convert fixed-rate callable consolidated obligations (COs) to floating-rate instruments that periodically reset to an index such as one-month or three-month LIBOR. If the hedged advances or liabilities have embedded call options, caps or floors, the hedged derivative instruments must also have mirrored embedded options. If interest rates decline, the swap counterparty will generally cancel the interest rate swap and the FHLBank will then typically call the CO bonds or the underlying assets.

It is not possible for an FHLBank to consistently issue debt simultaneously with the issuance of advances in the same amount and with the same terms as the advance, or to predict ahead of time demand for advances, including the terms sought for such advances. As such, the FHLBank must have a ready supply of funds on hand to meet member advance demand. The FHLBanks will typically source debt as opportunities arise in the market and make the proceeds of these debt issuances available for members to borrow in the form of advances. These debt issuances issued for liquidity are often referred to "warehoused" debt or liabilities. The FHLBank may use derivative instruments to hedge anticipated debt issuances and mortgage delivery commitments.

Some FHLBanks use a delta hedging strategy to manage the mortgage portfolio's price volatilities. It is an options strategy designed to reduce the risk associated with price

movements in the underlying security, achieved through offsetting long and short positions. It is the process of setting or keeping the delta of a portfolio at zero, or close to zero, where delta is the sensitivity of the value of a derivative to changes in the price of its underlying instruments. The mortgage portfolio has to be adjusted continuously in order to maintain delta neutrality.

To effectively manage interest rate risk, management should consider the FHLBank's ability to access various funding and derivative markets. Also, FHLBank should consider the fit of its interest rate risk profile with its strategic business plan.

Generally, all FHLBanks measure the duration of equity and market value of equity and report to their board of directors on a regular basis. Management also tracks specific sensitivity limits for individual portfolios, including mortgage-backed securities and acquired member assets. All FHLBanks also estimate their potential market value losses using historically-derived 120-day interest rate and volatility shift scenarios based on a monthly data since July 1978, and estimate that they have sufficient capital to cover all but the worst 1 percent of potential outcomes. They measure their exposure to earnings volatility and establish retained earnings targets that promote their ability to pay a steady dividend stream. In addition, FHLBanks should measure, monitor, and control their repricing, basis, yield curve, and option risks. All risk limits and risk management guidelines are documented in the FHLBank's risk management policy.

In general, most FHLBanks have established their market risk management function independent from risk-taking activities. For some FHLBanks, the market risk function is part of an enterprise risk management function. The market risk function is responsible for identifying, measuring, monitoring, and reporting the FHLBank's interest rate risk exposure to the board of directors and senior management.

An FHLBank should establish a risk governance policy detailing its risk governance structure and process. The policy should identify and capture the decision-making process and approval authority. The policy should exhibit consistent and coherent integration with the risk management practices directed towards meeting the FHLBank's overall profitability objective. The risk governance policy details the role of the board of directors and senior management in establishing and overseeing strategies, policies and processes that identify, measure, monitor and control risk and thereby ensure sound risk management and decision making. The risk governance policy includes the risk policies, committees and management processes, information flows and reporting that are integrated to effectively manage risk, including interest rate risk.

The FHLBank's board of directors usually delegates responsibility for establishing specific interest rate risk policies and practices to a committee of senior managers. This senior management committee is often referred to as the "financial management committee" (FMC) or the "asset/liability management committee" (ALCO). The ALCO usually manages the structure of the FHLBank's business and the level of interest rate

risk it assumes. It is responsible for ensuring that measurement systems adequately reflect the FHLBank's exposure and that reporting systems adequately communicate relevant information concerning the level and sources of the FHLBank's exposure.

To be effective, the ALCO should include representatives from each major line of business of the FHLBank that assumes interest rate risk. The ALCOs of some FHLBanks include a representative from marketing so that marketing efforts are consistent with the ALCO's view on the structure of the FHLBank's business. Committee members should be senior managers with clear lines of authority over the units responsible for establishing and executing interest rate positions. A channel must exist for clear communication of the ALCO's directives to these line units. The risk management and strategic planning areas of the FHLBank should communicate regularly to facilitate evaluations of risk arising from future business.

The ALCO usually delegates day-to-day operating responsibilities to the FHLBank's treasury unit. The ALCO should establish specific practices and limits governing treasury operations before it makes such delegations. Treasury personnel are typically responsible for managing the FHLBank's discretionary portfolios, such as securities, consolidated obligations and discount notes, and derivatives interest rate contracts.

The treasury unit or investment officer can influence the level of interest rate risk in several ways. For example, the unit may be responsible for implementing the policies of the ALCO on short- and long-term positions. Regardless of its specific delegations, treasury or other units responsible for monitoring the FHLBank's risk positions should ensure that reports on the FHLBank's current risk are prepared and provided to the ALCO in a timely fashion.

To effectively manage risk, close coordination with other key operating areas of the institution is required, including:

1) Customer funding, such as with respect to advance activity with the members that includes new, maturing, and interest payments;

2) Acquired member assets, such as with respect to new loan purchases, and principal and interest payment cash flows to the FHLBank;

3) Correspondent bank services, such as with respect to deposit activity, wire transfer activity, automated clearing house activity, Federal Reserve Bank and correspondent bank activity, capital purchase/redemptions, and safekeeping activity;

4) Capital markets, such as with respect to investment purchases, maturing assets, large swap payments, and newly-issued and maturing debt;

5) Accounting, such as with respect to general ledger balances, premium amortization

and discount accretion; and

6) Risk management, such as with respect to risk measurement, monitoring and reporting.

Risks Associated with Interest Rate Risk Management Function

Accepting interest rate risk is a normal part of banking operations and is an important source of profitability and shareholder value. But taking excessive interest rate risk positions can threaten the FHLBank's earnings, capital, liquidity, and solvency. Therefore, the primary risk associated with the interest rate risk management function is the taking of excessive risk positions relative to the FHLBank's earnings and capital. This risk is compounded when the risk management function cannot identify the excessive risk, allowing for timely mitigation of the risk. This may result from (1) poor corporate governance, (2) inadequate risk measurement and information systems, (3) weak internal control infrastructure, or (4) inexperienced staff. Below are few specific examples that may contribute to excessive interest rate risk.

1) The board of directors and senior management may not have established adequate guidance and proper risk tolerance limits and may not monitor and review the level and direction of risk on a regular basis.

2) The FHLBank's funding and hedging strategies may not be commensurate with the level and types of risks undertaken.

3) The FHLBank's risk assessment process and risk measurement systems may not be sufficiently robust to identify and effectively capture all material risks.

4) The FHLBank may not have established an independent risk management function for the administration of its risk measurement, monitoring, and control activities. Reporting lines of risk management and risk-taking functions may not be properly and clearly defined.

5) Senior management may lack controls over traders due to lack of adequate oversight of their activities.

6) The FHLBank may have an unsound internal control infrastructure that allows traders to create policy exceptions that go undetected. The secondary reviewers may not be able to detect policy exceptions due to the lack of automated and manual controls.

7) The FHLBank may not have an effective internal audit function with requisite experience and skills. The audit scope, frequency and testing may be inadequate.

8) Traders and risk management staff may not have sufficient experience and skills.

9) The FHLBank's new product development process may not be sufficiently robust to identify and assess all material risks of new products.

Specific Risk Controls Relating to the Interest Rate Risk Management Function

Key elements of an effective risk management process include adequate board of directors and senior management oversight and a comprehensive risk management process:

Board of Directors and Senior Management Oversight

Effective board of directors and senior management oversight is the cornerstone of an effective risk management process. It is the responsibility of the board and senior management to understand the nature and level of interest rate risk being taken by the FHLBank. Effective risk management requires an informed board, capable management, and appropriate staffing.

For its part, a board of directors must:

1) Establish and guide the FHLBank's strategic direction and tolerance for interest rate risk and identify the senior managers who have the authority and responsibility for managing this risk.

2) Monitor the FHLBank's performance and overall interest rate risk profile, ensuring that the level of interest rate risk is maintained at prudent levels, is supported by adequate capital, and complies with regulatory requirements.

3) Ensure that the FHLBank adheres to sound risk management principles that facilitate the identification, measurement, monitoring, and control of interest rate risk.

4) Ensure that the FHLBank adheres to Finance Board regulations and its internal policy parameters.

5) Ensure that adequate resources are devoted to interest rate risk management. Effective risk management requires both technical and human resources.

6) Ensure that the risk management, monitoring, and control functions of the FHLBank are sufficiently independent of the position-taking functions.

Senior management is responsible for ensuring that interest rate risk is managed daily and over the long term. In managing the FHLBank's activities, senior management should:

1) Develop and implement procedures and practices that translate the board of directors' goals, objectives, and risk tolerances into operating standards that are well understood by FHLBank personnel and that are consistent with the board's intent.

2) Ensure adherence to the lines of authority and responsibility that the board of directors has established for measuring, managing, and reporting interest rate risk exposures.

3) Oversee the implementation and maintenance of management information and other systems that identify, measure, monitor, and control the FHLBank's interest rate risk.

4) Establish effective internal controls over the interest rate risk management process.

Risk Management Process

Effective control of interest rate risk requires a comprehensive risk management process that ensures the timely identification, measurement, monitoring, and control of risk. FHLBanks should establish and communicate risk management practices and principles in writing. The FHLBank's interest rate risk management procedures or process should establish:

1) **Responsibility and authority.** Appropriate management must identify the potential interest rate risk arising from new or existing products or activities; establish and maintain an interest rate risk measurement system; formulate and execute strategies; and authorize policy exceptions.

2) **An interest rate risk measurement system.** The FHLBank's risk measurement system should be able to identify and quantify the major sources of an FHLBank's interest rate risk, including repricing risk, basis risk, yield curve risk, price risk, and option risk. The risk measurement system should be able to measure how changes in interest rates will affect the FHLBank's income and capital.

3) **A system for monitoring and reporting risk exposures.** Senior management and the board of directors should receive reports on the FHLBank's interest rate risk profile at least monthly, but more frequently if the character and level of the risk require it. These reports should allow senior management and the board to evaluate the amount of interest rate risk being taken, compliance with regulations and established FHLBank policy risk limits, and whether management's strategies are appropriate in light of the board's expressed risk tolerance.

4) **Risk limits and controls.** When determining risk exposure limits, senior management should consider the nature of the FHLBank's strategies and activities, its past performance, the level of earnings and capital available to absorb potential losses, and the board of directors' tolerance for risk. Section 917.3(b)(2) of the

Finance Board regulations requires each FHLBank to set forth in its risk management policy its tolerance levels for market risk. A comprehensive set of interest rate risk limits is the primary mechanism for achieving that objective. Each FHLBank should have a set of risk limits to control aggregate, or FHLBank-wide interest rate risk exposures. Where appropriate, FHLBanks should also have limits for individual business activities or units, portfolios, traders, and positions.

5) **Independent Risk Management Function**. The FHLBank should establish an independent risk management unit responsible for the design and administration of the FHLBank's risk measurement, monitoring, and control functions. In general, the unit should be headed by an officer with responsibility for developing an effective risk management infrastructure which includes: (1) a capable risk management staff; (2) risk management policies, procedures, and controls; (3) risk model review and approval; (4) risk measurement and monitoring capability; (5) risk limits monitoring and enforcement; and (6) risk management results communicated to senior management and the board of directors.

6) **Risk Management Policies and Procedures.** The FHLBank should establish comprehensive risk management policies and procedures pertaining to advances, investments, funding, and hedging activities that establish detailed procedures for risk measurement, monitoring, reporting, and controls.

7) **Internal control procedures.** Oversight by the board of directors and senior management is critical to the internal control process. In addition to establishing clear lines of authority, responsibilities, and risk limits, management and board should ensure that adequate resources are provided to support risk monitoring, audit, and control functions. The persons or units responsible for risk monitoring and control functions should be separate from the persons or units that create risk exposures.

It is particularly important that the FHLBank has a strong internal audit function and sufficient safeguards in place to ensure that all trades are reported to senior management in a timely manner and are consistent with strategies approved by senior management. The internal audit function provides evaluations on the adequacy and effectiveness of the internal control structure pertaining to interest rate risk management. If the internal audit function does not have adequate technical expertise, independent testing should be outsourced to external auditors or consultants.

Examination Guidance

Advisory Bulletin 04-5 provides that the primary objective of interest rate risk management is to achieve a target level of return while maintaining interest rate risk exposures within prudent bounds. In pursuing these objectives, management should ensure that risk to the institution's earnings and economic values are within prudent bounds over a range of plausible interest rate environments. The objective is not to

eliminate interest rate risk, but rather to maintain risk exposures at levels that are prudent and acceptable to the institution's board of directors. In determining a FHLBank's interest rate risk rating, examiners should review the level of a FHLBank's interest rate risk exposure, the level of oversight by the board of directors and senior management, and the quality of interest rate risk measurement systems and processes, including policies and procedures, internal controls, and the internal audit function.

A work program for interest rate risk management accompanies this narrative. What follow below are guidelines for interest rate management that incorporate many of elements of effective interest rate management discussed previously. It contains illustrative examples of attributes that the examiner should consider in completing the analysis of interest rate risk management activities. The examiner should also consider Finance Board regulations, Advisory Bulletins, Sarbanes-Oxley Act (SARBOX), Basle Committee guidelines on banking supervision, and guidelines provided by rating agencies. In addition to management reports, the ALCO and board of directors or board committee meeting minutes and agenda materials, examiners should review reports contained in the Finance Board Call Report System (CRS), filings with the Securities and Exchange Commission (SEC), and information from Finance Board risk modelers and FHLBank analysts.

1) Organizational structure

Assess the effectiveness of the functional organizational structure, including board of directors and management committees, to determine whether the current structure is efficient and adequate for the purpose of interest rate risk management. Reviews should include, at a minimum, the following specific items:

a) Identification of functional department and reporting responsibilities;

b) Identification of key personnel responsible for risk management activities and reporting lines;

c) Identification of primary duties, responsibilities, and technical expertise of personnel;

d) Segregation of duties to ensure that risk management responsibilities are segregated from lending, investment, funding, hedging, and accounting activities. Ensure that the risk management activities are independent both at functional and committee levels;

e) Cross-training of personnel;

f) Coordination with other departments such as risk management, information technology, treasury, investment, cash management, and accounting;

g) Identification of management and board committees with the responsibility of monitoring the FHLBank's interest rate risk exposure; and

h) Identification of significant changes since the last examination and changes anticipated.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function

Assess interest rate risk tolerances, the development of interest rate risk management policies, and oversight by the board of directors. Assess the adequacy of senior management oversight over the interest rate risk management function. Review board and management committee meeting minutes and agenda and their decision process.

Specifically, examiners should determine whether:

a) The board of directors approves all major strategies and policies relating to managing interest rate risk and reviews such strategies and policies at least annually and more frequently if market conditions change or if the FHLBank incurs significant deviations from expectations.

b) The board of directors approves the FHLBank's interest rate risk limits and provides management with clear guidance regarding the level of acceptable interest rate risk. The risk limits should be consistent with the FHLBank's risk and return objectives and with its liquidity and capital needs. The board of directors should review policies and institution-wide risk limits at least annually, and more frequently in the event of significant changes in market or financial conditions. The review should address the appropriateness of the FHLBank's risk limits in light of the board's tolerance for risk, the strength of the FHLBank's capital, the adequacy of retained earnings, and the overall quality of risk management, measurement, and reporting systems. The board's review should also include an assessment of management's compliance with the risk limits.

c) The board of directors ensures that senior management take the steps necessary to identify, measure, manage, control, and report on the FHLBank's interest rate risk exposures and ensures that the FHLBank's system of internal controls is functioning effectively.

d) The board of directors has established lines of authority and responsibility for managing interest rate risk. The board should be satisfied that the risk management, monitoring, and control functions of the FHLBank are sufficiently independent of the position-taking functions. Ideally, the FHLBank should

establish an independent risk management unit responsible for the design and administration of the FHLBank's risk measurement, monitoring, and control functions. In general, the unit should be headed by an officer with responsibility for developing an effective risk management infrastructure which includes:

(1) Maintaining a capable risk management staff;
(2) Establishing risk management policies, procedures, and controls;
(3) Reviewing and approving risk models;
(4) Measuring and monitoring risk;
(5) Monitoring and enforcing risk limits; and
(6) Communicating risk management results to senior management and the board.

e) The board of directors is being informed routinely of the FHLBank's interest rate risk exposures and, on a regular basis, discusses and evaluates the FHLBank's risk exposures in light of current market conditions, established risk limits, operating performance, and other relevant factors.

f) The board of directors or committee thereof understands and assesses the performance of senior management with respect to the implementation of board-approved strategies and policies governing interest rate risk and compliance with interest rate risk limits.

The board of directors ensures that appropriate corrective measures, such as improved reporting systems, intensified board oversight, or disciplinary action, are taken when interest rate risk limit exceptions occur.

Examiners should determine that senior management is carrying out its responsibilities with respect to interest rate risk. Specifically, examiners should determine whether:

a) Senior management implements board of directors-approved strategies and policies relating to the management of interest rate risk.

b) Senior management ensures that effective and appropriate interest rate risk management policies, procedures, and controls are established and followed.

c) Senior management ensures that the FHLBank has adequate systems and resources available to measure, monitor, manage, and control the FHLBank's interest rate risk. Management should ensure that knowledgeable, competent, and experienced staff conduct analyses and risk management activities relating to interest rate risk.

d) Senior management ensures that policies and procedures assign responsibility for managing the FHLBank's interest rate risk limits.

e) Senior management ensures that the lines of authority and responsibility for managing interest rate risk and monitoring interest rate risk limits are clearly identified.

f) Senior management ensures that policies and procedures identify the reporting and remedial actions to be taken by management when interest rate risk limit violations occur.

g) Senior management periodically reviews and discusses with the board of directors information regarding the FHLBank's interest rate exposures. The information should be sufficient in detail and timeliness to permit the board to understand and assess the performance of management with respect to the management and control of the FHLBank's interest rate risk exposures.

3) Key FHLBank policies and procedures

Review the adequacy of key FHLBank interest rate risk management policies and procedures.

Examiners should assess the quality of the FHLBank's risk management policies, procedures, and internal controls. Specifically, examiners should determine whether the FHLBank has clearly defined policies and procedures for managing and controlling interest rate risk exposures. The policies and procedures should delineate lines of responsibility and accountability over interest rate risk decisions. The policies and procedures should also delineate authorized hedging instruments and hedging strategies. Management should identify the interest rate risks inherent in new products and in business activities, including hedging activities, and ensure that they are subject to appropriate policies, procedures, and controls before being introduced or undertaken.

The FHLBank establishes a comprehensive risk management policy and other related procedures for the administration of interest rate risk management activities. Policies and procedures should address investment, funding, and hedging activities. The FHLBank may also have policies for retained earnings and dividends, capital management, accounting for premium amortizations and discount accretions, the risk assessment process, risk model validation, model calibration and back testing, and new product modeling.

Examiners should determine whether policies and procedures:

a) Are consistent with Finance Board regulations, Advisory Bulletin guidance, SARBOX, and Basle Committee guidance on interest rate risk management;

b) Delineate authorized investment and hedging instruments and strategies;

c) Delegate trading authority to specific individual(s);

d) Include sufficient guidance for risk assessment, measurement, monitoring, and reporting processes as well as delineate proper lines of responsibility and accountability over risk management decisions; and

e) Are periodically reviewed and approved by the board of directors as required by Finance Board regulations where appropriate.

Assessing Policy Limits

The examiner should determine whether the risk limit structure included in the policies and procedures is prudent and effective and is part of the review or audit of the adequacy of policies and procedures. An FHLBank should have interest rate risk limits to safeguard earnings and economic capital against adverse movements in interest rates and other risk factors. The risk limits should reflect the risk and return objectives of the board of directors. Examiners should determine whether an FHLBank has a comprehensive set of interest rate risk limits. An FHLBank should consider setting risk limits that are defined in terms of its economic capital ratio. Limits based on the economic capital ratio should define the lowest economic capital ratio that the board is willing to tolerate under selected interest rate scenarios, such as parallel and nonparallel interest rate shocks as well as changes in other key risk factors such as prepayments, interest rate volatility, and interest rate spreads.

An FHLBank should also consider setting limits on the maximum allowable decline or variation in net interest income that its board of directors is willing to tolerate for a specified time horizon under specified interest rate scenarios. Limits based on other risk metrics such as VaR, duration-of-equity (DOE), duration gap, and the market value of equity to book value of equity should be considered. Other limits may include risk limits specific to the mortgage portfolio, repricing risk limits, and basis risk limits. Limits should not be set so far above actual risk exposures, or target levels of exposure, that they are meaningless or have no effect on risk-taking behavior.

The examiner should determine whether:

a) Risk limits are comprehensive within the context of the risk characteristics of the FHLBank's on-and off-balance sheet activities. Limits should not be based

on enterprise-wide aggregate exposure only, but also on a portfolio basis where appropriate.

b) Limits are commensurate with the strength of the FHLBank's capital position, its earnings, the level of its retained earnings, and the quality of risk management and reporting systems.

c) Changes in an FHLBank's aggregate risk limits are approved by the board of directors and documented in the board's minutes.

d) A formal system to monitor interest rate risk exposures against established limits is present. Staff that is independent of those who are authorized to take positions should perform the risk measuring, monitoring and reporting.

e) Senior management ensures that appropriate and prompt follow-up action is taken when limit violations occur and when policies and procedures are not followed. The FHLBank should also maintain a record of all limit violations. Recurrent changes in interest rate risk limits for the purpose of accommodating instances in which the limits have been, or are about to be, breached may be indicative of poor or inadequate risk management or faulty risk measurement systems.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Risk Assessment

Under Section 917.3(c) of the Finance Board regulations, each FHLBank is required to perform an annual risk assessment for all business processes to identify and evaluate all material risks, including both quantitative and qualitative aspects. The examiners should evaluate the FHLBank's annual risk assessment to ensure that it is reasonably designed to identify and evaluate all material interest rate risks, including repricing risk, basis risk, yield curve risk, option risk, and price risk that could adversely affect the achievement of the FHLBank's performance objectives and fulfillment of its compliance requirements. The examiners should determine whether the FHLBank's risk assessment:

(1) Identifies all business lines and processes;
(2) Identifies strategic objectives of each business line and process;
(3) Describes key business processes;
(4) Identifies and evaluates all material risks for all key business process;
(5) Describes associated risks and quantifies potential effects on earnings and capital;
(6) Describes control objectives;
(7) Identifies existing mitigating controls;

(8) Assesses the effectiveness of existing mitigating controls;
(9) Documents methodologies utilized for testing control effectiveness;
(10) Quantifies the likelihood of control failures;
(11) Identifies control weaknesses; and
(12) Describes remedial actions to address identified weaknesses.

b) Sarbanes-Oxley Act Compliance

The examiners should review:

(1) The effectiveness of evaluations conducted pursuant to SARBOX that identifies the key risks and controls pertaining to financial reporting and evaluates potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.
(2) An evaluation of the adequacy of corrective actions on control weaknesses identified by annual risk assessments and evaluations conducted under SARBOX.

5) Testing performed by external and internal auditors and outside consultants

Evaluate the adequacy of testing of controls over interest rate risk management performed by external and internal auditors and outside consultant***s.***

The examiner should review the scope of the internal audit of the interest rate risk management process to determine whether the audit scope and testing are sufficiently comprehensive and the frequency of the audit is adequate. The examiner should review:

(1) Evaluations of periodic appraisals of the adequacy and effectiveness of the interest rate risk management process.
(2) Evaluations of appropriateness of the FHLBank's risk measurement methodologies and assumptions, including those for interest rates, spreads, prepayments, yield curves, discount rates, volatilities, and interest rate scenarios.
(3) Verifications of the adequacy and accuracy of risk exposure reports and management reporting to the board of directors.
(4) Reconciliations of on- and off-balance sheet inputs used in the model to general ledger.
(5) Verifications of documentation of the risk modeling process and assumptions, including spreads, market rates, volatilities, and discount rates.

In addition, the examiner should:

(1) Determine whether individuals conducting the audit have the appropriate experience and skill.
(2) Determine whether findings/recommendations by internal and external auditors and outside consultants are fully documented and tracked for adequate follow up.
(3) Determine whether management's corrective actions on recommendations by internal and external auditors or consultants are adequate and are reviewed by senior management and the board of directors.

6) Information technology and controls

Assess the adequacy and effectiveness of automated and manual processing. The examiner should review the FHLBank's automated and manual data processing systems and spreadsheets. The examiner should also review flow charts to identify how information is channeled from one process to another and one function or department to another and determine that appropriate and effective automated and manual controls as needed are in place. At a minimum, the examiner should:

a) Review the FHLBank's flow charts to determine how information is channeled from one business process to another.

b) Identify and assess the automated and manual systems and applicable controls for processing information within the same business unit as well as from one business unit to another.

c) Identify and assess control deficiencies noted by internal and external auditors or consultants.

d) Identify and evaluate internal control exceptions and violations to determine whether they have occurred due to deficiencies in controls.

e) Assess management corrective actions on identified control deficiencies to prevent their reoccurrence.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow, analyses, and processes as well as controls, including the level, types, sources, and direction of interest rate risk, taking into account on- and off-balance sheet risk characteristics, and the quality of risk management. If applicable, conduct an assessment of any significant or anticipated changes to FHLBank funding and hedging strategies, product lines, trading volumes, and commitments since the last examination that may affect the FHLBank's interest rate risk profile.

For the purpose of this program, the assessment is based on reviews of the Quarterly Risk Monitoring Report and on- and off-site risk analyses and results produced by Finance Board Risk Modeling Division (RMD), CRS data and trend book, FHLBank risk monitoring reports, SEC fillings, and significant changes since the last examination. The examiner should have discussions with RMD staff and FHLBank management during the review process.

a) Level and Direction of Risk

The examiner should assess and discuss with management the FHLBank's DOE and MVE sensitivity to various hypothetical scenarios, including:

(1) Parallel interest rate shocks.
(2) Non-parallel rate shocks. The FHLBank's rate scenarios should involve changes in the shape of the yield curve, including steepening, flattening, and twists.
(3) Changes in key spreads. The FHLBank's interest rate scenarios should include shocks that change the spreads between key rates, such as CO rates and LIBOR, and CO rates and mortgage rates.
(4) Changes in the FHLBank's exposure to rate changes at particular term points on the yield curve. The FHLBank's interest rate scenarios should include shocks that determine the FHLBanks key rate durations.
(5) Assess the FHLBank's DOE and MVE sensitivity for various interest rate shocks in relation to the FHLBank's post-shock level of DOE and MVE, including the change in DOE and MVE resulting from a +/- 200 basis point parallel rate shock in relation to the FHLBank's DOE and MVE following a +/-200 basis point shock. Perform analysis for various rate shocks.
(6) Assess the FHLBank's value-at-risk report that estimates the FHLBank's potential market value loss.

The examiner should assess and discuss with management the FHLBank's ***NII sensitivity*** to various hypothetical scenarios.

(1) Assess the FHLBank's NII sensitivity for various interest rate scenarios in relation to the FHLBank's retained earnings in those scenarios. Use the FHLBank's scenario results to perform analysis.
(2) Assess the FHLBank's other risk monitoring reports such as repricing and basis gap reports to estimate how each risk component could affect the FHLBank's earnings when interest rates change.
(3) Assess and discuss with RMD staff their review of results and analyses.
(4) Assess the ability of the FHLBank to estimate (mark-to-model) the value of its holdings of financial instruments in the base case and in alternative interest rate scenarios.

For all financial instruments with embedded options or which are otherwise difficult to value, the examiner should determine whether the FHLBank can adequately value the instruments in both the base case and in all interest rate scenarios. The RMD's pre-examination Liability and Mortgage Reports should provide evidence as to whether the FHLBank's models are valuing optionality accurately.

For all financial instruments in the FHLBank's portfolio with embedded options and other instruments that are difficult to value, the examiner should determine whether the FHLBank obtains or develops reliable and independent estimates for base case values and for alternative scenarios.

b) Significant Sources of Risk

Examiners should determine the level of exposure in the areas identified as potentially having significant interest rate risk. A basic tenet of portfolio theory is that interest rate risk must be assessed on a total portfolio basis. It is the risk of the entire portfolio not the risk of individual instruments that matters in assigning a risk exposure rating. Although interest rate risk exposure should not be measured piece-meal, once a FHLBank's overall level of exposure has been measured, it may be useful to identify the portions of the FHLBank's portfolio that contribute most to its exposure. This requires considering the assets, funding, and any derivatives associated with the particular portfolio, such as investments, advances, or AMA, together. The examiner should review and analyze the FHLBank's balance sheet structure, off-balance sheet activities, trends, and asset and liability compositions to identify the major sources of interest rate risk exposures.

The examiner should consider:

(1) The maturity and repricing structures of the FHLBank's loan, investment, liability, and off-balance sheet portfolios;
(2) Whether the FHLBank has substantial holdings of products with explicit or implicit embedded options, such as prepayment options, caps, or floors, or products whose rates will considerably lag market interest rates;
(3) The various indices used by the FHLBank to price its variable rate products, such as prime, LIBOR, Treasury, and the level or mix of products tied to these indices;
(4) The use and nature of derivative products; and
(5) Other off-balance sheet items, such as, letters of credit, loan commitments, and mortgage delivery commitments.

The examiner should assess and discuss with management the FHLBank's vulnerability to various movements in market interest rates including:

(1) The timing of interest rate changes and cash flows because of maturity or repricing mismatches;
(2) Changes in key spread or basis relationships;
(3) Changes in yield curve relationships; and
(4) The nature and level of embedded options exposures.

c) Mitigating Controls

For the purpose of this program, the assessment of mitigating controls will be conducted based on FHLBank policies and procedures, risk management strategies and practices, and monitoring reports. RMD staff will complete a separate examination program for the purpose of assessing the FHLBank's interest rate risk modeling, including model validation and back testing. The examiners, in consultation with RMD staff and FHLBank management, will conclude whether existing mitigating controls are adequate and effective.

At a minimum, the examiner should determine that:

(1) The FHLBank has appropriate risk management policies and strategies for investments, advances, AMA, funding and derivatives;
(2) The FHLBank's hedging strategies are appropriate and sufficient to manage embedded options, basis risk, yield curve risk, price risk, and repricing risk associated with on- and off-balance sheet activities;
(3) The FHLBank's risk tolerance limits are appropriate given the nature, the types and the level of risk;
(4) The FHLBank's investment, advances, mortgage loan acquisition and debt issuance activities are consistent with board of directors-approved guidelines, and they achieve their intended risk management and earnings objectives;
(5) The FHLBank appropriately uses derivatives to hedge the anticipated debt issuance and mortgage delivery comments;
(6) The FHLBank, if applicable, appropriately uses a delta hedging strategy to manage volatility risk associated with mortgage assets;
(7) The FHLBank has established sufficient procedures and systems to identify and measure risks associated with these derivative instruments.
(8) The FHLBank's derivatives activities are consistent with the board of directors' risk management strategies and policies. If so, determine whether the use of such derivatives allows the FHLBank to achieve those strategies effectively;
(9) The FHLBank's policies, procedures, and strategies are reviewed and approved by senior management; and
(10) Procedures are established to ensure timely reporting of FHLBank policy exceptions and regulatory violations.

d) Accounting Controls

Assess the adequacy of the FHLBank's accounting procedures and strategies for mitigating accounting risk arising from changes in interest rates in context of earnings and capital. The review should determine:

(1) Whether the FHLBank has established an appropriate methodology for premium amortization and discount accretion in accordance with SFAS 91.
(2) Whether the FHLBank has procedures and systems in place to mark-to-market trading and available-for-sale securities (price risk) in accordance with SFAS 115.
(3) Whether the FHLBank has established an effective methodology to perform hedge effectiveness testing in accordance with SFAS 133. In addition, determine if the FHLBank has the infrastructure to assess potential earnings impact from hedging and derivative strategies.
(4) Whether the FHLBank has established procedure for compliance with SFAS 149.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on preliminary reviews of corporate governance, risk management practices, internal controls and audit coverage. Testing of the accuracy and adequacy of risk modeling, including model input and output, and model validation and back testing procedures is not part of this examination program. Testing for these attributes is included in the examination program for the interest rate risk modeling. For the purpose of this program, testing may include:

a) Verifying management's adherence to regulations and risk management policies and procedures. Obtain periodic risk exposure reports and related documentation and spreadsheets/databases and verify that appropriate and effective procedures that underlie the production of these reports and spreadsheets are in place. Verify that key risk management reports, including regulatory violations and policy exceptions are regularly and timely submitted to senior management and the board of directors, and the board and senior management take appropriate corrective actions to prevent their reoccurrence.

b) Obtaining flow charts and analyzing key processes and channels of information from the front office to the back office. Identify automated and manual controls in place and assess their effectiveness and determine that staff adheres to these mitigating controls.

c) Obtaining management analyses and relevant board of directors and board committee meeting minutes. Determine whether the analyses consider the

board's strategic direction and risk appetite, and the FHLBank's earnings and capital positions, including retained earnings in order to set forth the FHLBank's limits for exposure to interest rate risk.

d) Obtaining the FHLBank's prices for mortgage assets and derivative instruments used for the production of risk exposure reports. Compare the FHLBank's internally-generated prices against broker-dealer prices for accuracy.

e) Obtaining sample traded transactions, including advances, MBS/CMOs and AMA pools and associated debt and derivative instruments. Analyze their risk characteristics to determine that they are appropriate and consistent with the board-approved policies and regulatory guidelines.

f) Obtaining records of mortgage loan delivery commitments and securities held at fair value and available-for-sale. Determine that these accounts are marked-to-market and gains/losses are accounted for in earnings or capital in accordance with SFAS 133 or SFAS 115, as applicable.

g) Obtaining procedures and spreadsheets used for premium amortizations and discount accretions. Assess whether the FHLBank's procedures and calculations are appropriate and accurate, as well as consistent with the SFAS 91.

h) Obtaining audit and consultant reports, workpapers, and analyses. Assess whether audit scope and testing of attributes are adequate given the level and types of risks and that management responses and corrective actions are appropriate.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the level of market risk (low, moderate, high); the direction of market risk (stable, decreasing, increasing); and the quality of market risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination. Evaluate vertical and horizontal channels of communications and information flows, as well as board of directors and management committee structure relevant to interest rate risk management.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances, the development of key interest rate risk management policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight over the interest rate risk management function. Review board and management committee meeting minutes, agenda, and decision-making process.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to interest rate risk management, including the risk management policy, investment, funding and hedging activities, relevant accounting rules and other pronouncements, and business continuity and recovery planning. Assess the adequacy of policies, procedures and practices in the context of Finance Board regulations, accounting standards, board of directors directives and risk appetite, strategic and business plans, and industry best practices.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and the internal control assessment under SARBOX applicable to interest rate risk management, as well as procedures implemented to periodically attest to the adequacy of the control environment, including board reviews and corrective actions on identified control weaknesses.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing of controls over its interest rate risk management activities performed by the FHLBank's external auditors, internal auditors, or consultants. Review the audit plan, audit scope and frequency, the engagement letter, and audit workpapers where appropriate. Review audit exception tracking systems and management's corrective actions.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by the front office and back office functions for processing trades and debt issuances, as well as for measuring and producing reports of interest rate risk.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow, analyses, and processes as well as controls, including the level, types, sources, and direction of interest rate risk, taking into account on- and off-balance sheet risk characteristics, and the quality of risk management. If applicable, conduct an assessment of any significant or anticipated changes to FHLBank funding and hedging strategies, product lines, trading volumes, and commitments since the last examination that may affect the FHLBank's interest rate risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of corporate governance, risk management, internal controls, and audit coverage. Testing may include verifying the accuracy of the FHLBank's risk position reports and FHLBank adherence to regulations and internal policy parameters, the effectiveness of manual and automated controls, the adequacy of risk tolerance limit structure and related analyses, and the appropriateness of funding and derivatives activities given the risk profile of the balance sheet.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the level of market risk (low, moderate, high); the direction of market risk (stable, decreasing, increasing); and the quality of market risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

The FHLBanks have complicated balance sheets that include assets and liabilities with imbedded optionality. Many of them also have significant positions in derivatives, including swaps, options, and swaptions. Because of the complicated nature of their positions, the FHLBanks require models to measure their exposure to interest rate risk. Each FHLBank uses numerous models to project the likely effects of interest changes on its market value of equity, on the prepayment rates on its mortgage related assets, and on current and future earnings. Each FHLBank also uses models to estimate the market value of instruments for which actual market prices are often not available.

The Risk Modeling Division (RMD) provides technical and analytical exam support in five main areas: (i) measurement of interest rate risk exposure, (ii) modeling systems, (iii) modeling assumptions, (iv) mortgage prepayment modeling, and (v) value-at-risk (VaR) model review. The RMD uses a variety of models and model review procedures to test FHLBank risk-modeling capabilities. The RMD's overarching goal is to verify independently the market values and market value sensitivities of the FHLBanks' positions using a consistent set of assumptions and algorithms.

To provide this support, the RMD has developed four templates for collecting essential data from each FHLBank. These templates are the **Modeling Assumptions Template,** two **Mortgage-Related Asset Templates**, and the **Liabilities Template**. They are part of the material requested, in the Alert Letter, prior to the examination and can be downloaded from: http://resource.fhfb.gov/. The RMD uses a fifth template, **Data Items for Off-Site Market-Risk Monitoring,** to collect estimates of the FHLBank's interest rate sensitivity during the quarterly supervisory reviews. The RMD completes much of our analysis and data collection prior to the start of the examination.

Regulatory Environment

The primary authorities governing Risk Modeling activities are set forth below.

1) ***Rules and Regulations of the Federal Housing Finance Board,*** which includes Section 932.5, Market Risk Capital Requirement

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of modeling are the following:

   Advisory Bulletin 06-02, dated March 20, 2006, provides guidance to model documentation and validation.

   Advisory Bulletin 05-06, dated June 10, 2005, outlines the process and describes the type of documentation required for an FHLBank to avail itself of the notification process to make changes to a previously approved internal market risk model.

Advisory Bulletin 04-5, dated September 29, 2004, provides guidance to senior management and boards of directors of FHLBanks on risk limits for the management and control of interest-rate risk.

Advisory Bulletin 03-10, dated October 6, 2003, provides guidance on a number of issues relating to the calculation of market value at risk (VaR) and market risk modeling.

Advisory Bulletin 03-9, dated October 3, 2003, provides FHLBanks with a uniform methodology for calculating Duration of Equity (DOE) under a smaller parallel down shock when a full - 200 basis point shock would cause some rates to fall below 35 basis points (0.35 percent).

Advisory Bulletin 03-7, dated May 9, 2003 directs each FHLBank, post implementation of its capital plan, to conduct, at least annually, an independent validation of its internal market risk model.

Risks Associated with the Risk Modeling Function

An FHLBank's primary risks relating to the Risk Modeling function are set forth below.

1) Operational Risk

Potential sources of operations risk include:

a) Processes and controls for the data that are fed into the FHLBank's models. Such data include market data and data on the FHLBank's positions (assets, liabilities, and derivatives).
b) Model calibration.
c) Model assumptions, including
   (1) The FHLBank's choice of discount curves, and spreads, for discounting different types of cash flows; and
   (2) Assumptions used in modeling complex advance, debt and swap instruments.
d) IT capacity and controls to run the models and process the results efficiently.
e) The level and expertise of the risk management department at the FHLBank.
f) The adequacy of the documentation to support the valuation model and changes to the model, such as a change log for changes to its models or model assumptions.
g) Adequacy of the FHLBank policies and procedures for model-related issues, such as model validation, back-testing and error tracking.

2) Market Risk

Without sound risk modeling, the FHLBank will not have accurate measures of its Duration of Equity (DOE) or other interest rate risk limits or of the sensitivity of its market value of equity (MVE) or income to changes in market interest rates. Accurate measures of these risks and sensitivities are imperative in making sound risk management decisions.

3) Model Risk

No one vendor model is clearly superior in measuring the full variety of risks encountered by the FHLBanks, including both market value and income sensitivity. The RMD has gained knowledge and expertise regarding some of the particular strengths and weaknesses of various Asset Liability Management (ALM) packages used by the FHLBanks. During examinations, the RMD uses some of these methods and models to spot-check the FHLBank's model results as a test of the quality of its modeling and valuation methods.

The focal points of the RMD's work are consolidated obligations (COs) and mortgage-related assets. For a sample of COs, the RMD estimates base case values and measures the interest rate sensitivity of these values. For mortgage-related assets, the RMD develops a reasonable range for Option-Adjusted Spread (OAS), effective duration, and other interest rate sensitivity measures at the instrument level. If an FHLBank has estimates for these measures outside this reasonable range, it is likely to have other defective risk measures, such as VaR. Unreasonable OAS estimates may also result from inaccurate base case prices for the mortgage-related asset. When possible, the RMD checks outlying FHLBank prices for these assets against known pricing sources.

VaR model review includes verifying consistency with Finance Board regulations and approvals, and in the context of best practices as enunciated by Basel Committee on FHLBank Supervision and other regulators. The RMD also reviews any independent validations of VaR models conducted by the FHLBank (much of the VaR model review is done outside of the normal exam process). FHLBanks also simulate their income for a short time horizon as part of their risk management. Various models and assumptions are employed to generate these income projections. These models and assumptions used for income projection should also be validated during the examination.

Specific Risk Controls Related to the Risk Modeling Function

An FHLBank's controls relating to the Risk Modeling function are:

1) Validation of model inputs against the general ledger.
2) Validation of the processing component of the models – calibration, securities valuation, etc.
3) Annual independent model validation report.
4) IT change control procedures.
5) Back-testing the model's results against actual results.
6) External benchmarking – comparing model results to external, third-party prices.
7) Policies and procedures for model validation, model change, and testing.

Examination guidance

A work program for Risk Modeling accompanies this narrative. What follows are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's risk modeling activities.

1) Pre-Exam (See also "Testing" below):

a) Prepare and deliver Model Status Report to the Examiner-in-Charge (EIC) three weeks prior to start of the examination. Also, be prepared to discuss model status issues in any "pre-alert" meetings with the EIC, Portfolio Manager, and other interested parties.
b) Request the following FHLBank documents through the EIC (prior to the Alert Letter):
   (1) Current risk management policy.
   (2) Most recent independent, risk model validation report.
   (3) Monthly market risk management report.
   (4) List of modeling assumptions (discount curves, spreads, interest rate processes, etc. for all instruments)-completed Modeling Assumptions Template.
   (5) Most recent Asset-Liability Committee (ALCO) report.
   (6) Completed Mortgage-Related Assets Templates.
   (7) Completed Liabilities Template.
   (8) Written procedures for pricing/valuing mortgage related instruments including any pooling or sorting rules that the FHLBank might follow as part of its AMA valuation procedures and FHLBank procedures for adjusting, calibrating, or "tweaking" mortgage prepayment models.
   (9) List of instruments that the FHLBank is unable to model or that require "work-arounds" along with descriptions of any work-arounds.
   (10) Spreadsheet showing market value by FHLBank sub-account of all VaR scenarios. If available, a written description of the relation between the worst-case scenarios and the FHLBank's risk factors.

(11) Any documents pertaining to special concerns for the FHLBank under examination.
(12) If available, a list of end-user applications the models rely upon.
(13) SARBOX (or other FHLBank) diagrams pertaining to the model's data and inputs, the model, and the model outputs.
(14) Documentation listing model, assumption or data input changes.

c) Review previous Report of Examination.
d) Review any work by Finance Board analysts that pertains to the FHLBank.
e) Read and evaluate the FHLBank's risk exposure discussion in its SEC submissions (10K, 10Q, etc.).
f) Using the table from the Quarterly Market Risk Monitoring Report for the most recent end of quarter and, when possible, the three previous quarter ends, prepare Market-Risk Monitoring Report for delivery to the EIC three weeks prior to exam start date. (The data tables for this report are available at: Q:\OS\Risk Modeling Division\FHLB Mkt-Risk Exposure Reports. A link to this address can be found under "Other Useful Links:" on the Reference Page of the Finance Board intranet site.)
g) Based on the Model Status Report and in consultation with the examination team, prepare and deliver Model Review Plan (a description of planned activities and focus of the model review during the period of the examination) three weeks prior (subject to provision of the necessary data by the FHLBank) to the examination start date.

2) Organizational structure

a) Functional organization and reporting structure;
b) Identification of key personnel;
c) Primary duties, responsibilities and technical expertise of personnel;
d) Segregation of duties;
e) Cross-training of personnel;
f) Coordination with other departments; and
g) Significant changes in the foregoing since the last examination.

3) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for risk modeling activities, which may include the following:

a) Input of the division primarily responsible for modeling the FHLBank's interest rate risk into decisions about risk limits made by senior management and the board of directors;
b) Communication to the FHLBank modeling staff of the FHLBank's risk limits; and

c) Policies and procedures for FHLBank risk modeling staff to communicate violations of risk limits or triggers to senior management and other relevant FHLBank divisions.

4) Key FHLBank policies and procedures, which may include those relating to the following:

a) Modeling Assumptions:
   (1) Review modeling assumptions for internal consistency as well as consistency with industry practices;
   (2) Review the FHLBank's choice of discount curves, and spreads, for discounting different types of cash flows;
   (3) Review assumptions used in modeling complex advance, debt and swap instruments.
b) Compare of base-case mortgage security prices to LehmanLive and Bloomberg prices.

5) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from and controls established by the institution over risk modeling activities and includes quantitative and qualitative evaluations; and
b) Evaluate the effectiveness of the evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

6) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of the scope and testing performed by external and internal auditors; and
b) Evaluate the adequacy of the scope and testing performed by outside consultants such as penetration testing.

7) Information technology and controls

Identify and assess the automated and manual systems and applicable controls for processing transactions, including:

a) Authorized users;
b) Vendor technical support;
c) Use of spreadsheets; and
d) Business continuity and recovery.

8) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate workflow and processes as well as controls, including the level and direction of risk and the quality of risk management; and
b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile such as management, systems, key personnel, regulatory requirements and processing.

9) Testing (primarily pre-exam)

a) Use PolyPaths/AFT and/or PolyPaths/ADCO to model mortgage related assets; obtain OAS, duration, and convexity estimates for comparison to FHLBank estimates. Prepare Mortgage Report for delivery to EIC three weeks prior to the examination start date. (As this report takes between one- and two-weeks to prepare depending on the size of the FHLBank's mortgage-related asset portfolio, the timing of its delivery is dependent on the timely delivery of the necessary data by the FHLBank.) When possible, check questionable results against LehmanLive or other pricing source.
b) Use PolyPaths, including the Kalotay callable bond options model when appropriate, to model a sample of COs to obtain base case valuations and rate sensitivities for comparison with the FHLBank's results. Prepare Liabilities Report for delivery to EIC three weeks prior to exam start date.
c) Assess compliance with policies, procedures, and internal controls. Specific attributes include, but are not limited to the following:
   (1) Mortgage prepayment modeling review includes the following:
      (a) Evaluation of the FHLBank's testing procedures for comparing and/or calibrating its model results with historical prepayments;
      (b) Evaluation of the FHLBank's testing procedures for comparing and/or calibrating its model results with Wall Street models;
      (c) Evaluation of the FHLBank's controls and procedures for model "tweaks";
      (d) Discussion and attempted resolution of any significant differences between FHLBank results for OAS, duration, etc. and Risk Modeling Division results reported in the Mortgage Report.
      (e) Validate FHLBank's written procedures through verbal descriptions of processes and procedures.
   (2) Review and verify modeling assumptions from Template.
   (3) Evaluate model and data verification and reconciliation.
   (4) Determine if any risk-limit violations have occurred and discuss the reasons for the event.
   (5) Review and verify interest rate and volatility scenarios used in VaR for consistency with FHFB regulations.
   (6) Assess the data sources and feeds into the risk model.

(7) Determine if there are pre-processing adjustments applied to the data.
(8) Discuss SARBOX or FHLBank-produced diagrams that depict the data feeds into the risk model, and the output from the model.
(9) Review any new instruments and how they are modeled.
(10) Discuss any specific issues for the FHLBank under examination.
(11) Discuss any work-arounds, and end-user applications used in these work-arounds, the FHLBank uses and the FHLBank's longer term plans for addressing the model shortcomings that produce the need for the work-arounds.
(12) "Walk through" (simulate) how FHLBank personnel would use the valuation models, including the model used for income simulation. Note any undocumented assumptions, inputs or work-arounds used during the procedure. Note the FHLBank personnel and his/her experience using the model.
(13) Discuss any post-processing adjustments applied to the model's estimates.
(14) Discuss how the model outputs are used for risk management purposes (which reports use the model estimates).

10) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

11) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Risk Modeling
As of XXXXXX

1) Organizational structure

Evaluate effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination. In doing so, review the depth and level of management reporting of model results.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for risk modeling activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to risk modeling activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and the internal control assessment under SARBOX applicable to risk modeling activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its risk modeling activities. Specifically, focus on the scope, depth, and ultimate disposition of the annual independent model review.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls used by the risk modeling function for managing the data flow from trade inception to routing of model output and reports, including authorized users, vendor technical support, use of spreadsheets and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to risk modeling operations implemented since the last examination, or under consideration, that may affect the FHLBank's risk profile.

8) Testing

Conduct tests of FHLBank models using FHFB models and other sources of pricing information. Conduct other testing as appropriate based on preliminary review of model results, governance, risk management, internal controls, audit coverage, and external model validation reports.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

Forms of derivative products have existed for many years. The first derivatives products were commodity futures contracts to establish a more certain price for farmers' planned production. Commodity futures have been traded through formalized exchanges for many years. As a result of volatility in interest rates and currency exchange agreements, certain participants in the financial markets desired to hedge some of the risks they were facing. In the 1970s, exchange-based trading in stock options and financial futures contracts was initiated. The birth and rapid growth of the swap agreement began in the early 1980s.

In recent years, market deregulation, growth in global trade, and continuing technological developments led to a corresponding increase in demand for risk management products. This demand is reflected in the growth of financial derivatives from the standardized futures and options products of the 1970s to the wide spectrum of over-the-counter (OTC) products offered and sold today.

Many products and instruments are often described as derivatives by the financial press and market participants. In this guidance, financial derivatives are broadly defined as instruments that primarily derive their value from the performance of an underlying asset or item, typically interest or foreign exchange rates, equity, or commodity prices.

Examples of financial derivatives include futures, swaps, options, structured debt obligations and forward rate agreements. Recently, credit derivatives have been used increasingly by financial institutions to mitigate potential financial difficulties experienced as a result of the failure of borrowers to perform under the terms of loan transactions. Some derivatives are traded on organized exchanges, whereas others are privately negotiated transactions.

Derivatives have become an integral part of the financial markets because they can serve several economic functions. When used properly, derivative products can become effective tools in managing business risks. In the marketplace, derivatives can be used to expand product offerings to customers, manage capital and funding costs, and alter the risk-reward profile of a particular item or an entire balance sheet. Most importantly, derivative transactions offer the opportunity for financial institutions to reduce risks in the marketplace.

Despite their usefulness, financial derivatives may be used inappropriately. In recent years, there have been many examples of financial institutions and other companies losing large sums of money as a result of poorly controlled derivatives use. As the market has developed, there has been a significant increase in the types and complexity of derivatives. Failing to understand, identify and manage the risks associated with financial derivatives can have a sudden and significant impact on an institution's financial position. It is imperative that management of an FHLBank understand what they are attempting to accomplish in making use of the various derivative products in the marketplace.

The use of financial derivatives requires special expertise, experience and rigorous controls. Critical management systems should be in place commensurate with each institution's use of derivative products. An FHLBank should not engage in derivatives activities unless management understands the features, cash flows and risks inherent in their particular products. Derivatives should not be executed without the proper systems and internal controls necessary to monitor and analyze the performance of the instruments. An FHLBank needs to ensure that the rewards associated with derivatives are commensurate with the risks being taken and that these risks are understood by the FHLBank's board of directors and senior management.

This guidance is intended to provide a framework for evaluating the adequacy of risk management practices regarding derivatives use by an FHLBank. Although this guidance is comprehensive in scope, it provides only a framework. Examiners must still exercise judgment when determining whether risk management processes are appropriate.

Regulatory Environment

The primary authorities governing derivatives use are set forth below:

1) ***Rules and Regulations of the Federal Housing Finance Board,*** which include the following parts and sections relevant to derivatives use:

   Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, is pertinent.

   Part 956 of the Finance Board regulations addresses the use of derivatives in the FHLBank System. Specifically, Section 956.5, Authorization for Derivative Contracts and Other Transactions, and Section 956.6, Use of Hedging Instruments, are pertinent.

FHLBank Environment

Generally, FHLBanks make use of derivative transactions to mitigate risks in market conditions. The most common use of derivative transactions is for the purpose of converting the "fixed or floating" characteristics of assets or liabilities and eliminating the mismatch that would occur between assets and the underlying funding sources by use of interest rate swaps. Additionally, FHLBanks execute various other derivative transactions to mitigate market risks including the use of floors and caps. These transactions are frequently entered into to hedge the risks provided in advance products the FHLBanks offer to members. Forward contracts are used to eliminate the adverse impact of changes in market conditions on the value of assets acquired in AMA programs.

One of the risks most frequently faced by FHLBanks in the management of financial performance centers on the early payment of mortgages by borrowers, which in turn, can result in prepayment of advances or early pay down of AMA assets. FHLBanks have addressed this risk in a number of ways, including the use of derivative transactions. "Caps" may limit the costs associated with debt. "Floors" may be executed to ensure a minimal return on assets even during periods of low interest rates. As one would assume, the costs of entering into these transactions reflect the current and projected interest rate environments. Depending on market conditions, the upfront costs of entering into derivative transactions may be excessive and make the transaction uneconomic.

Because of the unique use of derivatives in an FHLBank and the fact that most derivatives used are designed to mitigate risks in a specific transaction, almost all derivatives used by the FHLBanks are OTC transactions. OTC derivatives are attractive because transactions may be structured to fit the specifics of the risks an FHLBank is attempting to address. Without an exchange mandating rigid standards for settling transactions and marking the positions to market on a daily basis, the FHLBank must satisfy questions it may have related to the creditworthiness of counterparties.

FHLBanks generally segregate the key duties associated with executing and monitoring derivative transactions. Although differences exist among the twelve FHLBanks, the treasury department is usually charged with evaluating the various options for mitigating market risks. Decisions related to executing derivative transactions are usually made by staff in these departments. Valuing the derivative transactions is usually carried out by a group of individuals separate from those executing the derivatives. Accounting for the transaction and assessing the credit risk of counterparties is generally segregated from the risk taking position of the FHLBanks. It is essential that these various functions related to derivative transactions are fully segregated and independent.

Derivatives are an essential tool for Banks to mitigate the interest rate risk exposures experienced as a result of market conditions. Prior to the regulatory requirement for each FHLBank to adopt a capital plan, interest rate risk limitations were established by regulatory guidance in the Finance Board Financial Management Policy. The policy established parameters limiting interest rate risk exposure measured by market value-of-equity (MVE) and duration-of-equity (DOE). Most FHLBanks continue to operate under interest rate risk parameters imposed by board-approved policies. Additionally, some of the FHLBanks have adopted interest rate risk limitations for earnings performance. To comply with these limits, most FHLBanks use derivatives to modify the characteristics of portions of the balance sheet.

Retention of proper legal documentation related to derivative transactions is important. Derivatives are generally only entered into with counterparties when a legally enforceable International Swaps and Derivative Association (ISDA) agreement has been executed. However, instances have been noted where FHLBanks were unable to present copies of these documents which establish the relationship with the counterparty for all

derivative transactions. Amendments to the legal documents should be executed as new derivative transactions are entered into.

Credit risk related to derivative transactions should be monitored by individuals independent of the execution of derivatives. FHLBanks should have a system in place to conduct an independent analysis of counterparty credit risk based on information from a variety of sources, and not place undue reliance on rating agency information. When assessing counterparty credit risk of institutions not domiciled in the United States, FHLBanks should be cognizant of differences in accounting practices or other financial reporting rules which could distort the financial position of counterparties.

Accounting for derivative transactions can greatly affect the financial performance of the institutions engaging in derivative transactions. Management must ensure that documentation is adequate to support the accounting treatment for derivative transactions, or otherwise be subject to volatility due to changes in the value of derivative instruments that are not allowed hedge accounting treatment.

Whatever the organizational structure of the individual FHLBanks, the complexity of derivative transactions mandates that the FHLBank have adequate controls to mitigate potential risks. Senior management must have the knowledge and expertise to manage the complexity associated with derivative transactions. Reporting to appropriate management personnel and committees is essential to ensure all parties are fully informed. Board-level guidance is essential for establishing limitations related to the appropriate use of derivative transactions. Each FHLBank should have adequate systems to monitor and report the performance of derivative transactions and their overall impact. FHLBanks should ensure that they have fully analyzed potential risks and considered alternatives before engaging in new derivative product transactions.

Risks Associated with Derivatives

An FHLBank's primary risks relating to derivatives activities are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, measured, monitored, and controlled.
b) A sound risk management framework composed of policies and procedures, risk measurement and reporting systems, and independent oversight and control processes has not been developed and implemented.
c) Senior management has not adequately analyzed new products or activities, taking into account pricing, processing, accounting, legal, risk measurement, audit, and technology considerations.
d) Risk management, monitoring, and control functions are not sufficiently independent of the position-taking functions.

e) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.
f) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise to test the control environment.

2) Market Risk

Market risk is the degree to which changes in interest rates, foreign exchange rates, commodity prices, or equity prices can adversely affect an institution's MVE or earnings. For FHLBanks, the primary component of market risk is interest rate risk – the risk to the MVE and earnings related to changes in interest rates. Interest rate risk arises from differences between the timing of rate changes and the timing of cash flows (repricing risk); from changing rate relationships among yield curves that affect FHLBank activities (basis risk); from changing rate relationships across the spectrum of maturities (yield curve risk); and from interest-rate-related options embedded in FHLBank products (option risk). Price risk is closely related to interest rate risk and is the risk to earnings or capital arising from changes in the value of a financial instrument or portfolio of financial instruments.

Repricing or Maturity Mismatch Risk

Repricing risk results from differences in the timing of rate changes and the timing of cash flows that occur in the pricing and maturity of an FHLBank's assets, liabilities, and derivatives instruments. Repricing risk is often the most apparent source of interest rate risk for a FHLBank and is often gauged by comparing the volume of a FHLBank's assets that mature or reprice within a given time period to the volume of liabilities that reprice. Because the yield curve is generally upward-sloping (long-term rates are higher than short-term rates), FHLBanks can often earn a positive spread by funding long-term assets with short-term liabilities. However, this strategy makes earnings vulnerable to an increase in interest rates that raises the FHLBank's cost of funds when short-term liabilities have to be replaced.

Basis Risk

Basis risk is the risk that the correlation between two prices or interest rate indices may change. Correlation is the relationship between mathematical or statistical variables. For example, if an FHLBank uses a Constant Maturity Treasuries Indexed-Consolidated Obligation (CMT) to fund LIBOR-indexed advances, it is exposed to basis risk because changes in CMT and LIBOR will not always move in tandem.

Yield Curve Risk

Yield-curve risk arises from variations in the movement of interest rates across the maturity spectrum. It involves changes in the relationship between interest rates of different maturities of the same index or market, such as a three-month U.S. Treasury

security (Treasury) versus a five-year Treasury. The relationships change when the shape of the yield curve for a given market flattens, steepens, or becomes negatively sloped during an interest rate cycle. Yield curve variation can accentuate the risk of an FHLBank's position by amplifying the effect of maturity mismatches.

Option Risk

Option risk arises when an FHLBank or an FHLBank's member has the right, but not the obligation, to alter the level and timing of the cash flows of an asset, liability, or derivatives instrument. An option gives the option holder the right to buy (call option) or sell (put option) a financial instrument at a specified price (strike price) over a specified period of time. For the seller or writer of an option, there is an obligation to perform if the option holder exercises the option.

The option holder's ability to choose whether to exercise the option creates an asymmetry in an option's performance. Generally, option holders will exercise their right only when it is to their benefit. As a result, an option holder faces limited downside risk (the premium or amount paid for the option) and unlimited upside reward. The option seller faces unlimited downside risk (an option is usually exercised at a disadvantageous time for the option seller) and limited upside reward (if the holder does not exercise the option and the seller retains the premium).

Options often result in an asymmetrical risk/reward profile for the FHLBank. If the FHLBank has written or sold options to its members, the amount of earnings or market value that an FHLBank may lose from an unfavorable movement in interest rates may exceed the amount that the FHLBank may gain if rates move in a favorable direction. As a result, the FHLBank may have more downside exposure than upside reward.

Some FHLBanks buy and sell options on a "stand-alone" basis. The option has an explicit price at which it is bought or sold and may or may not be linked with another FHLBank product. An FHLBank does not have to buy and sell explicitly priced options to incur option risk, however. Indeed, FHLBanks incur option risk from options that are embedded or incorporated into certain assets.

Prepayment options are the most prevalent embedded option. Most residential mortgage loans give the borrower an option to prepay with little or no prepayment fee. FHLBanks may also permit the prepayment of advances with no prepayment penalty, or by not enforcing prepayment penalties in response to competitive pressures. Advances without a prepayment penalty are usually priced at a higher rate. A prepayment option is equivalent to having written a call option to the member. When rates decline, members will likely exercise the calls by prepaying advances, and the FHLBank's asset maturities will shorten just when extension would be preferable. And when rates rise, members will likely keep their advances, making it difficult for the FHLBank to shorten asset maturities just when shortening would be preferable.

FHLBank products that contain interest rate caps or floors are other sources of option risk. Such products are often embedded into advances and may have a significant effect on an FHLBank's rate exposure. For the FHLBank, an advance cap is like selling a put option on a fixed income security, and a floor is like owning a call. The interest rate on a cap or floor rate is the strike price. When market interest rates exceed the cap rate, the borrower's option moves "in the money" because the borrower is paying interest at a rate lower than market. When market interest rates decline below the floor, the FHLBank's option moves in the money because the rate paid on the loan is higher than the market rate.

Price Risk

Price risk is the risk to earnings or capital arising from changes in the value of portfolios of financial instruments. Many FHLBanks use the term price risk interchangeably with market risk. The accounts most affected by price risk are those that are revalued (marked-to-market) for financial presentation, such as trading account securities, derivatives, and foreign exchange products. When evaluating the sensitivity of a derivative contract to a change in price risk factors, the contract's terms, maturity, and timing and amount of future cash flows must be considered. An assessment of the potential impact on a portfolio of contracts should consider the extent to which contracts may complement or offset one another.

3) Credit Risk

Credit risk is the risk to earnings or capital of an obligor's failure to meet the terms of any contract with the FHLBank or otherwise to perform as agreed. Credit risk arises from all activities in which success depends on counterparty, issuer, or borrower performance. It arises any time FHLBank funds are extended, committed, invested, or otherwise exposed through actual or implied contractual agreements, whether reflected on- or off-balance sheet.

Credit exposure arising from derivative activities should be monitored and managed within the same framework used to assess credit risk in traditional banking activities. Counterparty credit risk can be managed through accurate measurement of exposures, ongoing monitoring, timely counterparty credit evaluations, and sound operating procedures. In addition, there are a growing number of mechanisms that can reduce credit exposure, such as netting arrangements, credit enhancements, and early termination agreements.

Credit risk in derivative products comes in the form of pre-settlement risk and settlement risk. Pre-settlement risk is the risk of loss due to a counterparty defaulting on a contract during the life of a transaction. It consists of both current exposure (the replacement cost of the derivative transaction or its market value) and the add-on (an estimate of the future replacement cost of the derivative).

Calculating pre-settlement risk is more complex than assessing the credit risk of traditional lending products. The maximum credit exposure from traditional banking activities is generally limited to the outstanding amount of funds advanced or invested at the time of a customer default. For many off-balance-sheet derivatives, however, there is no advancement of funds or exchange of principal. Therefore, the risk of loss is conditional on the counterparty defaulting at a time when the derivative contract has positive value to the FHLBank (an in-the-money contract) at the time of default. The level of exposure can vary throughout the life of the derivative contract. Even derivative contracts that are out-of-the-money (contracts under which the FHLBank has no current loss exposure because the mark-to-market is positive for the counterparty, not the FHLBank) have potential credit risk, because changes in market factors can cause the value of the contract to become positive to the FHLBank at any point prior to maturity. To manage credit risk effectively, an FHLBank should develop a reliable method of estimating potential credit exposure.

Settlement risk is the loss exposure arising when an FHLBank honors its obligation under a contract before the counterparty meets its obligation. A failure to perform may be due to counterparty default, operational breakdown, or legal impediments. Settlement risk occurs from the time an outgoing payment instruction can no longer be canceled unilaterally until the time the incoming payment is received and reconciled. This risk arises because it is generally impractical to arrange simultaneous payment and delivery in the ordinary course of business. For example, settlement risk arises in international transactions because of time zone differences. This risk generally exists for a minimum of one to two days. It can take another one to two business days to confirm receipt through reconciliation procedures. As a result, settlement risk can often last more than three business days before an FHLBank can be certain that a payment has been received. FHLBanks should monitor and control settlement risk separately from pre-settlement risk.

4) Operational Risk

Operational risk is the risk to earnings or capital arising from problems with service or product delivery. This risk is a function of internal controls, information systems, employee integrity, and operating processes. Operational risk exists in all products and services. Derivative activities can pose challenging operational risks because of their complexity and continual evolution. The operations function refers to the product support systems and related processes.

A cornerstone to minimizing operational risk is the internal control framework instituted by the board of directors and senior management to help prevent losses caused by fraud and human error. Fundamental to this framework is the segregation of the operations and risk-taking functions. Adequate systems and sufficient operational capacity are essential to support derivative activities. Just as trading systems have evolved, operational systems must keep pace with the rapid growth in both the volume and complexity of derivatives

products. Trades must be processed timely not only to service the counterparty but also to update position management and credit line monitoring systems.

Skilled and experienced staff is integral to the efficient operation of back office systems and is especially true for derivatives activities because of their complex nature. Management should regularly evaluate whether the staff have the necessary knowledge and skills and whether staffing levels are sufficient.

Operational risk also encompasses the risk to earnings or capital arising from violations of laws, rules, regulations, prescribed practices, or ethical standards. The risk also arises when the laws or rules governing certain FHLBank products or activities of the FHLBank's members may be ambiguous or untested or when these change. This risk can lead to an inability to enforce contracts as written, or the voiding of contracts.

In addition, earnings or capital face operational risk arising from adverse business decisions or improper implementation of those decisions. This risk is a function of the compatibility between an organization's strategic goals, the business strategies developed to achieve those goals, the resources deployed in pursuit of these goals, and the quality of implementation. The resources needed to carry out business strategies are both tangible and intangible. They include communication channels, operating systems, delivery networks, and managerial capacities and capabilities.

This risk may also arise when the FHLBank's business approach is not well developed or properly executed because of: an inability to react to changes in market condition, shifts in internal management focus, lack of internal coordination and communication to facilitate product delivery, or an inability to assemble the necessary financial, personnel, and systems infrastructure. Proper strategic planning and consistent market approach are integral to the success of the product or business activity.

Earnings or capital can also face risk arising from adverse public opinion or a negative reputation. This affects the FHLBank's ability to establish new relationships or services, or continue servicing existing relationships. This risk can expose the FHLBank to litigation, financial loss, or damage to its reputation and is present throughout the organization. It includes the responsibility to exercise an abundance of caution in dealing with its members and community. This risk is also present in such activities as member transactions.

Because the orderly operation of financial markets is largely based on confidence among all market participants, FHLBanks that actively associate their name with financial products such as derivatives are more likely to have higher operational risk. Derivative activities carry a higher degree of operational risk related to reputation because they are generally more complex and less understood by the public than other financial products. If the FHLBank engages in a derivative transaction that is inappropriate for the member/counterparty or that the member/counterparty does not understand, there is

greater potential for member/counterparty default, litigation, and damage to the FHLBank's reputation.

5) Financial Condition and Performance

The use of derivatives can adversely affect the FHLBank's liquidity and therefore its financial condition and performance, most notably if the FHLBank is unable to execute a transaction at a reasonable price. This typically arises when counterparty exposure requires a user to liquidate or offset a particular derivative position. When reacting to control this risk, users then become subject to associated market risks affecting the value of the derivative or the cost of the derivative needed for an offset position. The degree of market risk is aggravated when an inadequate primary or secondary market exists for the derivative subject to liquidation or offset.

In addition to the effects associated with liquidating a position, derivative transactions may adversely affect the funding and cash flow positions of an institution. Funding risk stemming from derivatives alone provides only a partial picture of an FHLBank's liquidity position. In general, funding risk is best analyzed for the whole institution across all financial instruments. The impact to an FHLBank's cash-flow position, however, could be significant. If an FHLBank was hedging a large position and interest rates move against the position, the margin call for exchange-traded derivatives could be significant relative to the available cash on hand. The same is true with OTC derivatives that have collateralization agreements that may be triggered and require the posting of collateral.

Specific Risk Controls Relating to the Derivatives Management Function

An FHLBank's controls relating to the derivatives management function are set forth below.

1) Corporate Governance (Board of Directors and Senior Management Oversight)

The safe and sound use of derivatives is contingent upon effective senior management and board of directors oversight. It is the responsibility of the board to hire a competent executive management team, endorse the corporate vision and the overall business strategy (including the institutional risk appetite), and hold executive management accountable for performance. The board must understand the role derivatives play in the overall business strategy.

It is the responsibility of senior management to ensure the development of risk management systems. This entails developing and implementing a sound risk management framework composed of policies and procedures, risk measurement and reporting systems, and independent oversight and control processes.

The formality of senior management and board of directors oversight mechanisms will differ depending on the derivatives activities of the FHLBank. However, the board and senior management must provide adequate financial resources, technical expertise, and systems technology support to implement appropriate oversight mechanisms.

The management of derivative activities should be integrated into the FHLBank's overall risk management system using a conceptual framework common to the FHLBank's other businesses. For example, the price risk exposure from derivative transactions should be assessed in a comparable manner to and aggregated with all other price risk exposures. Risk consolidation is particularly important because the various risks contained in derivatives and other market activities can be interconnected and may transcend specific markets.

Policies and Procedures

An FHLBank's board-approved policies should provide a framework for the management of risk. Written policies for derivative activities should ensure proper identification, quantification, evaluation, and control of risks.

Guidelines for derivatives activities can be included in policies that control financial risk-taking, including price, interest rate and credit risk, as well as liquidity adequacy, at the FHLBank level, as well as at the functional business unit or product level. Operating, accounting, compliance, and capital management policies should also address the use of derivatives.

Senior management should ensure that policies identify managerial oversight, assign clear responsibility, and require development and implementation of procedures to guide the FHLBank's daily activities. Policies should detail authorized activities, as well as activities that require board approval and activities that are considered inappropriate. Policies should articulate the risk tolerance of the FHLBank in terms of comprehensive risk limits, and require regular risk position and performance reporting.

Policies must keep pace with the changing nature of derivative products and markets. On an ongoing basis, the board of directors or appropriate board committee should review and endorse significant changes in derivative activities. At least annually, the board or a designated board committee should also approve key policy statements. Meeting minutes should document these actions.

New Products

Senior management should perform a comprehensive analysis of new products or activities. New products frequently require different pricing, processing, accounting, and risk measurement systems. Management and the board of directors must ensure that adequate knowledge, staffing, technology, and financial resources exist to administer the activity. Plans to execute new products for member counterparties or to mitigate risk

should consider the cost of necessary controls and retaining skilled staff. The new product approval process should include a review by all relevant areas such as risk control, operations, accounting, legal, audit, and line management. Depending on the new product or activity and its potential impact on the FHLBank's risk profile, senior management, and in some cases, the board of directors, should provide the final approval. For new and existing products, a uniform product assessment process should be part of the overall risk management function. The goal of this process should be to ensure that all significant risks and issues are addressed. Elements that should be included in a uniform product assessment are:

a) Product definition.
b) Explanation of how the product or activity meets business strategies and objectives, such as customer service or risk management tool.
c) Pricing mechanisms.
d) Description of risk management processes.
e) Descriptions of limits and exception approval processes.
f) Capital allocations.
g) Accounting procedures.
h) Operating procedures and controls.
i) Legal documentation requirements.
j) Other legal and regulatory issues.
k) Tax implications.
l) Ongoing update/maintenance.

Recognition that a product or activity as new is central to ensuring that variations on existing products receive the proper review and authorization. Factors that should be considered when deciding whether a product must be routed through the new-product process include, but are not limited to: capacity changes, structure variations (non-amortizing swap versus amortizing interest rate swap), products which require a new pricing methodology, legal or regulatory considerations; and market characteristics.

Oversight Mechanisms

An FHLBank's board of directors and senior management should approve policies delineating permissible derivative activities and risk tolerances. However, the volume and complexity of derivatives activities may make it impractical for these directors and senior management to oversee the day-today management. Consequently, they rely, in part, on strong risk control and audit functions to ensure compliance with policies.

The risk control and audit functions should possess the independence, authority, and corporate stature to identify and reporting findings. It is important to employ individuals with sufficient experience and technical expertise to be credible.

Risk Control

The role and structure of the risk control function (also referred to as "market risk management") should be commensurate with the extent and complexity of the derivative activities. Because measuring and controlling the risk of some derivative activities can be more complex than doing so for traditional products; a strong risk control function is a key element in assisting members of the board of directors and senior managers in fulfilling their oversight responsibilities.

Risk control units should regularly evaluate risk-taking activities by assessing risk levels and the adequacy of risk management processes. These units should also monitor the development and implementation of control policies and risk measurement systems. Risk control personnel staff should periodically communicate their observations to senior management and the board of directors.

Depending on the nature and extent of an FHLBank's activities, the risk control function can be structured in various ways. Often the most practical solution for such FHLBanks is the use of independent treasury support units, or qualified outside auditors or consultants. These individuals report risk-taking and management issues to the board of directors or a committee, such as an asset liability management committee (ALCO). The selected approach should be structured to ensure sufficient stature and expertise in the oversight role.

Audit

Audits should be conducted by qualified professionals who are independent of the business line being audited. Audits should supplement, and not be a substitute for, a risk control function.

The scope of audit coverage should be commensurate with the level of risk and volume of activity. The audit should include an appraisal of the adequacy of operations, compliance, and accounting systems and the effectiveness of internal controls. Auditors should test compliance with the FHLBank's policies, including limits. The audit should include an evaluation of the reliability and timeliness of information reported to senior management and the board of directors. Auditors should trace and verify information provided on risk exposure reports to the underlying data sources. The audit should include an appraisal of the effectiveness and independence of the risk management process. Auditors might ensure that risk measurement models are properly validated.

The audit should include an evaluation of the adequacy of the derivative valuation process and ensure that it is performed by parties independent of risk-taking activities. Auditors should test derivative valuation reports for accuracy. For hedge transactions, auditors should review the appropriateness of accounting treatment and test for compliance with accounting policies.

Procedures should be in place to ensure that auditors are informed of significant changes in product lines, risk management methods, risk limits, operating systems, and internal controls so that they can update their procedures and revise their audit scope accordingly. Auditors should periodically review and analyze performance and risk management reports to ensure that areas showing significant changes, such as earnings or risk levels, are given appropriate attention.

The level of auditor expertise should also be consistent with the level and complexity of activities and degree of risk assumed. In many cases, FHLBanks choose to out-source audit coverage to ensure that the professionals performing the work possess sufficient knowledge and experience.

The audit function must have the support of management and the board of directors in order to be effective. Management should respond promptly to audit findings by investigating identified system and internal control weaknesses and implementing corrective action. Thereafter, management should periodically monitor newly implemented systems and controls to ensure they are working appropriately. The board, or designated committee, should receive reports tracking management's actions to address identified deficiencies.

Risk Measurement

Accurate measurement of derivative-related risks is necessary for proper monitoring and control. All significant risks should be measured and integrated into an FHLBank-wide or corporate-wide risk management system. For example, price risk measurement should incorporate exposure from derivatives, as well as cash products.

Measurement of some types of risk is an approximation. At a minimum, management should regularly assess vulnerabilities to these risks in response to changing circumstances. The sophistication and precision of risk measurement methods will vary by the types, volumes, and level of risk for activities performed.

Risk Limits

Risk limits serve as a means to control exposures to the various risks associated with derivative activities. Limits should be integrated across the FHLBank and measured against aggregate individual and geographical risks. Limits should be compatible with the nature of the FHLBank's strategies, risk measurement systems, and the board of directors' risk tolerance. In addition to an annual approval process, changes in resources or market conditions should prompt the board to reassess limits and make appropriate revisions. Annual approvals of limits and any interim revisions should be communicated to appropriate parties within the FHLBank, including traders, risk managers, operations staff, and auditors.

In addition to providing a means of controlling aggregate exposure, limits can be used to foster communication of position strategies and changes in the FHLBank's risk profile. Limits called "management action triggers" (any limit that would require some level of management approval or other action in order to be exceeded) are often used for this purpose. Line managers should promptly report unanticipated changes and progressively deteriorating positions, as well as other significant issues arising from their positions, to the risk control function and responsible management.

When reviewing an FHLBank's limit structure, examiners should evaluate the size of limits in relation to the FHLBank's capital base, earnings, and the board of directors' expressed risk tolerance. The risks resulting from full utilization of an FHLBank's limits should not compromise the financial condition of the FHLBank. Examiners should analyze the percentage of limit utilization over time. Excessively large limits as compared to normal usage can mask meaningful shifts in risk-taking activity and can fail to trigger a formal evaluation process. Conversely, overly restrictive limits that are frequently exceeded may undermine the purpose of the limit structure.

Management Information Systems

The frequency and composition of board of directors and management reporting depends upon the nature and significance of derivative activities. Where applicable, board and management reports should consolidate information across functional and geographic divisions. Reporting should be tailored to the intended audience, providing summary information to senior management and the board and more detailed information to line management. For example, the board, or designated committee, should periodically receive information illustrating trends in aggregate exposure and compliance with business strategies and risk limits. Line management should receive more detailed reports with sufficient information to assess risk levels, returns, and consistency with strategic objectives. Ideally, management reports should be generated by control departments independent of the risk-takers.

Personnel and Compensation Plans

Management should ensure that compensation programs are sufficient to recruit and retain experienced staff. However, compensation programs should not encourage excessive risk-taking. Because of the leverage and volatility associated with derivatives and the consequent ability to generate large profits in a relatively short time, employees may be tempted to take excessive risk. Therefore, it is important that compensation programs do not motivate an employee to take risk that is incompatible with corporate strategies, risk appetite, policies, or applicable laws and regulations. Compensation that is based on short-term results may not take into account long-term risks.

Staff turnover can create serious problems, especially if knowledge is concentrated in a few individuals. Periodic rotation and cross-training of staff members performing key functions can help build depth over time and alleviate some of this risk. In addition, both

contingency plans and management succession plans should be established addressing the loss of key personnel and developing a pipeline to fill unanticipated position vacancies, respectively. Contingency actions may include curtailing existing or new activities or outsourcing functions to qualified auditors or consultants. Succession plans should identify and lay out individual development plans to develop bench strength to backfill vacancies from within where ever possible.

Personnel policies should require employees who are in positions that can significantly affect the books and records of the FHLBank to take two consecutive weeks of leave each year. The importance of implementing this control has been confirmed by recent well publicized trading losses that occurred because traders were able to conceal unauthorized trading activities for a number of years without being detected. These unauthorized activities might have been detected earlier if the traders had been required to take leave. Employees subject to this policy should not be able to effect any transactions while on leave. Exceptions to this policy should be granted only after careful consideration and approval by senior management. In no instance should multiple exceptions for the same employee be allowed to occur.

2) Market Risk

Derivatives are often an integral part of a financial institution's means to manage interest rate risk exposure. A formal structure should be in place assessing the FHLBank's overall interest rate risk measurement and management practices. When used as hedging tools, derivatives can not be viewed separately from the overall management of the financial institution's market risk exposure.

The level of structure and formality in an FHLBank's measurement and management of interest rate risk should be commensurate with the activities and level of risk approved by senior management and the board of directors. Contributing to effective supervision of interest rate risk are the following:

a) Appropriate board and management supervision.
b) Well-formulated policies and procedures.
c) Reliable pricing and valuation systems.
d) Accurate risk identification and measurement processes.
e) Interest rate risk limits.
f) Timely and effective risk reporting, monitoring, and exception approval processes.

FHLBanks must understand the factors affecting the price of derivatives to be able to effectively measure and manage potential risks to earnings and capital. FHLBanks should have access to several pricing sources to ensure the reasonableness of the prices being quoted. Independent third parties should be used for obtaining market values. However, any considerations affecting independence, such as obtaining market values from the same dealer who sold the derivatives, need to be assessed by management.

At a minimum, the risk measurement system should evaluate the possible impact on earnings and MVE that may result from adverse changes in interest rates and other market conditions. The measurement system should also allow management to monitor and evaluate the effectiveness of derivatives in the FHLBank's overall interest rate risk profile. This system should include risk-adjusted return analyses.

Interest Rate Risk Measurement

Risk measurement systems should be able to identify and quantify in timely fashion the major sources of interest rate risk. All FHLBanks should have models that enable them to accurately quantify sensitivity to changes in interest rates. However, sophisticated interest rate risk measurement systems introduce the added risk that assumptions used in the model may not hold in all cases. Such a possibility is generally termed “model” risk. FHLBanks should regularly re-evaluate interest rate risk model assumptions to ensure that they provide a reasonable estimate of risk for the scenarios being simulated. See the “Interest Rate Risk Management” section of this manual for more information on evaluating interest rate risk models.

At least annually, a summary of current interest rate risk measurement techniques and management practices should be provided to senior management and the board of directors. This presentation should explicitly identify and report weaknesses or limiting assumptions in risk measurement models. Also, significant revisions to models should be reported and the impact on risk levels quantified.

3) Credit Risk

Each FHLBank must have an effective means of measuring and controlling derivatives credit risk. A prudently controlled environment will include the following:

a) Effective senior management and board of directors oversight.
b) Policies and procedures.
c) Strong credit review, approval, and limit processes.
d) Accurate and validated risk measurement systems.
e) Timely and effective risk reporting, monitoring, and exception approval processes.
f) Proper credit documentation standards.

Counterparty credit risk should be strictly controlled through a formal and independent credit process. To avoid conflicts of interest, the credit approval function should be independent of the risk-taking unit and staffed by qualified personnel. Independence must be maintained for the initial credit assessment, establishment of counterparty credit lines, monitoring and reporting of exposure, and approval of exceptions. These functions are typically performed by the FHLBank's credit division.

The credit department should periodically review the creditworthiness of derivative counterparties and assign risk ratings as they would to members using advances.

Communication between the risk-taking unit and credit department are essential to ensure that all parties are informed of a change in the credit line or creditworthiness of a counterparty. Nonperforming contracts should be reported consistent with the FHLBank's internal policy for nonperforming assets. The quality of the derivative counterparty portfolio and the integrity of risk ratings should be periodically reviewed by the credit review function or similar independent party.

Credit Risk Measurement

Presettlement Risk

FHLBanks should have a system to quantify pre-settlement risk. Pre-settlement credit risk can be estimated using a variety of methods. Techniques have evolved from using the full notional amount of the contract, to a percentage of the notional amount, to loan equivalent estimates. Many FHLBanks now employ sophisticated computer models to simulate the potential credit exposure over the life of a derivative contract.

The credit risk in a derivative product is a function of several factors. The risk depends on the type of contract, cash flows, price volatility, tenor, and other factors. Exposure at the beginning of a contract is usually at or near zero. Most transactions are at market prices. Off-market transactions create an immediate credit exposure, with the risk most often taken by the FHLBank. Most derivative contracts do not involve an exchange of principal. After inception, the expected risk increases or decreases to reflect the impact of changing price factors. The potential for rate movements and a change in potential exposure increases with the duration of the agreement. Credit risk is generally reduced over the life of the contract because (1) interim cash flows reduce payment uncertainty and (2) the shorter the remaining life of the contract the less potential there is that significant adverse rate movements will occur. The credit exposure will often be skewed to either the beginning or the end of the contract depending on the size of the rate differentials and timing of cash flows.

Settlement Risk

The duration of an individual FHLBank's settlement exposure will depend on the characteristics of the relevant payments systems as well as on the FHLBank's internal reconciliation procedures. FHLBanks can reduce settlement exposure by negotiating their correspondent arrangements to reduce the amount of time they are exposed to non-cancelable payments awaiting settlement. Further, FHLBanks should review the time necessary for reconciliation of payment receipt. Reducing the time it takes to identify final and failed trades will reduce settlement exposure. FHLBanks should consider net settlement payments, when legally permissible, rather than settling on a trade-by-trade basis. Netting is discussed later in this section and in the "Operational Risk" section of this manual.

Credit Risk Limits

Counterparty credit limits should be approved before the execution of derivative transactions. FHLBanks should establish counterparty credit limits in much the same way as traditional credit lines. The credit file should document the purpose, payment source, and collateral (if any). Credit evaluations of individual counterparty credit limits should aggregate limits for derivatives with the credit limits established for other activities.

Mechanisms to Reduce Credit Exposure

In recent years, FHLBanks have increasingly used netting arrangements, credit enhancements, and early termination agreements to reduce credit exposure, to manage credit lines more efficiently and to minimize transaction costs. Before recognizing the reduction in credit risk that these arrangements can provide, FHLBanks must ensure that they are properly documented and legally enforceable. Terms of these arrangements are usually outlined in a standardized master agreement covering specific products such as the International Swaps and Derivatives Association (ISDA) agreement, Foreign Exchange and Options Master Agreement (FEOMA), and International Currency Options Market (ICOM) agreement. FHLBanks must also ensure that the arrangements are legally enforceable in the relevant jurisdictions. See the "Operational Risk" section for more information on documentation and enforceability. FHLBanks must ensure that they have adequate operational capacity to perform the necessary calculations for these arrangements.

Management Information Systems

Risk measurement and assessment should be conducted on an aggregate basis and reports should be timely and accurate. They should be generated from sources independent of the trading function, and distributed to all appropriate levels of management. Daily reports should, at a minimum, address significant counterparty line usage and limit exceptions. FHLBanks should combine the derivatives exposures with other credit risks to determine the aggregate risk for each counterparty. Monthly reports should detail portfolio information on industry concentrations, tenors, exception trends, and other relevant information with respect to pre-settlement exposure.

4) Operational Risk

Operational Risk Management

In order to effectively manage operational risk, senior managers must fully understand the processing cycle and must change processes and technology when necessary. They should identify areas of transaction risk and estimate the loss an FHLBank could suffer from a given exposure.

To ensure efficient processing and minimize operational risk, all personnel involved in derivatives activities should understand the distinct roles played by member services, trading, risk control, credit, operations, and accounting. Insufficient knowledge of derivatives prevents an understanding of the risks involved and may prevent effective internal controls from being implemented. The operations unit needs to be more than a processing center. The staff must be knowledgeable of derivative products, and able to communicate and work effectively with front office traders. These skills require that an FHLBank provide back-office personnel with appropriate continuing education.

Weak operational processes increase the possibility of loss from human error, fraud, or systems failure. Operational errors may affect the accuracy of management reports and risk measurement systems, thus jeopardizing the quality of management decisions. For example, losses can occur not only from settlement errors but also from managing incorrect positions or misstating credit exposure because trade data was input incorrectly. Further, operational errors and inefficiencies can harm an FHLBank's reputation that might result in a loss of business.

Organizational Considerations in Managing Operational Risk

The function of an operations department is to process transactions, record contracts, and reconcile transactions and databases. A properly functioning operations department will help ensure the integrity of financial information and minimize operations, settlement, and legal risks. The operations area should provide the necessary checks to detect unauthorized trades.

Typically, the dealing/risk-taking functions are referred to as the "front office" and the processing and recording/reporting areas are referred to as the "back office." In some FHLBanks, a "middle office" helps to reconcile systems, monitor positions and revenues, and perform related activities. FHLBanks create middle offices to be able to calculate and verify profits and losses, as well as position risk. Like the back office, the middle office should operate independently of the risk-taking environment.

At FHLBanks for which establishing a separate risk control unit is not economical, the back office will generally be responsible for much of the risk control. This may include exposure/position reporting, monitoring of credit and price limits, and profit and loss reporting. In any event, it is essential that the FHLBank's recording/ reporting function is independent of the risk-taking function.

Operational risk is very difficult to quantify. The ability to control this risk depends on accurate transaction updates to all systems, such as trading, settlement, credit, and general ledger. Back-office personnel who are responsible for accounting records, confirmations, reconciliation and settlement, must maintain a reporting line that is independent of front-office personnel. On-line credit systems should calculate aggregate exposure globally with credit exposure and credit usage information updated as soon as deals are transacted. Procedures should be established to segregate duties among persons responsible for:

making investment and credit decisions; confirmations; recordkeeping; reconciliations; and disbursing and receiving funds.

FHLBanks that transact large volumes of trades should monitor the quality and efficiency of operations against quantifiable performance measures. Examples of such measures include the number of transactions processed per employee and overtime hours worked. Other examples of performance measures include: the volume of disputed, unconfirmed, or failed trades; reconciling items; and documentation exceptions. Timeframes for resolving discrepancies should be documented, evaluated, and regularly reported to senior management.

Policies and Procedures

Policies and procedures are the framework for managing operational risk. FHLBanks should insure that operating policies and procedures are developed and regularly updated. Procedures manuals can take different forms, but their detail should be commensurate with the nature of derivative activities. Policies and procedures for derivatives activities need not be stand-alone documents, but rather can be incorporated into other applicable policies such as operations guidance on interest rate risk, investment securities, and dealing activities. The documents should guide employees through the range of tasks performed and should contain guidance on relevant areas of trade processing, account valuations, reconciliations and documentation.

The following issues should be addressed in policies and procedures:

Trade Capture

The front office conducts a transaction over the phone, through a broker, or through an electronic matching system. Phone conversations should be captured on recorded lines in the event of disputes between the counterparties at a later date. After the transaction is executed, staff should immediately input trade data into the trading system (or write a ticket to be entered into an FHLBank's operations system). Information on transactions conducted over electronic dealing systems can flow electronically to update relevant reports and databases. All trades should be entered promptly so that all systems can be updated, including credit, intra-day P&L, risk positions, confirmation processing, settlement, and general ledger.

Trade information includes trade date, time of trade, settlement date, counterparty, financial instrument traded and amount transacted, price or rate, and netting instructions. Settlement instructions sometimes accompany this information. The trading system uses this information to update position and P&L reports or on-line systems. Information captured by trading system may also flow into the credit system so that settlement and presettlement exposures can be updated.

Ideally, the front-office system should have one-time data capture for transactions to maximize operational efficiency. That is, after the trade is executed, the system should automatically generate accounting entries, confirmations, update trader positions, credit risk exposure reports, and other relevant databases. One-time data capture can significantly minimize the possibility of subsequent data entry errors.

Confirmation Process

The purpose of the confirmation process is to verify that each derivative counterparty agrees to the terms of the trade. For each trade, a confirmation is issued by the FHLBank, and the counterparty either issues its own confirmation or affirms the FHLBank's confirmation. To reduce the likelihood of fraud or human error, this confirmation process must be conducted independently of the risk-taking unit.

To minimize risk, an FHLBank should make every effort to send confirmations as soon as possible after deals are executed and no later than the end of the business day. Inefficient confirmation issuance and receipt make it difficult to detect errors that may lead to problems in P&L reconciliation and position valuation.

The method of confirmation varies depending on the type of counterparty, derivative traded, and the method of settlement. Ideally, confirmations are exchanged electronically with the counterparty. Telephone confirmations are frequently conducted in the absence of electronic notification. Oral confirmations should be completed with designated individuals at the counterparty, exclusive of the trading function. Although telephone confirmations can help to reduce trade discrepancies, they are no substitute for physical confirmations. Except when contracts have very short maturities, it is poor practice to rely solely on telephone verifications. Errors may be made in interpreting terminology used over the telephone. In addition, certain jurisdictions only recognize physical confirmations for litigation purposes.

Unconfirmed and Disputed Trades

All incoming confirmations should be sent to a department that is independent of the risk-taking unit. Incoming information should be compared with the outgoing confirmation and any disputes carefully researched. Disputes or unconfirmed trades should be brought immediately to the attention of the operations manager and regularly reported to a senior operations officer.

An FHLBank should adopt standard procedures for addressing disputes and unconfirmed trades. Documentation should include the key financial terms of the transaction, indicate the disputed item, and summarize the resolution. The counterparty should receive notice of the final disposition of the trade and an adequate audit trail of the notice should be on file in the back office. Risk-taking and sales personnel should be notified of disputed or unconfirmed deals.

Netting

Netting is an agreement between counterparties to offset positions or obligations. Payment or settlement netting is a bilateral agreement intended to reduce settlement risk and is used to net payments payable between parties on particular date, in the same currency, under the same transaction or a specified group of transactions. Payment netting occurs throughout the life of a master agreement. Payment netting reduces credit and transaction risk by allowing the FHLBank to make or receive one payment instead of settling multiple transactions individually. FHLBanks can reduce credit and transaction exposure by using multilateral netting arrangements. Multilateral netting is designed to extend the benefits of bilateral netting to cover contracts with a group of counterparties.

Close-out (or default) netting arrangements involve netting the positive and negative current replacement values (mark-to-market) with respect to the nondefaulting party for each transaction under the agreement to a single sum, either positive or negative. If the sum of the netting is positive, then the defaulting counterparty owes that sum to the nondefaulting counterparty. If that amount is negative, the nondefaulting counterparty would pay that amount to the other party, provided no "walkaway" provisions exist.

Despite the advantages of netting arrangements, their use presents operational complexities and is mainly confined to the largest FHLBanks and counterparties. FHLBanks cite costs and lack of operational capacity, as well as legal uncertainties, as barriers to the greater use of netting arrangements. FHLBanks performing netting should ensure that they have the systems to accurately and timely calculate net payments. Correct calculations of netted payments are important to preserve counterparty relationships and avoid costly errors. Some FHLBanks use payment netting services such as FXNET, SWIFT, and VALUNET for calculations. These on-line systems allow counterparties to communicate directly with each other. Some pairs of FHLBanks have set up bilateral netting arrangements on their own using standardized netting contracts.

Management should confirm that operational procedures ensure that netting is carried out as contractually obligated between an FHLBank and its counterparties. Operations personnel should ensure that netted trades are reflected in trade capture systems and credit systems so that netting is successfully executed. The operational procedures should include any necessary cut-off times, settlement instructions, and the method of confirmation/affirmation and should be supported by the documentation of the counterparty.

Settlement Process

Settlement is the process through which trades are cleared by the payment/receipt of currency, securities, or cash flows on periodic payment dates and the date of final settlement. The settlement of derivative transactions can involve various international and domestic payment system networks.

By separating the duties of operations staff members, an FHLBank asserts control over the settlement process. Like other operations functions, the settlement process should be controlled through procedures directing the payment/receipt of funds. Specifically, operations procedures should address regular terms of settlement, exception processes, and the reporting of stale dated or unusually large unsettled transactions. The person(s) responsible for the release of funds should be independent of the confirmation process and transaction processing that could allow access to the payment process. Such sensitive areas include, for instance, access to standardized settlement instructions.

Reconciliations

To ensure that data has been accurately captured, critical data points and reports should be promptly reconciled. The person who reconciles accounts must be independent of the person who initiates the transaction or inputs transaction data. The general ledger should be reconciled with front and back systems each day. Front and back office P&L and position reports should also be reconciled each day. Regulatory reports should be periodically reconciled to the general ledger. Reconcilement discrepancies should be investigated and resolved as soon as possible. Significant discrepancies should be brought to the attention of senior management.

Brokers' Commissions and Fees

The back office should review brokers' statements, reconcile charges to FHLBank estimates and the general ledger, check commissions, and initiate payment. Brokers should be approved independently of the risk-takers. The back office should monitor brokerage activity to ensure that it is conducted with only approved brokers and that trades are distributed to a reasonable number of brokers. Unusual trends or charges should be brought to the attention of back office management and reviewed with appropriate senior personnel.

Documentation and Record-Keeping

Transaction documentation for derivative instruments often requires written confirmation of trades, contract terms, legal authorities, and other matters. Many of the terms of the transactions are stipulated in master agreements and other legal documents. Maintaining proper documentation and ensuring proper completion and receipt is often the responsibility of the operations or credit functions. FHLBanks should establish processes such as checklist or tickler files to ensure that derivative transactions, like all other risk-taking transactions, are properly documented. These processes should monitor and control receipt of documents. FHLBanks should establish thresholds limiting future business with counterparties failing to provide required documentation. Proper control over derivative documentation requires a process that quickly identifies and resolves documentation exceptions. The role of legal counsel in the documentation process is discussed later in this section.

Revaluation Approaches and Reserves

Both the risk control and audit functions should ensure that position valuations are generated from independent sources. Accurate values are the key to the generation of reliable reports on risk levels, profitability, and trends. Ideally, much of the valuation process employs valuation model algorithms or electronic data feeds from wire services, with little manual intervention. When reliable revaluation models or data feeds are not available, as is the case with some illiquid or highly customized products, operations personnel or other independent personnel should obtain values from dealers or use approved mathematical techniques to derive values.

The process through which positions are marked-to-market should be specified in policies and procedures. Controls should be implemented that ensure proper segregation of duties between risk-takers and control personnel, including the independent input and verification of market rates. In addition, controls should provide for consistent use of pricing methods and assumptions about pricing factors, such as volatility, to ensure accurate financial reporting and consistent evaluations of price risk.

The approach FHLBanks use to value their derivative portfolios will depend on a variety of factors including the liquidity and complexity of the contracts and the sophistication of their valuation and accounting systems. Regardless of the valuation method used, management should ensure that policies and procedures are established that support their valuation. For risk management purposes, FHLBanks should independently revalue derivative positions at least once a month and should possess the ability to obtain reliable market values daily if warranted by market conditions.

In obtaining external valuations, the requirements of the valuation should be specified, for example: mid, bid, offer, indication, and firm. In addition, when external valuations are received they should be considered in light of the relationship with the party supplying them and, in particular, whether they include factors that may make them inappropriate, for example, obtaining valuations from the originating dealer.

Information Technology

Although systems and modeling technology supports a derivatives business, technology can also pose significant risks.

The sophistication of systems technology should be commensurate with the character and complexity of the derivatives activity. In assessing risk, management and the board of directors should consider how well the management information system functions, rather than its technical specifications. The system should serve the needs of applicable users, including senior management, risk control units, front office, back office, financial reporting, and internal audit. For large systems, the FHLBank should have flow charts or other documentation that show data flow from input through reporting.

An important aspect in the evaluation of information technology is how well different systems interface. Interface is usually accomplished using emulators that communicate from one application to another. FHLBanks relying on a single database may have stronger controls on data integrity than those with multiple databases and operating systems. However, it is rare to find a single automated system that handles data entry and all processing and control functions relevant to derivative instruments. The systems used may be a combination of systems purchased from vendors, applications developed in-house, and legacy systems.

Incompatible systems can result in logistical obstacles because deal capture, data entry, and report generation will require multiple keying of data. Accordingly, controls and reconciliations that minimize the potential for corrupting data should be used when consolidating data obtained from multiple sources. If independent databases are used to support subsidiary systems, reconciliation controls should be in place at each point that data files come together. Regardless of how an FHLBank combines automated systems and manual processes, management should ensure that appropriate validation processes protect data integrity.

Periodic reviews and planning

Operations and support systems should receive periodic reviews to ensure that capacity, staffing, and the internal control environment support current and planned derivative activity. These reviews can be performed as a part of the annual budgeting and planning process, but should also be conducted as activity and plans change throughout the year.

Other Operational Risk Considerations

The enforceability of many derivative contracts in the event of counterparty insolvency has not been tested in the courts in all jurisdictions. Therefore, legal counsel should review applicable documents before such transactions are executed. Counsel should be familiar with the economic substance of the transaction, the laws of the jurisdictions in which the parties reside, and laws governing the market in which the instrument was traded. All non-standard documents or changes to standard contract documents should be reviewed by counsel.

The use of standard industry contracts and addendums, such as the ISDA master agreement, minimizes the need for legal review, and for every transaction there should be an ISDA agreement if there is not a non-standard contract. FHLBanks should ensure derivative agreements are current to ensure conflicts related to derivative transactions can be resolved and agreements remain enforceable.

There are various methods by which an FHLBank may reasonably satisfy itself that a counterparty has the legal capacity to engage in derivatives transactions. For example, for governmental entities or for certain clients in regulated industries, an FHLBank should review relevant statutes or regulations delineating the powers of the entity. In

other situations, an FHLBank may need to examine the constitutive documents and other relevant materials of the counterparty; for example, for mutual funds, an FHLBank should at least examine a fund's prospectus. In some cases, an FHLBank may be able to achieve a level of reasonable satisfaction only upon the receipt and analysis from counsel specifically addressing the issues of power and authority of the counterparty to enter into the transaction.

An FHLBank should also ensure that a counterparty is authorized to enter into the derivatives agreement with the FHLBank and that any official of the counterparty who executes the derivative agreement on the counterparty's behalf is authorized to do so. Such authority should be evidenced by appropriate corporate resolutions, delegations of authority and certificates of incumbency. Additionally, FHLBanks should ensure that transactions are adequately documented. If adequate documentation of transactions is not obtained, enforcement of the transactions may be precluded under the relevant state law statute of frauds, which may require the existence of a written agreement for enforcement of a contract.

Credit Enhancements

A FHLBank should ensure that its rights with respect to any cash, securities, or other property pledged to the FHLBank by a counterparty to margin, collateralize, or guarantee a derivative contract are enforceable and exercisable and can be used upon the default of the counterparty to offset losses. To be reasonably sure that the pledged assets will be available upon default, the FHLBank must have both access to, and the legal right to use the assets. For example, to establish reasonable access, the counterparty should be required to deliver pledged assets directly to the FHLBank or to an independent escrow agent. FHLBank counsel should give an opinion on whether the contract that governs the pledged assets is legally enforceable.

Strategic Planning

The management of operational risk related to the use of derivatives not only involves the development of the strategic plan, but also focuses on how plans, systems, and implementation affect the value of the institution. It includes analyses of external factors affecting the FHLBank's strategic direction and analyses of the success of past business strategies.

An FHLBank's derivative activities should be part of the FHLBank's overall business strategy, which has been endorsed by the board of directors. This strategy may be articulated within policies governing other activities or documented separately. Strategy statements should include the following:

a) Scope of activities.
b) Consistency with FHLBank's overall business strategy.
c) Market assessment:

i. Supply/demand.
ii. Competitive factors.
iii. Niche or role and anticipated level of activity.
iv. Target member/counterparties.

d) Projected risk/reward payoff.
e) Business evaluation and performance benchmarks.
f) Personnel and systems needs.

Business strategies should be communicated to appropriate levels within the FHLBank to ensure consistent understanding and implementation.

Reputation

Management of operational risk includes ensuring the FHLBank proactively avoids activity which would adversely affect its reputation in the marketplace. Senior management should adopt a code of conduct that addresses such areas as conflicts of interest, member confidentiality, trade practices, appropriateness, and illegal or improper transactions or payments. Management should encourage compliance with policies through employee affirmations, standardized disclosures, and appropriate testing processes. The administration of prompt and consistent disciplinary action for infractions helps to foster a strong compliance culture. Senior management should continually assess the compatibility of FHLBank activities and employee compensation programs with the code of conduct.

Furthermore, the overall financial condition of the FHLBank could affect the ability to enter into derivative transactions. FHLBanks whose overall financial condition is weak or deteriorating could find that counterparties require a premium to accept additional risk.

5) Financial Condition and Performance

In developing guidelines for derivatives use, FHLBanks should consider the possibility of losing access to one or more markets, either because of concerns about their own creditworthiness, the creditworthiness of a major counterparty, or because of generally stressful market conditions. At such times, the FHLBank may have less flexibility in managing its market and credit risks. FHLBanks that dynamically hedge their positions require constant access to financial markets, and that need may increase in times of market stress. An FHLBank's liquidity plan should consider its ability to access alternative markets, such as futures or cash markets, or to provide sufficient collateral or other credit enhancements in order to continue executing derivative transactions under a broad range of scenarios.

Risk management systems for liquidity are intertwined with those used in the management of market risk. Consideration of market depth and the cash flow characteristics of particular instruments are critical in the establishment of risk limits and construction of portfolio stress tests. The management of these risks is not conducted in

isolation. As such, the examination of risk management systems for all applicable risks should be conducted concurrently.

Managers responsible for derivatives and funding activities must regularly communicate market conditions to senior management. In turn, senior management must ensure that personnel are aware of any strategies or events that could affect market perception of the FHLBank. Well-developed lines of communication, whether formal or informal, should be established between derivative managers and funding managers.

Early Termination Agreements

The use of early termination agreements has grown in recent years as market participants have sought avenues to reduce counterparty credit exposure. However, the use of these agreements is not without potential drawbacks. Although obtaining an early termination agreement from a counterparty can reduce an FHLBank's credit risk, providing a counterparty with an early termination agreement can increase operational, price, and interest rate risk. Early terminations may be triggered when the FHLBank can least afford the liquidity drain and the accompanying increase in price and interest rate risk (as trading or balance sheet hedge transactions are terminated, creating open positions). Management should enter into these agreements on a limited basis and only after careful consideration of their impact on price risk exposure and liquidity adequacy. The exposure and effects upon liquidity resulting from such agreements should be tracked and fully incorporated into liquidity planning. In addition, FHLBank policy should clearly define the circumstances, if any, under which management will honor a request for early termination when not contractually obligated.

FHLBanks often enter into derivative transactions with early termination agreements which mirror options which the FHLBank may exercise on a related asset or liability. In so doing, the FHLBank is eliminating exposure to the counterparty's ability to execute its option.

Examination Guidance

A work program for Derivatives accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage related to the management of derivative transactions.

1) Organizational Structure

a) Determine key personnel and reporting lines. Evaluate the quality of key staff. Determine whether management is technically qualified and capable of properly

engaging in the derivatives activity transacted by the FHLBank by reviewing the biographies of managers of units responsible for derivative products and job descriptions for key positions.

b) Review staffing levels, educational background, and work experience of the staff responsible for carrying-out the FHLBank's day-to-day derivatives transactions. Determine whether the FHLBank has sufficient and qualified staff to accommodate present and projected volumes and types of derivative transactions.

c) Review compensation plans, including incentive components, for derivatives staff, such as traders, risk control, operations. Ensure that such plans:

   i. Are designed to recruit, develop, and retain appropriate talent.
   ii. Do not encourage employees to take risk that is incompatible with the FHLBank's or member's risk appetite or prevailing rules or regulations.
   iii. Are consistent with the long-term strategic goals of the FHLBank.
   iv. Do not encourage trade practices that might damage the reputation of the FHLBank.

d) Determine how the FHLBank communicates interest rate risk exposure to appropriate levels within the organization. The formality and frequency of reporting should be directly related to the level of derivative activities and risk exposure.

e) Review the flow chart of front, middle, and back office systems configuration and identify important risk points. Review the policies and procedures governing management information systems applicable to these areas. Determine the adequacy of the segregation of duties. Assess the risk of errors and omissions by determining the degree to which various systems interface and the level of manual intervention required.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

a) Determine the nature of the FHLBank's derivative activities. Discuss with management the FHLBank's strategies, objectives, and plans regarding derivatives and how they were developed. Determine what management is attempting to accomplish by using derivatives and identify changes in the use of derivatives since the previous examination.

b) Review significant changes since the previous examination with respect to:

   i. Management of the FHLBank and key personnel involved in the derivatives management function.
   ii. Products offered by the FHLBank and activities engaged in by the FHLBank.

iii. Overall philosophy and strategy of the FHLBank.
iv. The FHLBank's overall risk profile.
v. Changes to policies and procedures related to the FHLBank's derivatives management practices.
vi. Front, middle and back office operations and systems.
vii. New system or model upgrades implemented and systems.
viii. The impact of any changes in market conditions on the FHLBank's use of derivative transactions.

c) Conclude as to changes in the use of derivatives, changes in the overall volume of derivative transactions, or changes in the types of derivative transactions entered into the FHLBank. Evaluate the reason for the changes and the appropriateness of the changes to the FHLBank's overall risk management practices.

d) Determine the extent and effectiveness of senior management and board of director's oversight over derivative activities. Review abstracted minutes of the board of directors meetings and other appropriate committee minutes such as ALCO, audit, and new products. Ensure that proper authorization has been provided to trading personnel and treasury management. Determine the limits and restrictions on delegated authorities.

e) Review information provided to the board of directors and senior management. Determine whether the board and senior management have been provided with material sufficient to fully describe the FHLBank's financial derivative activities. This documentation should include:

i. A clear statement of derivatives strategy and performance relative to objectives, including a periodic analysis of risk-adjusted return.
ii. Ongoing educational material and information regarding major activities.
iii. Reports indicating compliance with policies and law, including Finance Board regulation.
iv. Internal and external audit reports.
v. Reports indicating level of risk.
vi. Reports attesting to the validation/quality of risk measurement systems.
vii. Reports indicating the sufficiency of internal controls.
viii. Reports detailing performance of trading/dealing activity.
ix. Reports indicating the performance of positioning or hedging activity.
x. Reports detailing interest rate sensitivity and the impact of derivative transactions on earnings and capital.
xi. Periodic reports showing the appreciation and depreciation of derivative transactions.
xii. Reports indicating level and adequacy of liquidity reserves relative to risk exposures and regulatory requirements.
xiii. Other pertinent information.

f) Determine how the board of directors holds management accountable for

performance. Consider:

i. The consistency of performance against strategic and financial objectives over time.
ii. Internal/external audit and regulatory examination results.
iii. The level of compliance with policies and procedures.
iv. The quality and timeliness of communication to the board.

g) Evaluate the overall quality of senior management and board of directors oversight with respect to derivatives activity. Assess the:

i. Adequacy of policies and procedures, including internal controls.
ii. Consistency of management's derivatives activities with board of directors and ALCO business strategies.
iii. Quality of information provided to the board of directors, ALCO, and senior management on derivative activities.
iv. Compliance with internal policies, laws, regulations, and supervisory guidance.
v. Effectiveness of the risk management process.
vi. Adequacy of the skills of key personnel, staffing levels, and turnover.
vii. Reasonableness of employee compensation programs.
viii. Effectiveness of the audit process.
ix. Oversight of management activities and strategies.

h) Conclude as to the appropriateness of risk parameters established related to derivative transactions via the FHLBank's policies and procedures. Determine how the FHLBank makes use of derivative transactions to assist in the mitigation of risks.

i) Review and conclude as to any specific limitations in place for derivative transaction usage.

i. Are limitations consistent with articulated strategy?
ii. Are limits reasonable in light of recent profit and loss experience and budget expectations?
iii. Do limits adequately control exposures to identified interest rate risk in normal and volatile market conditions?

3) Key FHLBank policies and procedures

a) Identify all policies related to derivatives management. Are appropriate limitations regarding the use of derivatives in existence? Are the types of derivative transactions which may be transacted clearly identified?

b) Do policies incorporate limits regarding the various risks and effects on financial condition and performance posed by derivative transactions? Such policies

should include discussions on credit, operational and market risks as well as the adequacy of liquidity reserves relative to risk exposures and regulatory requirements.

c) In coordination with other examiners reviewing market risk, evaluate the derivative policy direction and limitations in the context of interest rate risk limitations.

d) Ensure that policies require appropriate legal review of all relevant activities including new products, counterparty or agreement forms, and netting arrangements.

4) Risk assessment under Part 917 and internal control evaluation

a) Review the FHLBank's risk assessment related to derivative transactions and the hedging process. Conclude as to the adequacy of identifying potential risks to the institution. Determine if mitigating controls are adequate.

b) Evaluate whether staff assigned to complete an assessment of mitigating internal controls has the expertise to undertake the task.

5) Testing performed by external audit, internal audit or consultants

a) Review the adequacy of the audit scope and frequency of the audits of derivative activities. At a minimum, the audit should accomplish the following:

i. Periodic review of the adequacy of all FHLBank policies and procedures.
ii. Appraise the adequacy of accounting, operating, compliance, and risk management controls related to derivatives.
iii. Test compliance with policies, including risk limits.
iv. Evaluate the effectiveness and independence of the risk management function.
v. Verify the accuracy of risk measurement and revaluation methodologies, if not performed by another independent party.
vi. Ensure the performance of an independent validation of the accuracy of pricing, revaluation, and risk measurement methodologies (including spreadsheet applications), with emphasis on new products.
vii. Test the reliability and timeliness of information reported to senior management and the board.
viii. Evaluate the adequacy of internal controls and the testing of operations functions including: Segregation of duties; trade entry and transaction documentation; confirmations; settlement; cash management; revaluations; accounting treatment; independence and timeliness of the reconciliation processes.
ix. Determine the adequacy of data processing systems and software.
x. Assess unusual situations such as off-market deals, and unusual changes in

volume.

xi. Review brokerage commissions and fees.

xii. Test trader compensation calculations.

b) In conjunction with the examiner evaluating the FHLBank's internal audit function, conclude on the adequacy of audit size staff and qualifications relative to the FHLBank's derivative activities.

c) Review the findings of audits performed since the previous examination. Consider material or deficiencies identified.

d) Conclude on the adequacy of management's steps to corrected weaknesses identified by the internal audits completed.

6) Information technology and controls

a) In coordination with the Finance Board Risk Modeling Division (RMD), evaluate the FHLBank's method of valuing derivative contracts:

i. If outside sources are used, determine whether the FHLBank obtains several quotes, independent of the originating dealer.

ii. If the FHLBank revalues the position internally, determine whether the revaluation methodology is consistent with the volatility and complexity of the instruments.

iii. Ensure the values are obtained independent of the risk-taker.

iv. Ensure the revaluation is performed with reasonable frequency. FHLBanks should formally revalue positions at least monthly and should be able to obtain daily revaluations.

b) In coordination with RMD staff and information technology (IT) examiners, review current systems capabilities and planned upgrades or enhancements.

c) In coordination with IT examination staff, evaluate the various systems related to entering into and recording derivative transactions by the front, back and middle office. Determine if controls are in place to ensure that staff involved in executing the transaction are not involved in recording the transaction and may not modify such recording in the future.

d) In coordination with IT examination staff, evaluate contingency plans in place to provide contingency systems and operations support in case of a natural disaster or systems failure.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Review the impact of derivatives on earnings. Obtain an overview of performance by derivatives portfolio used in trading (economic or P&L) or risk management activity (yield enhancement or hedge effectiveness). Ascertain the significance of derivatives revenue.

b) Determine that the board of directors, through the ALCO or other appropriate committee, has established a risk control function. Review the oversight responsibility and staffing of the risk control function. Determine that the risk control function is:

   i. Independent of persons directly responsible for entering into derivative transactions.
   ii. Fully staffed with qualified individuals.
   iii. Fully supported by the board of directors and senior management.
   iv. Provided with the technical and financial resources, organizational visibility, and authority necessary to ensure effective oversight.
   v. Reports independently from those individuals directly responsible for trading decisions and trading management.

c) Review budget and budget variance reports for the past 12 months focusing on earnings. Discuss significant budget variances with management and conclude on the impact of derivative transactions to mitigate risks to the FHLBank's earnings performance.

d) Assess changes in the use of derivative transactions. Evaluate the potential impact of such changes to the institution. Has FHLBank management appropriately identified risks related to any new type of derivative activities and reported the risks to the board of directors.

e) In coordination with the examiner or FHLBank analyst reviewing Financial Condition and Performance, evaluate the effect of the FHLBank's derivatives transactions upon the adequacy of the institution's liquidity reserves relative to its risk exposures and regulatory requirements.

8) Testing

a) Select a sample of derivative transactions initiated since the previous examination. Determine whether the strategy behind the transaction is well documented and consistent with the FHLBank's overall business and strategic plans. For hedging transactions, determine that standards for hedge effectiveness have been established. Coordinate with the examiner reviewing Financial Reporting Operations to determine the adequacy of hedge effectiveness documentation.

b) Select a sample of derivative agreements. Determine if the agreements are current and appropriately executed. Review all derivative agreements executed with new counterparties since the previous examination.

c) Select a new derivatives product recently transacted. When applicable, test compliance with the FHLBank's new-product policy. Determine that the new product definition adequately ensures reasonable new product discipline.

d) Determine any adverse impact to the credit rating and market acceptance of the FHLBank as a counterparty. If the FHLBank recently experienced a rating downgrade, evaluate the impact.

e) Evaluate the adequacy of credit risk management policies and procedures. Do FHLBank personnel complete an on-going evaluation of counterparty risk and exposure? Does the FHLBank rely on NRSRO Ratings exclusively? Reliance on outside parties to assess credit risk of counterparties could result in the failure to identify potential concerns.

f) Review credit risk management reports used by senior and line management with respect to derivatives and evaluate their comprehensiveness.

g) Determine whether the credit risk measurement methodology has been independently validated prior to its first use and at least annually thereafter, or as market conditions warrant. Determine whether:

   i. Independent of persons directly responsible for entering into derivative transactions.
   ii. The validation is performed by a competent party independent of the business line using or generating the model.
   iii. The validation process has been adequately documented.
   iv. The validation includes an evaluation of routines to convert underlying position data to the format required by the system.
   v. Management has adequately responded to validation results.

h) Evaluate the adequacy of the credit risk measurement method used to calculate presettlement credit exposure. Through review of model information and discussions with management determine that:

   i. The system produces a reasonable estimate of loan-equivalent exposure including the current exposure (mark-to-market) plus an estimate of the potential change in value over the remaining life of the contract (add-on).
   ii. The credit risk add-on calculation is: statistically derived from market factors; consistent with the probability modeling used to evaluate price of the contract as a time horizon; and based on peak exposure.
   iii. The frequency of credit calculations is adequate.
   iv. The FHLBank maintains documentation to support that the assumptions

used in the credit risk exposure calculation are updated as appropriate.

i) Obtain and review reports related to the FHLBank's netting agreements. Conclude on the adequacy of these reports.

j) Determine the extent to which management uses settlement, closeout, or multilateral netting arrangements:

   i. Determine whether counterparty payments or credit exposures are netted for purposes of computing periodic settlement ore reporting aggregate credit exposure.
   ii. Determine whether the FHLBank's operational systems are adequate to correctly identify the amounts for netting with a counterparty.
   iii. Ensure management ensures a signed master agreement is on file before netting is performed.
   iv. Select a sample of counterparties where credit exposure is netted. Determine if calculations are correct and in accordance with the agreement executed with the counterparty.

k) Evaluate the FHLBank's method for resolving valuation disputes with counterparties. Are differences appropriately resolved? What action has the FHLBank taken in response to counterparties for which valuation differences have recurred? Are conversations of transactions with counterparties recorded?

l) Determine how the FHLBank communicates credit risk exposure to appropriate levels within the organization. Determine whether the reports are generated independently and are provided to the various levels of management and the board of directors. The formality and frequency of reporting should be directly related to the level of derivative activities and risk exposure.

m) Select a sample of counterparties from the list of derivative counterparties broken out by dealer and end-user/counterparty. Review credit files for the sample counterparties. Determine whether:

   i. Files are current and contain sufficient information to document an informed credit decision, including purpose, source of repayment, and collateral.
   ii. Credit evaluations aggregate limits for derivatives with the limits established for other activities, including commercial lending.
   iii. Risk ratings are accurate and current.
   iv. Management completes its own assessment of the counterparty's credit risk and incorporates the impact of the counterparty's use of derivatives.

n) Obtain a list of recent credit limit and policy exceptions. Determine whether the exceptions were identified and approved. Determine whether the basis and timeliness of approval was reasonable and within the approver's authority.

Evaluate the level and nature of the exceptions.

o) Determine how the credit risk control function notifies traders of deteriorating trends in a counterparty's financial condition or changes in limits. Also determine how traders communicate their knowledge of counterparties' deteriorating financial condition to the credit risk control function.

p) Determine whether there have been any recent counterparty credit downgrades or deteriorations affecting the FHLBank's trading activities. If so, determine the FHLBank's response.

q) In conjunction with the examiner reviewing Financial Reporting Operations, evaluate the appropriateness of accounting for derivative transactions.

r) Determine how the FHLBank identifies and reports past-due counterparty payments.

s) Determine whether the FHLBank maintains credit reserves for counterparty exposures apart from the allowance for loan losses. Determine whether the method for calculating the reserves is reasonable.

t) Determine whether executive management and credit risk management have assessed credit risk exposure arising from relationships with undisclosed counterparties. If so, evaluate their assessment and management's response.

u) From the counterparty concentration report, evaluate the FHLBank's exposure to external factors, such as countries, regions, and industries, and internal factors, such as exposure, tenors, and risk ratings. Discuss with management the FHLBank's strategy for managing concentration risk and evaluate its reasonableness.

v) Determine that business managers have developed contingency plans that describe actions to be taken in times of market disruption and major credit deteriorations to minimize losses and potential damage to the institution's market-making reputation.

w) Evaluate the adequacy of transaction risk management policies and procedures for derivative activities.

x) Review transaction risk monitoring reports used by management.

y) Determine the responsibilities of the front, middle (if applicable), and back office in transaction processing.

z) To gain an understanding of the manner in which trades are processed, follow an

actual trade ticket through the processing system, from trader's verbal commitment to final booking. Consider the following:

i. The length of time from a dealer's verbal commitment to entry of the trade into the accounting system.
ii. Whether the back office has a queuing mechanism to ensure all transactions are processed in a timely manner.
iii. Ensure that recording the transaction is completely independent of the traders. In the case of discrepancies, ensure that traders do not have the authority to make modifications.
iv. The capacity and ability of the systems and staff to handle present and projected future volumes and types of transactions.

aa) Determine if conversations with dealers and counterparties are recorded. Test a sample of transaction recordings. Ensure that the FHLBank's system of recording transaction negotiations is adequate to provide evidence in the event of a dispute related to the terms of a derivative transaction.

bb) Review operations exception reports for aging, failed trades, off-market trades, outstanding items, suspense items, and miscellaneous losses. Evaluate the level and nature of exceptions. Determine whether appropriate approval for exceptions was obtained when warranted.

cc) Review the settlement process and controls to ensure that they adequately limit settlement risk. Determine the adequacy of internal controls related to the settlement process.

dd) Discuss with operations management any unconfirmed or disputed trades that have occurred over the past 12 months. Evaluate the source and nature of the discrepancies and disputes and their ultimate resolution. Review the adequacy of documentation.

ee) Review a recent valuation report. Research significant differences between the FHLBank's and counterparty's values.

ff) Determine whether the valuation process is performed independently of the risk-takers and with appropriate frequency.

gg) For illiquid products for which independent quotes are not obtained, ask the FHLBank to provide documentation supporting how the value was derived.

hh) If the FHLBank uses mid-market valuations, determine the extent and nature of valuation adjustments (credit, administrative, close-out costs, funding/investing costs, or model errors) established at transaction inception. Determine whether the FHLBank justifies why certain adjustments listed above are not used. Determine whether adjustments are:

i. Reasonable and well supported.
ii. Clearly authorized in policies and procedures.
iii. Consistently applied.
iv. Periodically reviewed for reasonableness.

ii) Determine how discrepancies between front and back office comparisons are resolved. Select a sample from the larger discrepancies and determine the reason for each discrepancy and the final resolution.

jj) Review the reconciling process between general ledger and operational data bases, regulatory reports, and broker statements and between the front and back offices. Ensure that the person(s) who reconciles accounts does not also input transaction data. Determine:

i. The frequency and volume of reconciling items.
ii. The process for sign-off on reconciliation differences.
iii. Whether senior managers review large reconciliation differences.

kk) The content and frequency of reports will vary, but the FHLBank must be able to track errors and miscellaneous losses in sufficient detail to pinpoint the source of problems. Reports provided to senior management should be prepared independent of traders. The operations unit should generate management reports that reflect current status and trends for the following items:

i. Aging of documentation exceptions.
ii. Position reconcilements.
iii. Outstanding general ledger reconciling items.
iv. Failed trades.
v. After-hour and off-premise trades.
vi. Off-market trades.
vii. Aging of unconfirmed trades.
viii. Suspense items payable/receivable.
ix. Brokerage payments.

ll) Evaluate the quality of transaction risk management and the levels and trends in transaction risk exposure. Assess:

i. The adequacy of internal controls, including policies and procedures,
ii. Quality of information provided to senior management and the board of directors.
iii. Efficiency of trade processing.
iv. Compliance with policy.
v. Levels of unconfirmed and disputed trades.
vi. Adequacy of independence of the revaluation process.
vii. System capability and planned upgrades or enhancements.
viii. Adequacy of the disaster recovery plan.

mm) Ensure that the FHLBank requires legal opinions from all relevant jurisdictions addressing enforceability of a netting agreement before relying on the netting agreement to calculate and monitor credit exposure to the counterparty.

nn) Determine that the FHLBank adequately ensures that counterparties have the legal capacity to execute specific derivative transactions and that counterparty officers and staff entering into derivative agreements are duly authorized by the counterparty to do so.

oo) Determine that the FHLBank adequately documents its legal authority to engage in derivative transactions. If the FHLBank is required to notify the Finance Board and receive prior approval to engage in the activity, determine that such approval has been obtained.

pp) Review any legal exceptions. Evaluate the adequacy of tracking systems. Evaluate the source, nature, and level of exceptions.

qq) Evaluate the quality of compliance risk management and the levels and trends in compliance risk exposure. Assess:

i. Adequacy of internal controls, including policies and procedures.
ii. Adequacy of the legal review of all relevant documents.
iii. Adequacy of the compliance program.
iv. Level of legal documentation tracking exceptions.
v. Adequacy of legal documentation tracking systems.
vi. Pending litigation or counterparty complaints.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Derivatives
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the FHLBank's functional organizational structure related to the execution of derivative transactions. Conclude on the adequacy of the reporting structure in place. Assess the adequacy of staffing and technical expertise of individuals responsible for the various aspects of entering into derivative transactions. Determine whether the primary duties and responsibilities of staff are clearly and appropriately defined. Determine whether the segregation of duties for those individuals involved in executing, confirming, recording and monitoring derivative transactions is appropriate. Evaluate changes instituted since the previous examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances and the development of management policies established for the FHLBank's derivatives transactions, as well as oversight by the board of directors in this area. Evaluate the adequacy of senior management oversight and the risk management function. Conclude as to the adequacy of information provided to senior management and the board of directors.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to derivatives. Policies should establish clear parameters related to the overall level of interest rate risk and counterparty credit exposure the FHLBank is willing to assume. Determine how the FHLBank utilizes derivatives to comply with policy constraints.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the FHLBank's annual risk assessment completed for derivatives and hedging. Review the FHLBank's internal control assessment under SARBOX related to derivatives and hedging. Determine whether internal controls have been appropriately identified and conclude on the reasonableness of the FHLBank's determination of the adequacy of these controls.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls related to the FHLBank's participation in derivatives transactions.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by various departments for processing derivatives transactions.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes as well as key controls, including the level and direction of risk and the quality of risk management, for the derivatives management process. If applicable, conduct an assessment of any significant changes to the FHLBank's process of executing, recording and monitoring derivative transactions that have been implemented since the last examination or are being considered in the future that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. A selection of various derivative transactions should be tested. Conclude as to the adequacy of documentation, the assessment of risks by FHLBank staff and the appropriateness of the transactions. Determine if established internal controls have been adhered to appropriately.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of risk (low, moderate, high); the direction of risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

Sections 11(g), 11(h), and 16(a) of the FHLBank Act, Section 956 of the Finance Board regulations, and the Finance Board Financial Management Policy (FMP) establish the FHLBanks' investment authority. The entire FMP applies only to FHLBanks that have not yet converted to their new capital plans. Each FHLBank that has converted to its new capital plan has established its own Finance Board-approved risk management policy (RMP). Only the provisions of the FMP contained in Sections II.C.2., 3., 4., and 5., and Section V.C.5. apply to such FHLBanks. The FMP provides a framework within which the FHLBanks are allowed to implement financial management strategies that assist them in accomplishing their mission, and in generating income sufficient to meet their financial obligations in a safe, sound, and profitable manner.

Regulatory Environment

1) ***Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to investment portfolio management:***

   Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management and Section 917.6, Internal Control System, are pertinent.

   Section 932.9 of the Finance Board regulations addresses unsecured extensions of credit and limits to various counterparties. It also details measurement and reporting requirements for both on- and off-balance sheet exposures.

   Section 940.3 of the Finance Board regulations discusses allowable mission-related investments.

   Part 956 of the Finance Board regulations discusses allowable and prohibited investments.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of investment portfolio management are:

   Advisory Bulletin 98-10, dated December 8, 1998, which formalizes guidance to the FHLBanks on the minimum unsecured credit monitoring standards the FHLBanks are expected to apply.

   Advisory Bulletin 01-08, dated October 4, 2001, which establishes policy and procedures standards for identifying, comparing, reporting, and quantifying problem assets.

Advisory Bulletin 01-09, dated October 24, 2001, which reinforces the need for the FHLBanks to monitor unsecured credit positions, especially with respect to concentrations.

Advisory Bulletin 02-07, dated August 27, 2002, which establishes reporting standards for unsecured credit exposures.

Advisory Bulletin 05-08, dated August 25, 2005, which establishes regulatory expectations related to anti-predatory lending policies. This bulletin is pertinent to some private label mortgage-backed securities (MBS) investments.

Advisory Bulletin 07-01, dated April 12, 2007, which establishes regulatory expectations for the FHLBanks to adopt and implement policies and risk management practices that establish appropriate risk limits for, and appropriate mitigation of, credit exposure on nontraditional and subprime mortgage loans.

3) Financial Management Plan

Sections II.C.2., 3., 4. and 5. of the FMP establish the following limitations on authorized investments:

1) An FHLBank may enter into agreements to purchase MBS, collateralized mortgage obligations (CMOs), real estate mortgage investment conduits (REMICs), and eligible asset-backed securities so long as such purchases will not cause the aggregate book value of such securities held by the FHLBank to exceed 300 percent of the FHLBank's capital. An FHLBank may not increase its holdings of such securities in any one calendar quarter by more than 50 percent of its total capital at the beginning of that quarter.

2) The purchase of Interest Only or Principal Only stripped MBS, CMOs, REMICs, and eligible asset-backed securities are prohibited.

3) The purchase of residual interest or interest accrual classes of CMOs, REMICs, and eligible asset-backed securities is prohibited.

4) The purchase of fixed-rate MBS, CMOs, REMICs, and eligible asset-backed securities, or floating-rate MBS, CMOs, REMICs, and eligible asset-backed securities that on the trade date are at rates equal to their contractual cap, with average lives that vary more than six years under an assumed instantaneous interest rate change of 300 basis points, is prohibited.

<u>FHLBank Environment</u>

Given the regulatory environment within which the FHLBanks operate, their investment portfolios tend to be of higher credit quality and driven by mission-related activities. The

investment portfolios are normally divided between the money market portfolio and the term portfolio. The money market portfolio contains primarily short-term, highly-rated unsecured investments. These investments include the following: Federal funds sold, certificates of deposit, commercial paper, repurchase agreements, and short-term U.S. Treasury (Treasury or Treasuries) and Agency obligations. This portfolio is very liquid and comparatively low-yielding. The portfolio is used primarily to meet regulatory liquidity requirements and funds management needs. Management of the money market portfolio is normally a separate function under the FHLBanks' treasury function. These portfolios are transaction-intensive and require continual monitoring for credit events but have negligible interest rate risk.

The term portfolio is composed of GSE MBS, private label MBS and commercial MBS, state housing authority debentures, and longer-term Treasuries. These investments are also highly-rated, although the drivers for the high ratings can be different than those for the money market portfolio. In particular, the amount of collateral rather than quality of collateral for private label MBS and CMBS drives the ratings. This portfolio is liquid and comparatively higher-yielding. The portfolio is used primarily to generate earnings, but can also be used for other purposes, normally within a broad balance sheet management content. Management of the term portfolio is normally a separate function under the FHLBanks' treasury function. These portfolios require regular monitoring for performance and do contain interest rate risk.

Risks Associated with Investment Securities

An FHLBank's primary risks associated with investment securities and money market assets are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, measured, monitored, and controlled.
b) A sound risk management framework composed of policies and procedures, risk measurement and reporting systems, and independent oversight and control processes has not been developed and implemented.
c) Senior management has not adequately analyzed new products or activities, taking into account pricing, processing, accounting, legal, risk measurement, audit, and technology considerations.
d) Risk management, monitoring, and control functions are not sufficiently independent of the position-taking functions.
e) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.
f) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise to test the control environment.

2) Market Risk

The discussion of market risk will begin with those factors that impact the price sensitivity of a security and then proceed to outline measures of rate sensitivity, both for option-free securities and securities with options. Finally, this section will address portfolio sensitivity measures, risk control of portfolio sensitivity, and asset/liability management issues.

Factors in Interest Rate Sensitivity

The investment portfolio, which often contains longer-term, fixed-rate assets, is usually a significant source of interest rate risk for an FHLBank. From an interest rate risk standpoint, "sensitivity" refers to how much the price of a security changes when interest rates change. Regardless of the type of security, it is the variability of the value of the security's cash flow, caused by fluctuating interest rates and spreads relative to a benchmark such as Treasuries, that determines a security's price sensitivity. A security's interest rate, or price sensitivity, is primarily a function of:

1) Maturity;
2) Option features;
3) Coupon rate; and
4) Yield levels.

Maturity. For most securities, maturity is the most important determinant of price sensitivity. If a change in interest rates is the same across all maturities, a "parallel" interest rate shift, the price of a long-term security will change more than the price of a short-term one. For example, if interest rates rise 100 basis points, a 30-year, 5 percent coupon Treasury bond would lose nearly 14 percent of its value, while a two-year, 5 percent coupon Treasury note would lose less than 2 percent. Because money market assets mature within one year, they generally have the least price sensitivity.

Option features. Options can either increase or decrease a security's potential for price changes, depending upon the type of option and who owns it. A call option allows the issuer of the security to redeem the full amount of the obligation before its maturity date. Investors have sold, or are "short," the option on a callable bond. In return for allowing the issuer to call a bond prior to maturity, investors receive a higher yield.

It is helpful to consider securities with call options in two groups: amortizing and non-amortizing or "bullet" securities. An amortizing security is one that pays principal throughout its life, such as a mortgage security. A non-amortizing security is one that has only one principal payment. That payment may occur before maturity, and may exceed par value due to a call premium (for example, callable at a dollar price of 102 percent of par), but it does not pay principal throughout its life. Amortizing securities typically experience "partial calls" because, for example, some but not all borrowers may prepay their mortgages.

For a non-amortizing security, the call option limits price when rates fall. Investors are not willing to pay large premiums if the issuer can redeem the bonds prior to maturity. Many callable securities remain callable past the initial call date. For example, the issuer of a five-year bond callable in two years, often referred to as "five, non-call two", may typically call the bond at the end of two years, or on any coupon payment date thereafter, if the option is Bermudan. Investors need to understand all possible dates that issuers can call their bonds since the call dates will have a direct bearing on the price sensitivity of the security. These call options typically require the issuer to call the entire security.

If interest rates rise, however, the price sensitivity of non-amortizing callable bonds will ultimately approach the sensitivity of non-callable securities with the same final maturity. For example, the five, non-call two bond above initially will have the price sensitivity of a bond with a two-year final maturity. However, if interest rates continue to rise, the bond will eventually begin to depreciate like other securities with the same final maturity. Therefore, callable securities can lose value at an increasing rate as the security's effective maturity becomes longer.

Amortizing securities, such as mortgage securities, have similar performance characteristics. A mortgage borrower has the right to pay off, or "call," the debt before maturity. The mortgage lender therefore has sold a call option to the borrower. Since mortgage securities pass through cash flow from the underlying mortgage loans to investors, investors in mortgage securities have effectively sold call options to borrowers. The homeowners have the economic incentive to exercise these options and prepay when interest rates have fallen, allowing them to refinance and get new mortgages at lower interest rates. The prepayment option limits price appreciation for mortgage securities when interest rates fall.

When interest rates rise, amortizing securities may also lose value at an increasing rate, as their average lives extend. For example, a mortgage security may, at current interest rates, have an estimated average life of five years. Average life refers to the average length of time a dollar of principal remains outstanding. However, as rates rise and fewer homeowners prepay, the security may then have an average life of seven years. Its price sensitivity will consequently become similar to a seven-year security, rather than a five-year security.

It is helpful to consider amortizing securities into two separate groups: pass-through and pay-through or "structured" securities. In a pass-through security, investors get their pro rata share of principal and interest payments. If an investor owns 1% of the security's par value, it will receive 1% of the cash flow. The cash flow from the underlying mortgages "passes through" to investors.

In a pay-through, or "structured" security, a set of payment "rules" determines how and when investors receive principal cash flows from the underlying mortgages. For structured securities like CMOs, the "maturity effect", where the security loses value at an increasing rate, can be very significant. A lower-risk CMO tranche will have limited cash flow variability as rates change. A higher-risk CMO tranche will have significant cash flow variability as rates change.

The following table illustrates how the average life of two different CMO structures might change as rates change by 200 basis points.

Structure	Average Life: Unchanged Rates	Average Life: Rates Up 200 bps	Average Life: Rates Down 200 bps
Lower Risk	2.0 yrs	3.2 yrs	1.7 yrs
Higher Risk	2.0 yrs	19.7 yrs	0.2 yrs

A higher-risk CMO tranche could, for example, have an average life that changes from 2 years to 20 years with even a modest increase in interest rates. Higher risk refers here to the cash flow variability of the tranche, not its credit quality, although underwriters can create structured securities that combine higher average life sensitivity with lower credit quality.

The highest yields go to those tranches that, by design, exhibit the most volatile average lives. Such tranches receive excess principal cash when prepayments rise, and pay off early. When prepayments are slower, these tranches may not receive any principal cash flow at all. Such tranches protect or "support" other tranches in the CMO structure. These other, well-supported, tranches may have lower risk than the pass-through security from which they are created. Although there are partial calls in the underlying mortgages that make up the CMO, the payment rules of some CMO tranches can result in a complete call of the tranche as rates fall, making it similar to a non-amortizing security.

The risk-return profile of callable (non-amortizing) and prepayable (amortizing) securities is therefore not symmetrical. Investors in these securities have limited upside price potential. Investors are not willing to pay large premium prices for assets that can be called. Investors use the term "price compression" to refer to the inability of such securities to trade at prices significantly above par. However, these securities can have significant downside price potential. To compensate investors for this asymmetric and unfavorable risk profile, callable and prepayable securities must offer higher yields. The following table summarizes callable and prepayable securities:

Type	Cash Flow Priority	Sensitivity
Callable	Not applicable.	Limited price upside; can depreciate at an increasing rate when interest rates rise as effective maturity lengthens.
Amortizing: pass-through	Pro-rata. Examples: GNMA, FNMA & FHLMC mortgage pools.	Limited price upside; can depreciate at an increasing rate as effective maturity lengthens.
Amortizing: structured	Determined by payment rules. Examples: CMO tranches.	Depends upon security structure. Some tranches can have very high price

		and cash flow risk and others very low price and cash flow risk.

A put option allows the investor to return the bond, at a price of par, to the issuer prior to its stated maturity. Here, the investor owns the option. Investors will exercise this right when interest rates have risen, since they can reinvest the proceeds at higher available market yields. The put option thus limits price declines when rates rise, because the investor can redeem the bond at par on a specified date. When interest rates fall, however, the price of the security will rise like a bond without option features. Put bonds thus have very favorable risk-return profiles, and investors must accept lower yields for this favorable asymmetry.

Coupon rate: The coupon rate of a security also affects its price sensitivity. There is an inverse relationship between coupon and price sensitivity. Higher coupon securities have lower price sensitivity; lower coupon securities have higher price sensitivity. A security whose coupon rate exceeds the required market yield for a particular maturity is a "premium" security because its price exceeds par value. For example, a security with a coupon rate of 5.75 percent will have a price over par value if the security's yield in the market is 5.50 percent. A security whose coupon rate is below the required market yield is a "discount" security because its price is less than par value. The security with the 5.75 percent coupon trades at a discount when the required market yield is 6.25 percent. Discount securities have more price sensitivity than premium securities. The most discounted of all securities is a zero coupon bond. A zero coupon bond is a security that investors purchase at a discount and redeem for par value at maturity. It has no coupon cash flows. Its only cash flow is the return of par value at maturity. For any given maturity, a zero coupon bond will have the most price sensitivity.

The inverse relationship between coupon rate and price sensitivity results from the distribution of cash flows. Compared to a lower coupon bond, more of the total cash flow of a high coupon security will come from interest payments. Interest payments are received throughout the life of the bond, which means that, relative to a lower coupon bond, a higher coupon bond will have a higher proportion of its cash flow returned sooner. The earlier the cash flow occurs, the less price sensitive its cash flow is.

As discussed above, longer maturity cash flows pose more risk than shorter maturity ones. Since a zero coupon bond has only one cash flow, a par value redemption at maturity, it will have the most price sensitivity of bonds with the same maturity.

Yield Levels: Non-callable bonds have more price sensitivity when market yields are low than when market yields are high, because of the curved or "convex" nature of the relationship between price and yield. This relationship means that non-callable bonds rise in value at an increasing rate when interest rates fall; they decline in value at a decreasing rate when interest rates rise.

The following table summarizes the factors other than credit that affect the price sensitivity of investment assets:

Factor	Higher Sensitivity	Lower Sensitivity
Maturity	Long maturities	Short maturities
Options	Sale of call options: limited upside price gains; full downside price exposure	Purchased puts: limited downside price losses; full upside price potential
Coupon	Lower coupons	Higher coupons
Yield Levels	Low yields	High yields

Floating-Rate Securities

Investors often mistakenly assume that floating-rate securities have little price sensitivity risk. Features that can cause floating-rate securities to have higher price sensitivity include option features, long maturities, and credit risk.

Consider a security that has a coupon rate that floats off of the London Interbank Offered Rate (LIBOR). Such a security might pay a coupon rate of Libor plus 50 basis points. However, if there is a cap that limits the coupon to 7 percent, then when LIBOR reaches 6.50 percent, any further increases in LIBOR will not result in any increases in the coupon rate on the security. Floating-rate investments with interest rate caps include CMO floaters and adjustable-rate mortgage (ARM) securities. The longer cash flows remain outstanding on such securities, the greater their potential price decline, since the investor faces a longer period of having the coupon capped at a below-market rate. If a CMO floater's average life increases from 3 years to 15 years due to a rise in rates and anticipated slowdown in prepayments, the investment is likely to fall in value quite sharply. This explains why CMO floaters with high variability in their average lives offer greater spreads over LIBOR than floaters with lower average life variability. ARM securities have both periodic and lifetime caps.

Floating-rate assets do not need caps to have high price sensitivity. Consider an investment with a coupon rate of LIBOR plus 50 basis points, issued at a time when investors demanded a spread of 50 basis points over LIBOR. Such a security will be issued at par. However, if at some future date, investors demand a 150 basis point spread higher spread over LIBOR, then the security is 100 basis points "below the market" and will have to trade at a discount. The longer its maturity, the more depreciation it will have. The decline in market value is the same for the following 2 scenarios:

1) An investor buys a fixed-rate security yielding 5 percent and market yields increase to 6 percent; and
2) An investor buys a floating-rate asset with a spread over LIBOR required by the market changes from 50 basis points to 150 basis points.

The investor has lost 100 basis points in each case. The required market yield for each is now 100 basis points higher.

Inverse floating-rate securities are a special kind of floater. Their coupon rates increase when general market rates decrease. For example, the coupon may be 8 percent minus the three-month LIBOR. These securities often appeal to investors when the yield curve is very steep, as the coupon formula will give a coupon rate often well above short term financing costs. However, an increase in LIBOR can cause the interest rate on this type of security to drop very low and possibly to zero. If the security has a long maturity, it can lose significant value. As a result, FHLBanks should exercise great caution with such securities.

Some floating-rate securities have traded with prices 30 percent and more below par value, even without credit problems, because of structural risks such as interest rate caps and highly variable cash flows. FHLBanks should therefore fully understand the price sensitivity imposed by the security structure, maturity, option features and credit risk of these floating rate securities or "floaters."

Portfolio Sensitivity Measures

As a matter of sound investment practice, FHLBanks should be able to measure the price sensitivity for individual securities and for the entire portfolio. In general, techniques used to measure the risk of individual securities are also appropriate for the entire portfolio.

To estimate portfolio sensitivity, FHLBanks generally use, at a minimum, duration. Because of the presence of options in most portfolios, duration may not be an effective risk measure. Because of negative convexity, due to the existence of options in the portfolio, a portfolio may gain 2 percent when rates fall 100 basis points and lose 3 percent when rates rise 100 basis points. Given the growing importance of economic value measurements for interest rate risk, it is important to recognize these asymmetries. FHLBanks should therefore evaluate portfolios in both rising and falling rate scenarios.

A security stress test involves evaluating the price sensitivity of a security, or a portfolio, over a number of different interest rate changes. To identify and measure portfolio risk, maintain duration of equity limits, and adhere to sound investment practices, FHLBanks are required to estimate the value of their investment portfolios for different parallel interest rate changes. However, since parallel shifts rarely occur, FHLBanks should, in general, also measure portfolio value changes for non-parallel shifts, such as yield curve steepening and flattening scenarios. A steepening yield curve occurs when the yield spread between short maturity yields and long maturity yields increases. For example, if the difference in yields, or "yield spread," between 2-year and 10-year Treasury securities changes from 100 basis points to 150 basis points, the yield curve has steepened. A yield curve flattening occurs when the yield spread between short maturity yields and long maturity yields decreases.

A more sophisticated technique to measure portfolio risk is value-at-risk (VaR). Whereas a portfolio sensitivity analysis measures portfolio value changes for a specific interest rate change for all securities, VaR measures the maximum potential loss on a portfolio for a specified confidence level and a specified time period. For example, consider a portfolio manager who measures VaR at a 95 percent confidence level and for a 90-day time horizon. If the portfolio's VaR is $8 million, there is only a 5 percent chance that at the end of 90 days the portfolio will have decreased in value by more than $8 million. A VaR system, like any measurement system, contains many assumptions that a user must understand before reaching definitive conclusions for risk assessment purposes. Nevertheless, VaR can be an effective means of measuring and controlling portfolio risk. Many vendor models now calculate VaR, and all FHLBanks use at least one model that measures VaR for investment portfolio assets, as required under Part 932 of the Finance Board regulations.

Risk Control: Portfolio Sensitivity Limits

The investment portfolio typically has a significant impact on an FHLBank's total interest rate risk profile. While FHLBanks may manage the interest rate risk of its mortgage assets by combining AMA and MBS, and manage the economic value risk of the entire FHLBank through VaR metrics, it is nonetheless a sound practice to separately measure and control price sensitivity in the investment portfolio with limits for price changes given rate changes.

For example, the FHLBank may limit the portfolio's sensitivity to 10 percent when interest rates change 300 basis points. If a FHLBank has a portfolio with a current value of $20 billion, the FHLBank will manage the risks so that the portfolio will not lose more than $2 billion in value when rates change 300 basis points ($20 billion x 10% = $2 billion). FHLBanks may also establish portfolio sensitivity limits as some specified percentage of capital.

To supervise investment portfolio risks effectively, management may wish to periodically estimate, and report to the board of directors, the value of the portfolio in different interest rate environments. The value in each interest rate scenario, compared with the current portfolio value, illustrates the amount of portfolio price sensitivity. Sensitivity reporting is a convenient means of assuring that management has complied with the board of directors' limits on the portfolio's volatility.

The presence of a few securities with high risk may, or may not, be a supervisory concern. Whether a security is an appropriate investment depends upon such factors as the FHLBank's capital level, the security's impact on the aggregate risk of the portfolio, and management's ability to understand and measure the security's inherent interest rate risk and potential effects upon liquidity. Examiners, as well as FHLBank management, should assess the process and environment that led to the acquisition of such higher risk securities. For example, was the transaction a policy exception? Did some internal control process break down? Has management reported the securities properly on activity reports to the board of directors? Has the FHLBank's risk appetite changed? Answers to these questions, which may suggest a

problem in the FHLBank's risk management process, could result in greater concern than the existence of a few higher-risk securities.

From a risk management perspective, the sensitivity of the entire portfolio is more important than the sensitivity of individual securities. A portfolio "sensitivity analysis" is a very effective way for management to gain an understanding of portfolio risks. The analysis can facilitate asset/liability management decisions and the establishment of policies or guidelines to control aggregate portfolio interest rate risk.

Asset/Liability Management Issues

The emergence of the derivatives market has led to the creation of investment securities with complex cash flow profiles. Investment professionals, using derivatives, can customize a security's structure to the investor's risk/reward profile of choice. As a result, investors now have more investment choices. The increasing complexity of many of the securities, however, has complicated asset/liability risk measurement and management decisions.

A decline in interest rates can cause significant amounts of prepayments and early redemptions for FHLBanks holding a large percentage of their portfolio in securities with options. The yields of such FHLBanks' portfolios could fall significantly as high-yielding assets pay off and are reinvested in lower market yields. These FHLBanks could be forced to reinvest substantial amounts of funds at a low point in the yield cycle. In an attempt to replace the high yields lost, management may be tempted to reinvest in additional securities with even more options. This strategy carries significant risks, since a subsequent rise in interest rates could extend maturities and accelerate depreciation. Management should consider guidelines on the volume of investments it can acquire within a short time period, in order to reduce the possibility of locking in a disproportionately large segment of the portfolio at the low point in the yield cycle.

If an FHLBank focuses exclusively on purchasing securities with the highest yields, the cash flow volatility of many of these securities will depress economic value when interest rates change. The examiner's assessment of the investment portfolio's risk should be part of an overall assessment of asset/liability management activities and interest rate risk.

3) Credit Risk

FHLBanks face credit risk in their investment activities from a variety of sources. These include:

1) Issuer credit risk - the risk that the issuer or guarantor of a security or money market obligation will fail to pay as agreed;
2) Dealer credit risk - the risk that the dealer from whom the FHLBank has purchased, or to whom it has sold, securities will default prior to settlement date; and
3) Custodian credit risk - the risk that the FHLBank's securities custodian fails and the FHLBank cannot recover all of its assets the custodian held for safekeeping.

Issuer Credit Risk

FHLBank investment portfolios traditionally have little credit exposure. FHLBanks generally have large holdings of Treasury and Agency securities, which are high credit quality assets. FHLBank management and examiners can assess portfolio quality by reviewing the percentage of the portfolio in each rating category. The three major rating services are Moody's Investors Service (Moody's), Standard & Poor's (S&P), and Fitch Ratings (Fitch). These services use the following standard bond rating symbols for investment grade obligations:

Summary of Investment Grade Rating Systems

Moody's	S&P	Fitch	Description
Aaa	AAA	AAA	"Gilt-edged;" extremely strong. Highest quality.
Aa	AA	AA	Very strong; high quality by all standards.
A	A	A	Upper medium grade; strong capacity to meet commitments; high credit quality.
Baa Lowest FHLBank-eligible grade is Baa3	BBB Lowest FHLBank-eligible grade is BBB-	BBB Lowest FHLBank-eligible grade is BBB-	Medium grade; adequate capacity to meet commitments; good credit quality.
Uses 1, 2, and 3 to show in-grade relative ranking	Uses +/- to show in-grade relative ranking	Uses +/- to show in-grade relative ranking	

Summary of Non-Investment Grade Rating Systems

Moody's	S&P	Fitch	Description
Ba	BB	BB	Speculative elements; faces major uncertainties, but deemed likely to meet payments when due.
B	B	B	Generally lack characteristics of a desirable investment. Highly speculative; currently has ability to meet commitments, but faces major uncertainties which could lead to inadequate capacity to meet its commitments.
Caa	CCC	CCC	Poor standing; may be in default

Ca C	CC C	CC C	(Moody's); currently vulnerable to non-payment; high default risk.
	D	DDD DD D	In default; Fitch ratings reflect recovery prospects.

Although FHLBanks can use published securities ratings to help make investment decisions, they should also consider other sources of financial information. Exclusive reliance on ratings can be an unsafe and unsound banking practice because credit ratings may lag actual changes in credit quality. There have been a number of instances where companies maintained investment grade ratings until just before they defaulted.

To manage investment risks prudently, FHLBanks should supplement external ratings with internal credit analysis. The depth of the FHLBank's internal analysis should be a function of the security's rating, the complexity of the structure, and the size of the investment. The more complex a security's structure is, the more credit-related due diligence an FHLBank should do, even when the credit ratings are very high.

For example, there is a fundamental difference between a bond with a strong credit rating because of a third party credit enhancement and a bond with a strong rating because of structural subordination. A third-party credit enhancer, such as a guarantor or surety provider, may refuse to honor its obligation if the issuer defaults. FHLBanks should therefore carefully evaluate the third-party credit provider, and assess the entity's ability to honor its guarantee/surety bond obligation.

Subordination, on the other hand, builds the credit enhancement into the security structure. Other investors provide the credit enhancement by having a lower claim on the security's cash flows. For example, a $100 security may have an $85 senior tranche, a $12 mezzanine (second loss) tranche and a $3 "equity" (first loss) tranche. The senior tranche may carry an "Aaa/AAA" rating because of the enhancement provided by the two other tranches. In this type of structure, the senior tranche would suffer a loss only after the other two tranches have suffered complete losses. The mezzanine tranche would suffer losses only after the equity tranche has suffered a complete loss.

Investors do not universally prefer third-party credit enhancement or structural subordination over the other. Structural subordination, however, has become more common over time, due to the declining number of firms rated Aaa/AAA as well as investors' desire to avoid undue concentrations in any single third-party credit enhancer.

The proliferation of asset-backed securities in recent years has given investors a wide range of choices among collateral types and security structures. Investors should understand why they are receiving a higher yield for the same credit rating.

FHLBank management should become familiar with the evaluation criteria used by the rating agencies for the type of security under consideration. Moreover, FHLBanks should ensure that they understand the scope of a credit rating. For most securities, the assigned credit rating applies to both principal and interest. However, underwriters can structure securities with a highly rated principal component, but with no rating for the interest component. Such securities may offer very high yields because of the uncertainty of collecting interest payments. The inconsistency of the high yields with the principal's rating should serve as a "red flag" for investors.

Because ratings are a convenient means of assessing portfolio credit quality, management should ensure that the ratings are current by periodically reviewing individual security ratings and updating them when necessary.

Money Market Asset Counterparties

FHLBanks routinely lend funds to counterparties in money market asset transactions, such as selling Federal funds, investing in certificates of deposit, time deposits, bankers' acceptances, and commercial paper. Money market assets enhance an FHLBank's overall liquidity posture, because their short maturities provide regular cash flow. This cash flow, which is a cushion against adverse funding conditions, can also fund advances or additional securities purchases.

To control the credit risk posed by money market assets, FHLBanks should establish credit lines. The credit relationships should always involve internal financial analysis, with the depth and frequency of the analysis dictated by the size of the exposures. The use of external ratings can be a meaningful part of the analysis; however the FHLBanks should not rely exclusively on these ratings. Credit managers will often lower the line amount as the tenor of the exposure increases, because the longer the FHLBank agrees to be exposed, the greater the credit uncertainty. For example, an FHLBank may have a $5 million overnight facility to a counterparty, but its 6-month line to that counterparty may only be $3 million. The credit facility should cover aggregate credit exposures to a given counterparty, and thus include exposure from investments and from derivative contracts.

The following table highlights the short-term ratings scale used by the rating agencies:

Moody's	S&P	Fitch	Interpretation
A-1	P-1	F-1	Superior ability to repay
A-2	P-2	F-2	Strong ability to repay
A-3	P-3	F-3	Acceptable ability to repay
Not prime	B C D	B C D	Speculative High default risk Default

The rating agencies do not assign short-term ratings using the same methodology as for long-term ratings. Each short-term rating category covers a range of longer-term ratings. For

example, a P-1 rating could "map," or be equivalent to a long-term rating as high as AAA or as low as A-.

Because commercial banks and securities dealers with whom an FHLBank may conduct business occasionally fail, credit risk from transactions with these entities is an important consideration. FHLBanks should establish and enforce credit limits on exposures with the counterparties. While personnel in the FHLBank's treasury unit may execute transactions within these limits, qualified, independent credit personnel should establish and authorize them.

Credit Risk From Securities Dealers

FHLBanks assume credit risk when buying securities from, and selling securities to, a securities dealer.

When purchasing securities from a dealer, FHLBanks face the risk that their dealer counterparty will be unable to complete the trade by delivering the securities to the FHLBank. Most securities transactions do not "settle" on the trade date. Therefore, FHLBanks face the risk that the dealer defaults on the transaction, prior to settlement, when the securities have increased in value. In that case, the FHLBank may lose the appreciation on the security. Credit risk is a function of the length of the settlement period between trade date and settlement date and the price sensitivity of the security. Credit risk increases as both the settlement period and price sensitivity of the securities increase. MBS, particularly newly issued CMOs, can take as long as 60 days to settle.

When an FHLBank sells securities, it faces the risk that the purchasing dealer will default before settlement date and that the securities' value will have declined between trade date and the date of default. The FHLBank has an opportunity loss equal to the difference between the agreed-upon sale price and the lower value of the securities at default.

When settling securities trades, FHLBanks should use a "delivery vs. payment" (DVP) process whenever possible. In a DVP process, an FHLBank pays for securities only when they are delivered. For example, on a transaction involving Treasury securities, the selling dealer delivers the securities according to the FHLBank's delivery instructions, such as to the FHLBank's Federal Reserve Bank account. When the dealer delivers the securities, the Federal Reserve Bank pays the dealer and charges the FHLBank's account. Similarly, when an FHLBank sells securities, it should deliver them against payment so that payment and delivery occur simultaneously. The FHLBank delivers the security to the purchaser and receives immediate credit in its own Federal Reserve account.

To control the risk of unsettled securities trades, FHLBanks should consider limits, by dealer, on the volume of unsettled trades it will allow. An approved dealer list provides a useful mechanism to control credit risks. Periodic review of dealer financial information allows the FHLBank to assess the dealer's continuing ability to perform on securities transactions. This type of credit control is particularly important for FHLBanks that conduct securities transactions with thinly-capitalized securities dealers.

4) Operational Risk

The most effective way to control transaction risk is to establish a sound system of internal controls. An effective control system is the cornerstone of a well-managed FHLBank, and is particularly important for investment securities, given the large dollar size of transactions. An FHLBank can purchase large volumes of investment assets with a single telephone call that lasts just several seconds. The basic control mechanisms every investment unit should have include:

1) Separation of duties;
2) Authorizing specific personnel to conduct portfolio trades;
3) Timely reconcilements;
4) Effective reporting procedures;
5) Data integrity checks; and
6) Competent personnel.

Separation of Duties

The board of directors and management should establish a control culture that stresses the importance of strong operating controls and an independent audit process. Most importantly, the persons who purchase or sell portfolio securities should not have any authority or responsibility to maintain official accounting records for those assets.

FHLBanks should ensure that confirmations from securities dealers for investment portfolio transactions are transmitted to operations (mid- or back-office) personnel rather than portfolio (front-office) personnel. The FHLBank's control structure should require portfolio personnel to report immediately all transactions to the operations area, which can compare the details of the transaction to information provided by the securities dealer. Early comparison of transaction details can avoid costly last minute settlement disputes and permit verification that all activity reported by portfolio personnel, and the dealer, has in fact occurred. For example, FHLBank operations personnel should not find confirmations from a dealer without a matching trade ticket or other originating documents previously reported by portfolio personnel. Similarly, FHLBank operations personnel should not find internal trade tickets that do not match an incoming confirmation from a dealer.

Authorization of Investment Personnel

The board of directors and management should designate personnel authorized to purchase and sell investment securities for the FHLBank. The FHLBank should provide a list of such personnel to securities dealers transacting business with the FHLBank, and keep the list current. FHLBanks should inform securities dealers that only personnel on the list may initiate securities trades. Securities transactions can commit a large percentage of the FHLBank's capital quickly; therefore, FHLBanks should strictly limit such authority to specifically designated personnel.

Timely Reconcilements

Management should implement procedures to ensure timely reconcilements of investment account records and securities holdings. For example, in addition to reconciling investment account records to the general ledger, operations personnel should also reconcile portfolio holdings to safekeeping records provided by the custodian for the FHLBank's securities. This procedure ensures that an independent party confirms the existence of the assets on the FHLBank's books. Custodians for FHLBank investment securities usually include a correspondent bank, a Federal Reserve Bank, or a broker/dealer.

Effective Reporting Processes

When FHLBank portfolio personnel purchase or sell securities, they should immediately report the transaction to operations personnel, which can arrange for settlement. A security settles when the buyer receives delivery from the seller and makes payment. In a DVP settlement, delivery and payment occur simultaneously. The buyer provides its settlement instructions to the seller, who then delivers the securities according to those instructions. Failure to communicate transactions in a timely manner can result in expensive security "fails" A fail occurs when a security settlement does not occur on the scheduled date. Either the seller fails to deliver to the buyer or the buyer fails to receive from the seller.

"Fails-to-deliver" are expensive because the FHLBank stops accruing interest income on the settlement date. If it delivers the securities a day late, the FHLBank carries the investment as a nonearning asset for that day. Fails are particularly expensive when they occur on a Friday, because the nonearning asset will cost the FHLBank three days of interest income.

A "fail-to-receive" can occur when the FHLBank purchases a security and the portfolio manager does not instruct operations personnel ro receive a security. The dealer will attempt to deliver the security but, lacking any instructions to receive them, operations personnel may refuse delivery. In the instance of a fail-to-receive, the securities dealer will likely claim compensation, or interest due from the FHLBank for the dealer's loss of interest income on the transaction. The dealer, expecting to receive payment for the delivery, will have less cash than expected and may have to borrow funds in the market. The cost of a fail and other securities operations problems underscores the importance of having well-trained personnel in securities operations. FHLBanks can minimize its expense in determining the cause of fails if management establishes and enforces prudent operating and control procedures.

When an FHLBank purchases or sells securities, portfolio personnel should report these transactions to the manager of the FHLBank's funding position. If the funding desk does not know about a large securities sale, it could find that it has a large amount of excess cash in the FHLBank's Federal Reserve Bank account. If an FHLBank purchases securities and funding personnel are not aware of it, the FHLBank could face a shortage in its Federal Reserve Bank account. The FHLBank could be forced to purchase funds in the overnight Federal funds market, perhaps at disadvantageous rates, or borrow at the Federal Reserve Bank's discount

window. Timely reporting of securities transactions permits an FHLBank to manage its reserve position more effectively.

Data Integrity Checks

Management makes business decisions based upon an assessment of risks and rewards. Risk assessment usually starts with an evaluation of financial data. If the financial data lacks integrity, management may not be able to make informed decisions. Because of the importance of data integrity, independent risk management personnel and/or internal auditors should routinely verify the accuracy of management information reports supplied to senior management and the board.

For example, management should ensure that periodic summaries of investment activity accurately report yields of purchased securities. Most importantly, management should confirm that the FHLBank reports portfolio values properly. Such values are reported or disclosed in regulatory and financial reports. Mistakes, which can necessitate amending such reports, can damage the FHLBank's reputation as well as result in a violation of Part 915 of the Finance Board regulations. As a result, to preserve integrity in the pricing and management information reporting process, FHLBanks should generally not allow portfolio managers to value the investment portfolio; rather, this task should be performed by an independent risk management unit.

Competent Personnel

Because of the increasing complexity of securities, investment personnel should have strong technical skills in order to understand both the risks and rewards of the securities as well as to evaluate whether the bid/offer prices are reasonable. A mispriced security, for which the FHLBank pays too much to purchase or sells too cheaply, can be very expensive. A seemingly insignificant mispricing of one-half of 1 percent on a $5 million security transaction will cost $25,000. The cost of pricing abuses highlights the importance of using reputable securities dealers for investment portfolio activities and adopting a practice of competitive bidding among dealers with which the FHLBank deals. When selling bonds, FHLBanks can protect themselves against potential pricing abuses by soliciting bids from more than one dealer. A competitive bidding process tends to assure a fair price.

Competitive shopping may not always be possible when buying securities, because not all dealers will have the same security to offer. In such cases, portfolio personnel should attempt to determine fair values by comparing the yield offered with yields on similar securities. Because credit ratings can lag actual changes in credit quality, FHLBank portfolio personnel should be wary of comparing yields based on credit ratings. When evaluating bonds of a specific issuer, the appropriate comparison is to other securities of the same issuer. Because investment firms use different methodologies to calculate an option-adjusted spread (OAS), FHLBanks should be similarly wary of making purchase decisions based on the security with the highest reported OAS.

Measuring Relative Value

For investors purchasing securities with call options, yield should not be the sole measure of a security's value. Suppose a callable security yields 4.61 percent, and a Treasury security yields 3.82 percent. Although the nominal yield (YTM) of the callable security is 79 basis points higher, the investor has to consider how the options affect its yield before determining whether it is a better value.

Any call option an investor sells imposes a cost, since options limit the bond's price appreciation when rates decline. The value of a security with call options is equal to the value of the security without the call option features, minus the value of the call options. As interest rate volatility increases, option values increase, because the likelihood of having rates fall enough to make it economic to call the bonds increases. Increases in volatility reduce the value of securities with options, because the investor has sold the options. The call feature limits price appreciation when rates fall.

Many investors, including those who hold securities to maturity, analyze the value of securities with embedded call options by assessing the yield on the securities after deducting the value of the options. The resulting value measure is called an option-adjusted yield. A security's option-adjusted spread (OAS) is its yield net of the cost of options, compared with a portfolio of Treasuries having the same expected cash flows. If a security has an OAS of 25 basis points, for example, its yield net of the cost of options is 25 basis points higher than a portfolio of Treasury securities that have the same expected cash flows.

Investors should exercise caution when evaluating securities with very high nominal yield spreads to Treasury securities, particularly when there is little credit risk. Such wide spreads may indicate the investor is selling options whose value is difficult to determine. Since an OAS analysis considers the value of options, a positive OAS compensates investors for credit risk, specifically model risk (the uncertainty associated with model estimates, such as a prepayment rates), and risk to the adequacy of liquidity. Investors should therefore expect relatively limited spreads after deducting the cost of the options on high-quality securities. OAS analysis addresses the deficiencies of the simple yield measures (YTM and YTC). However, the assumptions used to generate the OAS dictate the outcome of the measure. Because the investor has sold an option, interest rate volatility is the critical pricing parameter, along with prepayment modeling assumptions for assets such as mortgage securities. Purchasing securities with embedded options when volatility is high is beneficial, because the issuer will have to pay the investor higher yields to motivate the investor to sell the option.

Just as a securities dealer can make a CMO tranche appear attractive by using a prepayment speed different from the market consensus, an estimate of volatility that is below market consensus will result in a higher OAS. If the investor does not carefully evaluate volatility, it may purchase a security with a negative OAS, even though the nominal spread might appear quite attractive. This possibility underscores the need for the investor to evaluate more than just the simple yield measure. Investors in securities with options should evaluate volatility the same

way they do prepayment speeds for mortgage securities, such as by checking market consensus among several securities dealers.

An investment strategy that focuses exclusively on maximizing yield can result in a portfolio that fails to accomplish other desired objectives of investment activities, such as controlling interest rate risk and producing adequate liquidity. Strategies that emphasize accounting yields can, if not managed properly, result in portfolios with excessive levels of interest rate risk (due, for example, to concentrations in options or long maturities) or credit risk. Investment assets that provide the highest yields frequently have greater cash flow uncertainty and wider bid/offer spreads, reducing their potential liquidity. Management should set the investment portfolio's goals and then undertake securities transactions accordingly.

5) Financial Condition and Performance

Many FHLBanks use their investment and money market asset portfolios as a source of liquidity. Money market assets represent an excellent liquidity source because of their short maturities and limited price sensitivity. FHLBanks may use the liquidity of money market assets as a cushion against unanticipated funding demands. Many FHLBanks structure their portfolios so that maturities occur evenly over time, creating a "laddered" distribution. A laddered maturity distribution provides the FHLBank with a regular source of asset liquidity as well as allowing the FHLBank to "dollar cost average" its investment purchases. By investing a similar volume of funds at regular time intervals, FHLBanks reduce the risk of investing a disproportionate amount of funds at any one time. A "concentration" of security purchases, investing too much all at once, could result in future earnings problems if the security purchases occurred at the low point of a yield cycle. The more a securities portfolio has a concentration in options, the higher the risk that the FHLBank will find itself in this situation.

Cash flow uncertainty for a security is typically a function of options, which cause the timing and amount of cash flow to vary with changes in interest and prepayment rates. The more securities with options in the portfolio, the more cash flow uncertainty exists. The type of option-sensitive securities an FHLBank has in its portfolio has an important impact on the portfolio's cash flow uncertainty. Cash flow volatility will be highest for portfolios with concentrations in callable bonds, followed by portfolios with concentrations in CMO's, MBS pass-through securities, and asset-backed securities. Portfolios with limited holdings of securities with options will have the most cash flow certainty.

An FHLBank should expect that the issuer of a callable security will exercise its option, and call the entire security, whenever it is economically efficient to do so. If it does not, a credit problem may exist. On the other hand, when it is not economically efficient to call the securities, the issuer will likely leave the bonds outstanding. With an MBS, on the other hand, the investor will experience partial calls. The size of these partial calls depends upon such factors as the difference between current mortgage rates and mortgage rates of the loans that back the security, and the seasoning of the loans. Mortgage prepayments also increase when the slope of the yield curve is steep. When short-term rates are well below long-term rates, homeowners may

refinance their existing fixed rate mortgages into adjustable rate mortgages. Homeowners have historically not exercised their option to prepay as efficiently as do issuers of callable securities. A pass-through MBS rarely pays off with a large single payment regardless of how low mortgage rates fall. When rates rise, the securities will still experience some prepayments, as some homeowners will pay off their mortgage for reasons unrelated to overall interest rates.

A CMO is a structured security that uses mortgage pass-through securities as collateral. The predictability of a CMO's cash flow is a function of the CMO tranche's structure. Some CMO types, such as planned amortization classes (PACs), can offer fairly predictable cash flow profiles. Others, such as support tranches, absorb the cash flow uncertainty of the underlying collateral and "support" the more stable PAC tranches by having more volatile cash flow patterns. To properly assess risk, investors must assess the cash flow schedule and evaluate how much a change in interest and prepayment rates will alter the estimated cash flow. Asset-backed securities will tend to have more cash flow certainty because the loan assets tend to have a lower propensity to refinance as rates change.

A portfolio of non-callable securities will have no cash flow volatility, because the cash flow schedules do not change as interest rates change. FHLBanks that use their investment portfolios as a source of liquidity should recognize how the different kinds of option-sensitive securities affect cash flow predictability and consider these issues when structuring their portfolios.

Bond dealers tend to widen the bid/offer spread on complex securities (ones with highly uncertain cash flows), because these securities are more difficult to analyze and value, and consequently more difficult to sell. When a dealer buys securities for its own account, it assumes all the attendant price risk. The more difficult it is to sell a security, the more price risk a dealer takes. The dealer protects itself against the price risk of such securities by widening the spread. A wide bid/offer spread reduces the security's liquidity, because the price an investor receives to sell the security can be significantly less than the price paid to purchase the security. Liquidity, a consideration for all securities, is especially important to consider for securities in the held-for-fair-value and available-for-sale accounts, since FHLBanks mark-to-market both categories.

FHLBanks should be cautious about accumulating a material position in illiquid securities, because they can reduce the practical liquidity of the investment portfolio. Examples of illiquid securities include HFA Bonds where the issuers rely on debt placement to the FHLBanks, MBS investments where the FHLBanks own the majority of the issue, and MBS investments with new or unique collateral attributes. The fact that the issuer has a strong credit rating simply means the bonds have little credit risk; it does not imply that the bonds carry low interest rate risk or are liquid.

ACCOUNTING ISSUES

The investment portfolio is governed by two primary accounting rules. These are Statement of Financial Accounting Standards (SFAS) 115 and SFAS 91, and are discussed below.

SFAS 115 Security Classifications

When FHLBanks purchase investment securities, Statement of Financial Accounting Standards 115, "Accounting for Certain Investments in Debt and Equity Securities" (SFAS 115), requires them to classify the securities as held-to-maturity (HTM), available-for-sale (AFS), or trading.

The HTM account is appropriate only if the FHLBank has the positive intent and ability to hold a security to maturity. If an FHLBank classifies a bond as HTM, it has indicated, for accounting purposes, that it will hold the bonds to maturity. Absent a "safe harbor" exception, sales of HTM securities may call into question the appropriateness of the FHLBank's classification of other HTM securities. Accountants may require the FHLBank to reclassify as AFS some or all of the remaining HTM securities. FHLBanks carry AFS securities at market value and report changes in the market value in Accumulated Other Comprehensive Income (OCI), which is a separate component of equity.

SFAS 115 requires an analysis when a security's current market price is below its amortized cost. The assessment is made to determine if the impairment is "other than temporary." If management determines the impairment is other than temporary, the FHLBank must write off the amount below cost against current earnings. If the impairment is not "other than temporary," there will be no income statement impact.

FHLBanks occasionally sell securities from their AFS account to take gains (or losses), either for budget reasons or to reposition the risk profile of the portfolio. The AFS account provides the flexibility to buy and sell securities, and to manage investment risks. It is important, however, to differentiate between an AFS and a trading portfolio. Trading investments for speculative purposes or market-making activities is inconsistent with the FHLBank's mission. The FHLBanks use the trading designation primarily for the ability to mark the trading assets to fair value to offset the change in fair value of an associated derivative instrument that does not meet hedge criteria directed by SFAS 133. Selecting a security's accounting classification is another strategic decision an FHLBank faces when managing a securities portfolio.

Since SFAS 115 requires management to classify most securities as either available-for-sale (AFS), held-to-maturity (HTM), or trading, the initial classification is an important decision. The primary reasons are the rules for reclassifying investments between categories. For example, once a security is placed in the HTM category, management cannot usually sell it without adverse consequences. The inability to sell long-maturity, price-sensitive securities can significantly weaken management's control over the FHLBank's interest rate risk and earnings.

With an AFS portfolio, management can sell securities and restructure the portfolio to make its risk profile more consistent with the FHLBank's interest rate views and asset/liability management objectives. However, the marking to market of AFS securities in OCI and marking of the trading portfolio to income requires appropriate levels of retained earnings, given the par value nature of FHLBank stock.

SFAS 91 Requirements

When an FHLBank purchases MBS at non-par prices, the investments will need to meet the requirements of SFAS 91. SFAS 91, "Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases," requires that most costs and fees on loans and any discount or premium on loans at their time of purchase be amortized over the life of the loan. Amortization is calculated based on the interest method, using a level yield (constant effective yield method).

Regarding MBS, SFAS 91 permits an enterprise that "holds a large number of similar loans for which prepayments are probable and the timing and amount of prepayments may be reasonably estimated" to consider "estimates of future principal prepayments in its calculation of constant effective yield." Premiums and discounts are amortized based upon the expected prepayments of the underlying mortgages. At least monthly, amortizations should be adjusted to reflect actual prepayment experience and revised outlook. These adjustments may cause a substantial change in the accounting yield on MBS, as recognition of discounts and premiums accelerates or slows. FHLBanks may also use the contractual method for calculating SFAS 91 amortization. This method bases the amortization of premiums and discounts upon the actual terms of instruments and does not use estimates to predict prepayments.

Specific Risk Controls Related to the Investment Function

Risk Management Framework

The diversity and complexity of securities in FHLBank portfolios, and the investment portfolio's impact on market and credit risks, as well the FHLBank's financial condition and performance, underscores the importance of a mechanism to control risk. An effective risk management framework includes

1) Board of directors and senior management oversight;
2) Processes to identify, measure, monitor, and control risks; and
3) A sound system of internal controls.

1) Board of Directors and Senior Management Oversight

The oversight of investment portfolio activities is an important part of managing the FHLBank's overall interest rate, liquidity, operation, and credit risk profiles.

The board of directors' role in the oversight process is to:

1) Establish the FHLBank's strategic direction and its risk limits;
2) Review portfolio activity, risk profile, and performance;
3) Monitor compliance with authorized risk limits;
4) Approve investment policies; and

5) Hire capable management

Management's role in the oversight process is to translate the board of directors' tolerance for risk into a set of operating policies and procedures that govern the FHLBank's investment activities. Management develops portfolio objectives and strategies, establishes standards for investment acquisition and new product review, oversees portfolio activity, and reports the results of investing activities to the board. Additionally, management is responsible for establishing an environment in which employees adhere to a sound system of internal controls and employees are held accountable for developing and enforcing such a framework.

2) Processes to Identify, Measure, Monitor, and Control Risks

FHLBanks that cannot accurately measure risks will have a difficult time managing them effectively. Analyzing a security's price sensitivity is fundamental to investment portfolio management. In addition to assessing credit and liquidity risks, investment officers should assess the potential changes in security values over a number of interest rate scenarios. For example, the FHLBank might analyze the security's performance profile or value changes as yields increase and decrease by 100, 200, and 300 basis points, and for selected non-parallel yield curve shifts. This "pre-purchase analysis" will identify any asymmetries, such as limited upside price potential for securities with options. FHLBanks following this sound risk management practice are better able to quantify the security's interest rate risk.

A pre-purchase analysis often will alert FHLBanks to a security's characteristics that do not fit the FHLBank's objectives. FHLBanks that do not perform a pre-purchase analysis of risks are not managing the investment portfolio in a safe and sound manner. Management should establish standards for documenting the pre-purchase analysis. Although it may not be necessary to document the performance profile of all securities, such as short-term Treasuries, management may find that documenting the analyses imposes a healthy discipline over the investment process.

Some of the more complex securities can change in character as market yields change. For example, certain mortgage securities can have the amount and timing of their expected cash flows change significantly because of their option features and structure. A security's structure refers to how cash flows from the loans underlying an asset-backed security, such as a CMO, are distributed to security owners. While reviewing the price sensitivity of all securities, management should give particular attention to securities with option features, not only prior to purchase but also periodically thereafter.

FHLBanks control investment risks by establishing and enforcing investment policies. The investment policy lends structure and organization to the FHLBank's investing activities. Regardless of whether the FHLBank has a separate investment policy, or has the policy included with the risk management policy, it should address:

1) Investment objectives;

2) Minimum credit quality;
3) Permissible investment types;
4) Price sensitivity limits for both individual securities and the portfolio;
5) Maturity limits;
6) Risk concentrations;
7) Risk reporting;
8) Approved securities dealers; and
9) Policy exceptions.

Objectives: Most FHLBanks' investment objectives include achieving a desired asset/liability management profile, generating earnings, and providing liquidity.

Credit Quality: See the "Credit Risk" section above for a detailed discussion of the credit risk of portfolio assets. Minimum quality standards are a key component of any investment policy and outline the FHLBank's tolerance for credit risk in the investment portfolio.

Permissible Investments: See Part 956 for a list of permissible investments.

Price Sensitivity Limits: Price sensitivity limits for both individual securities and the aggregate portfolio are a key control over portfolio risk. FHLBanks that control interest rate risks by placing a limit on the permissible change in the market value-of-equity (MVE) do not necessarily need individual security and portfolio sensitivity limits, because they control risks at the macro level (on- and off- the balance sheet). However, they may find that micro limits for individual securities and the investment portfolio are helpful in achieving overall MVE objectives. Further, the FMP places restrictions on the price sensitivity of MBS.

Maturity Limits: While limits on price sensitivity are the most effective way to control interest rate risk, FHLBanks may find that a limit on the maturity of investment assets adds discipline to the risk control process.

Concentrations: Concentrations, which represent a lack of risk diversification, may result in:

1) Lack of geographic diversification. This problem, which often occurs with MBS, underscores the importance of identifying a portfolio's full risk profile. An FHLBank may find, for example, that it has an undesired concentration of mortgage pools in a particular state. If the FHLBank has paid a premium for the MBS and the state has faster-than-average prepayments, the FHLBank's MBS portfolio may perform poorly relative to management's expectations. If it has purchased its MBS portfolio at a discount, a concentration of pools in areas of slow prepayments will also cause the portfolio to underperform. Geographic diversification is also an especially important credit risk issue for mortgage securities without government agency backing and large municipal bond portfolios.
2) Holdings of a single issuer. Management should consider placing limits on how exposed the FHLBank can be to a single securities issuer.

3) Holdings of asset-backed securities having the same collateral characteristics, originator, packager, or servicer. Here, the FHLBank should consider how a decline in the credit quality of the originator may affect its underwriting standards, which in turn could lower the credit quality of the underlying securities.
4) Holdings of bonds having the same trustee. Failure of the trustee could delay the receipt of security cash flows (interest and principal).
5) Lack of coupon diversification for MBS. Mortgage securities contain embedded prepayment options. A concentration in a particular coupon makes the overall option concentration potentially even more risky. FHLBanks having large MBS portfolios concentrated in a single coupon could face substantial prepayments if mortgage rates fall to a level that spurs the refinancing of mortgages carrying that particular coupon. For adjustable rate mortgage securities, FHLBanks should be aware of concentrations in a specific rate reset period. For CMOs, FHLBanks should be aware of concentrations in underlying collateral. The Interest Rate Risk section of this manual provides a further assessment of the risks of CMOs.

When developing the investment policy, management should understand the ramifications of the aforementioned concentration sources and consider whether the board of directors' risk tolerance calls for specific limits.

Risk Reporting: The review of investment activity is one of the most important aspects of management oversight. FHLBanks typically report securities transactions to the board of directors every month and summarize activity in the investment portfolio at the end of the quarter. Too often, however, the reports provide data but do not adequately explain risk. Therefore, activity reports often do not contribute properly to effective oversight. For example, consider a monthly report of investment activity that lists the par value of each security purchased or sold, the issuer, the yield, the purchase/sale price, and any gain/loss. While these details are important, they do not address risk. A more effective presentation would also report the sensitivity of each purchased security if rates rise/fall 100 and 200 basis points, and any applicable policy limit. For MBS, risk reporting could identify a range of possible yields if the FHLBank purchased the security at a price significantly different from par. For CMOs, the FHLBank might also report the security's structure and the payment "window."

The summary of the aggregate portfolio is an especially important risk control report. Trend information is particularly helpful. For example, the FHLBank might report a summary, over the past 12 months, of the portfolio's balances and yields, its sensitivity to yield changes, and unrealized gains/losses. For the current position, risk-focused information might include a breakdown by security type, showing market value, unrealized gain/loss, price sensitivity for selected yield changes, and yield.

Equally important, periodic portfolio summaries should compare key policy constraints to portfolio performance, identifying any policy exceptions, explaining why they occurred and who approved them.

Reports to management summarizing investment performance and activity should provide more detail than reports to the board of directors. Periodically, management should assess whether the current reporting framework meets their needs. For example, a policy change to purchase more complex securities may require a change in the substance of management reports to more accurately detail the portfolio's risks.

Securities Dealers: The FHLBanks should not be over-reliant on the advice of securities sales representatives for recommendations of proposed investments, investment strategies, and the timing and relative value of securities transactions. FHLBank investment managers should communicate its investment policy effectively and instruct and expect dealers to find or structure securities that meet the FHLBank's objectives.

A disciplined process requires that the FHLBank deal only with approved investment firms. FHLBank management should know the reputation of securities firms and the personnel with whom they deal. An investment portfolio manager should not engage in securities transactions with any securities dealer that is unwilling to provide complete and timely disclosure of its financial condition. Credit personnel should review the dealer's financial statements and make an informed judgment about the ability of the dealer to honor its commitments.

The board of directors or an appropriate board committee should review and approve a list of securities firms with whom the FHLBank is authorized to do business. In selecting a dealer, the FHLBank should:

1) Consider the ability of the securities dealer and its subsidiaries or affiliates to fulfill commitments as evidenced by capital strength and operating results disclosed in current financial data, annual reports, credit reports, or other reports.
2) Inquire into the dealer's general reputation for financial stability and fair and honest dealings with customers, including past or current financial institutions.
3) Contact appropriate state or federal securities regulators and securities industry self-regulatory organizations, such as the National Association of Securities Dealers, concerning any formal enforcement actions against the dealer or its affiliates or associated personnel.
4) Inquire, as appropriate, into the background of the sales representative to determine his or her experience and expertise.

In managing an FHLBank's relationships with securities dealers, the board of directors may also want to consider prohibiting employees from engaging in personal securities transactions with the securities firm that the FHLBank uses for its transactions. Such a policy helps to control conflicts of interest. The board of directors may decide to prohibit such transactions unless the board specifically approves and periodically reviews them. Such prohibition could be included in the FHLBank's code of ethics or conduct. The board also may want to adopt a policy applicable to directors, officers, or employees concerning receipt of gifts, gratuities, or travel expenses from approved dealer firms and their personnel. In order to monitor the FHLBank's activities with dealers, management and the board should consider requiring reports of

investment activity to list the firm that executed each transaction. A concentration of transactions with one firm may indicate a failure to shop competitively to obtain the best price.

Policy Exceptions: Policy documents should be designed to impose discipline on risk-taking. Occasionally, management may determine that an exception to the investment policy is in the FHLBank's best interests. Policies should address whether exceptions require prior approval, and the appropriate approving level. Additionally, policies should provide for an orderly reporting process for exceptions. The risk reporting process serves to review compliance with policies on an ongoing basis. If exceptions become too frequent, the board of directors should evaluate whether it is time to revise the policy or insist on more rigorous compliance.

3) Internal Controls

A control culture, which senior management and the board of directors must support in policy and practice, is a key component of effective corporate governance and provides the corporate integrity necessary to properly manage risk-taking activities.

An FHLBank's management and board of directors are responsible for establishing an appropriate internal control structure. The internal control system is integral to the risk management framework. An effective internal control system includes policies and procedures, clear lines of authority, separation and rotation of duties, ethical standards, and an independent audit (including testing) of the systems for executing transactions and reporting risks.

Independent reviews are essential to the integrity, accuracy, and reasonableness of the entire risk management framework. Personnel independent of the FHLBank's investment securities function should periodically assess the effectiveness of the internal control system, risk reports, policies and procedures. Moreover, such independent personnel should assess compliance with applicable policies and procedures. Independent reviewers should immediately bring deficiencies in the control processes, and the risk management framework generally, to the attention of senior management and the board of directors. Examiners should assess the timeliness and appropriateness of corrective action.

Examination Guidance

A work program for Investment Portfolio Management accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's investment portfolio management.

1) Organizational Structure

Assess the organizational structure, staff capabilities, and line management of the investment function. Do the board of directors, management, and pertinent personnel display a fundamental understanding of the risks of investment securities and money market assets?

Given the size and complexity of the FHLBank's portfolio, determine whether management and investment personnel display adequate knowledge and technical skills to prudently manage the portfolio.

a) Assess whether management is capable of prudently managing the investment portfolio. Consider:

   (1) Management's understanding of financial concepts and investment portfolio management strategies;
   (2) Treasury personnel's education levels and commitment to enhance the knowledge through continuing education;
   (3) Risk appetite of the board of directors;
   (4) Size and complexity of the portfolio;
   (5) Treasury personnel's awareness of interest rate trends;
   (6) Number of dealers the FHLBank uses;
   (7) Commitment to understanding investment risks of both the portfolio and individual securities (pre-purchase analysis);
   (8) Adequacy of credit risk analysis; and
   (9) Compliance with FHLBank policies.

b) Assess whether operational (mid- or back-office) personnel have adequate knowledge and experience to ensure control over transaction risks given the size and complexity of the FHLBank's portfolio.

c) Evaluate the quality of management. Do portfolio and supervisory personnel have the required knowledge, experience, and risk management systems to identify, measure, monitor and control the risk of the FHLBank's securities activities?

d) Determine whether the audit and risk management functions are independent of investment portfolio staff and management.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Has the board of directors established appropriate policy guidelines for investment securities and an independent risk management function? Specific attributes to consider include, but are not limited to the following:

a) Has the FHLBank adopted an investment policy (may be contained in the RMP)?

b) Has the FHLBank established an asset classification policy that includes investments?

c) Determine management's policies for actions to be taken in the event a security's rating drops below investment grade.

d) Determine which of the FHLBank's accounting policies are pertinent to the investment activities. These will include SFAS 115 and 91 and may include SFAS 133 and 155, depending on the FHLBank's strategies. Coordinate efforts with the examiner reviewing Financial Reporting Operations.

e) Does the FHLBank have an independent unit to assess investment risks and review compliance with Bank policies?

f) Are investment decisions made by an individual or is a committee involved?

g) Assess the effectiveness (frequency and scope) of board of directors' policy reviews.

3) Key FHLBank policies and procedures

a) Assess pertinent policies, evaluate procedures, judge performance, and determine the thoroughness of board and management reporting to control credit, market and operational risks by considering:

(1) FMP (applicable by Section 956.2) portfolio MBS limits;
(2) FMP average live extension limits for individual MBS investments;
(3) Limits on the price risk of individual securities;
(4) Limits on the price sensitivity of the aggregate portfolio;
(5) Limits on authority of officers;
(6) Types of permitted securities;
(7) Credit quality of security issuers;

(8) Loan level attributes (FICO scores, LTV, IO, and documentation type) for MBS investments;
(9) Targeted subordination levels for MBS;
(10) Tranche or class thickness for MBS investments and maximum percentages of MBS investments;
(11) Selection of servicers/trustees for ABS transactions;
(12) Selection of securities dealers;
(13) Credit quality of securities dealer counterparties;
(14) Settlement limits for securities dealers;
(15) Predatory lending issues;
(16) Standards for transaction execution, such as requiring multiple bids/offers to ensure fair prices;
(17) Personnel authorized to conduct securities transactions;
(18) Limits on the volume of securities purchases/sales in a pre-defined period;
(19) Off-premises trading;
(20) Possession and control of securities;
(21) Portfolio diversification; documentation of pre-purchase analyses;
(22) Conflicts of interests;
(23) Securities lending and repurchase agreement activity;
(24) Internal control requirements;
(25) Reporting of investment transactions; and
(26) Policy exceptions.

b) Review compliance with FHLBank policies. A large number of exceptions, especially if the FHLBank has not identified them before they occur, may indicate a potential weakness. Does the board of directors or another supervisory committee approve previously identified exceptions to policies?

c) Review changes to the FHLBank's policies since the previous examination. Do the changes allow for increased credit and market risk, or affect the adequacy of the FHLBank's liquidity reserves relative to its risk exposures and regulatory requirements?

d) How granular are the FHLBank's policies. Do the policies have broad investment authority such as AAA-rated, or are investment types approved individually?

e) Are all investing standards memorialized or are "rules of thumb" approaches used?

f) Determine the FHLBank's investment strategies. Does management emphasize:

(1) Maximizing yield-to-maturity?
(2) Using the portfolio to implement a desired asset/liability management position?
(3) Taking conscious interest rate bets?
(4) Relative value of securities?
(5) Maximizing the portfolio's total return?

(6) Using the portfolio as a temporary asset until it can make advances?

g) Assess the MIS reports used by management and the board of directors to monitor investment activities. Consider whether the reports:

(1) Are appropriate for the level of risk;
(2) Document the monitoring of compliance with limits;
(3) Are accurate and explain how risks have changed rather than simply provide data that does not assess risks;
(4) Are appropriate for the intended audience;
(5) Provide both summary information and transaction detail, as appropriate;
(6) Are presented to management and the board in a timely manner;
(7) Appropriately stratified for sub-classes of investments, such as Alt-A, or for key providers, such as mortgage insurers or mortgage servicers; and
(8) Allow for roll-up exposures across business units, including off-balance sheet activities.

h) Evaluate portfolio performance:

(1) Compare yields with those of the FHLBank System averages.
(2) Does the FHLBank benchmark its portfolio performance against a customized system peer group or have internal benchmarks? If so, review the results of such comparisons and determine the cause of any significant differences in results.
(3) Evaluate portfolio yield relative to the credit risk and interest rate risk taken, and the adequacy of the FHLBank's liquidity reserves relative to its risk exposures and regulatory requirements.
(4) Determine whether depreciation in the investment portfolio represents a significant percentage of the FHLBank's capital.
(5) Assess whether securities gains reflect market decisions and progress toward asset/liability management objectives, or whether they are taken simply to achieve management's budgeted income targets.
(6) Assess whether the portfolio's interest rate risk is consistent with the board's risk tolerance and management's stated strategies.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917, the model validation for investment market values, and the internal control assessment under SARBOX applicable to investment portfolio management, as well as procedures implemented to periodically attest to the adequacy of the control environment. Consider the following:

a) Do the risk assessments capture emerging risks and incorporate market conditions into the process?

b) What are the FHLBank's processes for addressing open items associated with risk assessments, model validation recommendations, or control gaps? Are any resolution steps consistent with the magnitude of the risk?

5) Testing performed by external and internal auditors and outside consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its investment portfolio activities. Consider the following:

a) Is full audit testing conducted over an annual audit or is a multi-year cycle used for the audit program?

b) Review the breadth and depth of audit testing. Determine if the testing process is consistent with the investment portfolio's risks. Specific attributes to be included in the audit's scope include, but are not limited to the following:

(1) Principal and accrued interest reconciliations with the general ledger;
(2) Balancing of safekeeping reports with portfolio holdings;
(3) Testing of accrued interest calculations and premium amortization and discount accretion;
(4) Tracing confirmation terms and conditions for both sales and purchases to the FHLBank's system of record;
(5) Investment authorization and compliance limits;
(6) Comparison and reconciliation of portfolio yields with those of the FHLBank System averages;
(7) Benchmarking portfolio performance against a customized system peer group or have internal benchmarks. If this is done, review the results of such comparisons and determine the cause of any significant differences in results.
(8) Evaluating portfolio yield relative to the credit risk and interest rate risk taken, and the adequacy of the FHLBank's liquidity reserves relative to its risk exposures and regulatory requirements.

c) Are some audit control tests performed in other audits? For example, are tests for interest rate calculations performed in information technology audits rather than the investment audit?

Consider expanding control testing if the audit scope is considered deficient.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by the investment management function for processing, verifying, and settling transactions. Activities to review include the following: trade, trader, counterparty, regulatory, and bank-wide concentration limits, robustness of data environment, especially related to end-user computer application, authorized users, vendor technical support, and business continuity and recovery.

a) Using the risk assessments and SARBOX documentation, identify the FHLBank's system of records.

b) Evaluate how trades are entered into the system of records. Determine if multiple trade transaction entries are needed to populate other systems or if trade transaction data is only entered once (straight-through processing).

c) Review access controls to the trading systems.

d) Determine what systems are used by the FHLBank's traders to ensure that any prospective transactions will not exceed regulatory or policy limits. Determine if these systems are real-time and roll-up all exposures with the FHLBank's counterparties.

e) Determine who independently verifies compliance with limits.

f) Identify any end-user computer applications used in the investment process. Review controls over the applications.

g) Review the disaster recovery plan and the latest test results.

7) Identification and evaluation of controls and significant changes to the activity or function.

Evaluate the workflow, analyses, and processes as well as controls, including the level, types, sources, and direction of market, credit and operational risk, and the quality of risk management. Determine if these risks are measured thoroughly and include: individual positions, positions with common counterparty, products with common risk attributes such as collateral or documentation type, and concentrations. Assess whether these risks are measured both on a transaction basis and at the portfolio level. If applicable, conduct an assessment of any significant or anticipated changes to FHLBank investment portfolio management strategies since the last examination that may affect the FHLBank's risk profile.

a) Determine the level of credit risk in the portfolio:

(1) Segregate the portfolio by credit ratings to determine the percentage of the portfolio in each rating category, including non-rated securities.
(2) For term investments, determine extent of reliance on financial guarantors.
(3) Assess the trend in credit quality between examinations to determine whether the FHLBank has changed its credit risk appetite in its portfolios and, if it has, why.
(4) Evaluate the FHLBank's credit risk tolerance by reviewing changes to policies and security purchases between examinations.
(5) Determine whether any securities are rated below investment grade or have defaulted. If so, consider whether such securities have "other than temporary" impairment (SFAS 115). Determine management's policies for actions to be taken in the event a security's rating drops below investment grade.
(6) Assess any additional credit due diligence to U.S. branches of foreign commercial banks.
(7) Evaluate the FHLBank's credit monitoring practices. Will the monitoring practices capture obligor deterioration? Consider whether the FHLBank:

(a) Relies exclusively on external ratings.
(b) Establishes thorough internal credit reviews.
(c) Uses third-party providers for monitoring credit performance.
(d) Utilizes automated surveillance tools.
(e) Monitors collateral performance, servicer rating, and credit enhancement levels for private label MBS.
(f) Has used default scenario analysis for securities, particularly unsecured investments.

b) Determine the level of market risk in the securities portfolio and the direction of risk (increasing, stable, or decreasing).

(1) Review the portfolio's maturity distribution.
(2) Review duration reports to determine the price sensitivity information for the investment portfolio. Review interest rate shock reports to determine the extent of negative convexity. Determine overall sensitivity, and assess the level of risk to earnings and capital.
(3) Gain an estimate of the portfolios effective duration by comparing the change in portfolio value over time to changes to the general change in interest rates over the same period.
(4) Calculate the amount of appreciation/depreciation in the portfolio. Analyze the sources of any material depreciation of appreciation.
(5) If the FHLBank has portfolio price sensitivity limits, evaluate the appropriateness of the limit in light of capital strength, profitability, management talent, aggregate risk profile, and sophistication of measurement systems. Consider how funding reallocations could impact the portfolio limits.
(6) Stratify the portfolio by fixed- and floating-rate securities. Determine extent of any cap risk with the floating rate portfolio and how that risk is managed.

c) In coordination with the examiner or FHLBank analyst reviewing Financial Condition and Performance, evaluate the effect of the FHLBank's investment portfolio upon the adequacy of the institution's liquidity reserves relative to its risk exposures and regulatory requirements.

(1) Determine the FHLBank's reliance on the investment portfolio as a liquidity source. How much reliance is on term investments for liquidity?
(2) Determine the number and quality of pledged securities.
(3) Review the sources of any investment depreciation.
(4) Review the number of investments not covered by pricing services.
(5) Calculate holdings of investments with limited marketability. Investments with limited marketability can include "tail" pieces of MBS, structurally complex securities, and certain housing finance and Small Business Administration obligations.
(6) How do the investment SFAS 115 classifications between held-to-maturity, available-for-sale, and trading impact liquidity? Does the current mix allow for financial flexibility?
(7) Assess the monthly cash flow from the securities portfolio including maturities, anticipated calls and prepayments, and coupon interest. Distinguish between known cash flows, such as maturities and interest payments, and anticipated cash flows, such as prepayments and calls.

d) Determine whether the operational area adequately supports the FHLBank's investment activities:

(1) Obtain a general understanding of the work flow and job responsibilities of the FHLBank's operational area through discussions with management and reviewing FHLBank-prepared data.
(2) Determine whether operational procedures and systems are adequate to the scope and complexity of securities activities.
(3) Determine whether the operational area is independent of FHLBank personnel making investment decisions.
(4) Assess whether documentation is adequate for a proper audit trail.
(5) Evaluate how unique trade numbers are determined and controlled.
(6) Review operational losses such as reconciling errors and compensation claims, and determine whether the losses are reasonable.
(7) Assess whether the operational area can handle present and projected volumes.
(8) Determine if trade tickets contain key transaction information, such as trade date, purchase/sale, par value, price, and officer signatures.
(9) Test the confirmation process to ensure its accuracy and independence.
(10) Assess how changes in business processes map to procedure changes.
(11) Review reconcilements to determine whether there are significant unexplained differences. Significant differences should be discussed with management. Such reconcilement reports would include:

(a) Trial balance to general ledger, such as book value of securities and accrued interest;
(b) Portfolio holdings to safekeeping records;
(c) Pledged securities to pledged activity reports; and
(d) Pledged securities to secure repurchase agreements and public funds.

e) In conjunction with other examination staff, determine whether the FHLBank has effective accounting and valuation controls for investment securities.

(1) Review the FHLBank's accounting policy for investment securities to ensure that it conforms to GAAP, including SFAS 115. Coordinate this review of SFAS 115 with the examiner examining Financial Reporting Operations.
(2) Review recent purchase activity and determine the timeliness and appropriateness of allocations to the held-to-maturity, available-for-sale, and trading accounts.
(3) If applicable, determine whether sales from the held-to-maturity account meet SFAS 115 "safe harbors". If not, determine whether securities remaining in the held-to-maturity account should be moved to the available-for-sale account.
(4) Determine whether any securities are rated below investment grade or have defaulted. If so, whether such securities have "other than temporary" impairment under SFAS 115. Coordinate with the examiner reviewing Financial Reporting Operations to determine management's policies for actions to be taken in the event a security's rating drops below investment grade.
(5) Determine the appropriateness of any movement of securities between the AFS and HTM portfolios.
(6) Determine if the SFAS 115 portfolio distribution is consistent with the FHLBank's broader strategies-particularly funding?

f) In conjunction with other examination staff, review the FHLBank's investment market pricing process. As part of the review, consider:

(1) Independence of the pricing function;
(2) Frequency of market pricing;
(3) Volume of illiquid or non-marketable investments;
(4) Assumptions used in determining any modeled prices; and
(5) Securities and Exchange Commission qualitative disclosures of pricing process.

8) Testing

Conduct transaction testing. The testing should generally include both long-term investment purchases and short-term trades that have been executed since the previous examination. The choice of investments sampled should be risk-focused with the sample size dictated by the preliminary review of the changes to the size and composition of the investment portfolio, governance, risk management, internal controls and audit coverage.

a) Select a sample of purchased investments since the previous examination. The sample should generally include investments in all major categories. Unrated investment securities should be explicitly included in the sample. In determining both the specific investments to sample and the size of the sample, the following should be taken into consideration:

(1) Size of position;
(2) Price paid relative to par;
(3) Initial and current credit rating;
(4) Collateral type, and FHLBank's experience with investment type;
(5) Collateral quality and size/type of credit enhancements-if applicable;
(6) Collateral with potential predatory lending characteristics;
(7) Experience with counterparty;
(8) Concentrations with issuers, servicers, collateral type, or enhancers;
(9) Changes in FHLBank investment philosophy; and
(10) Changes in the investment staffing department.

b) Review the FHLBank's underwriting practices for the sampled transactions. Verify that the credit files contain:

(1) Trade ticket, primary and secondary approvals;
(2) Compliance with applicable FMP limits or internal limits;
(3) Trade confirmation;
(4) Alternative ask prices, as applicable;
(5) For non-rated securities, the credit analysis demonstrating that the security is the "credit-equivalent of investment grade."
(6) Offering circulars, prospectus, or reference to an electronic copy;
(7) Price paid relative to par;
(8) Initial and current credit rating;
(9) Size of position;
(10) Collateral type, and the FHLBank's experience with investment type;
(11) Collateral quality and size/type of credit enhancements-if applicable; and
(12) Experience with counter-party.

(c) Select a sample of approved counterparties and assess whether files are current and contain sufficient information to document an informed credit decision. These may include:

(1) Financial statements;
(2) Assessment of the counterparty's ability to meet its financial obligations; and
(3) Assessment of the counterparty's general reputation.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of risk (low, moderate, high); the direction of risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Investment Portfolio Management
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess market, credit and operational risk and financial performance tolerances, the development of key investment management policies, and oversight by the board of directors. Assess adequacy of senior management oversight of the investment function. Verify existence and assess adequacy of independent risk management function. Review board and senior management meeting minutes, agenda, and decision-making process.

3) Key FHLBank policies and procedures

Evaluate key FHLBank policies. The policies should address risk appetite, risk monitoring, and risk mitigation techniques. Particular attention should be on the depth and breadth of both risk measurement and monitoring. The policies should also address regulatory limits and accounting requirements. Review and evaluate both procedures used by investment management staff and the procedures followed by the risk management staff. Judge portfolio performance against risk tolerances and peers. Assess the thoroughness of management and board of directors reporting.

4) Risk assessment under Part 917, model validation, as applicable, under Part 932, and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917, the model validation for investment market values, and the internal control assessment under SARBOX applicable to investment portfolio management, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its investment portfolio activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by the investment management function for processing, verifying, and settling transactions. Activities to review include the following: trade, trader, counterparty, regulatory, and bank-wide concentration limits, robustness of data environment, especially related to end-user computer application, authorized users, vendor technical support, and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow, analyses, and processes as well as controls, including the level, types, sources, and direction of market, credit and operational risk, and the quality of risk management. Determine if these risks are measured thoroughly and include: individual positions, positions with common counterparty, products with common risk attributes such as collateral or documentation type, and concentrations. Assess whether these risks are measured both on a transaction basis and at the portfolio level. If applicable, conduct an assessment of any significant or anticipated changes to FHLBank investment portfolio management strategies since the last examination that may affect the FHLBank's risk profile.

8) Testing

Conduct transaction testing. The testing should include both long-term investment purchases and short-term trades, which have been executed since the previous examination. The choice of investments sampled should be risk-focused with the sample size dictated by the preliminary review of the changes to the size and composition of the investment portfolio, governance, risk management, internal controls and audit coverage. To the extent feasible, include in the sample investments purchased while on-site. Such an approach will allow for a review of the operational risks associated with transaction processing.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the types(s) of risk (market, credit, operational); the level of risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of the risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

In December 1996, the Finance Board authorized the Federal Home Loan Bank (FHLBank) of Chicago's Mortgage Partnership Finance ® (MPF) program. Authorized on a pilot basis, the MPF program was the first mortgage purchase program. In 1999, with the adoption of Resolution Number 1999-50, as modified by Resolution Number 1999-66, the Finance Board broadened the FHLBanks' authority and to emphasize that the mortgage programs must involve credit risk-sharing with FHLBank System members or housing associates. It was the view of the Finance Board that the expansion of the mortgage programs would provide the FHLBanks with a vehicle to reduce the amount of non-mission related investments financed by GSE borrowings.

In July 2000, the Finance Board adopted Part 955 to its regulations governing Acquired Member Asset (AMA) activities, which codified many of the parameters for AMA programs that were previously set forth by Finance Board resolution and established new requirements. With the adoption of Part 955, the previously-approved mortgage programs moved from pilot to permanent status.

To date, two separate mortgage programs have been authorized under Part 955 – the MPF program and the Mortgage Purchase Program (MPP). Since the FHLBank of Chicago was first approved to offer MPF to its members on a pilot basis, all of the FHLBanks have received Finance Board approval to offer MPF and/or MPP to their members. Members may participate in the MPF and MPP programs through various products with differing credit risk-sharing structures.

Except for the FHLBank of Chicago's Shared Funding® (Shared Funding) Program, an MPF product, the AMA products are structured such that the FHLBanks acquire, either through a purchase or funding transaction, whole, single-family mortgage loans from their members. Products exist for both conventional and government- guaranteed or-insured loans. The risks associated with the mortgages are such that the FHLBank manages the interest-rate risk and the member manages a substantial portion of the risks associated with originating the mortgage, including a substantial portion of the credit risk. Part 955 requires that the member provide a credit enhancement sufficient to enhance the credit quality of the assets to an equivalent of an instrument rated at least investment grade. The member may provide this credit enhancement through various means.

Shared Funding currently is the only AMA product under which the FHLBank may acquire interests in whole loans.

Regulatory Environment

The primary authorities governing, or relevant to, AMA activities of the FHLBanks are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) ***Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to AMA activities:***

Part 955, setting forth requirements for FHLBank participation in AMA programs and activities. The regulation's four main elements are as follows:

a) Three-part test to determine AMA eligibility;
b) Regulatory reporting requirements;
c) Administrative transactions between FHLBanks; and
d) Risk-based capital requirements for AMA.

Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4, Bank Member Products Policy, Section 917, Strategic Business Plan, and Section 917.6, Internal Control System, are pertinent.

Part 980, defining and setting forth the procedural requirements regarding FHLBank's new business activities. With respect to AMA, a new business activity is considered one in which the FHLBank is involved in either managing a risk or undertaking operations that it has not previously or regularly managed. The new business activity regulation prohibits FHLBanks from undertaking a new business activity without first complying with the requirements of the regulation.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of AMA activities are the following:

Advisory Bulletin 01-1, dated January 24, 2001, provides that an FHLBank acquiring AMA must seek to collect and have in place a system that is capable of accepting all data elements specified in Section 955.4 and Appendix A thereto.

Advisory Bulletin 01-2, dated January 24, 2001, provides that an FHLBank must maintain a security interest in collateral that is sufficient to fully secure the member's retained credit enhancement, over and above the collateral that is necessary to support any advance or other obligation of the member to the FHLBank.

Advisory Bulletin 01-6, dated June 13, 2001, provides the format under which the FHLBank must submit quarterly aggregate data, as required under Section 955.4.

Advisory Bulletin 01-7, dated August 8, 2001, provides the format under which the FHLBanks must submit year-to-date and program-to-date loan-level data.

Advisory Bulletin 01-8, dated October 4, 2001, provides guidance to the FHLBanks in establishing procedures to address the periodic review, classification and reporting of problem assets.

Advisory Bulletins 02-03, dated February 13, 2002 and 03-2, dated February 10,

2003, provides guidance on specific attributes to be considered by FHLBanks in the formation of their business continuity plans and the establishment of bilateral agreements with other FHLBanks.

Advisory Bulletin 03-6, dated May 9, 2003, addresses the FHLBanks' use of nationally recognized statistical rating organization (NRSRO) models for loans that may be secured by real property located in Georgia and originated between October 1, 2002, and March 7, 2003. The Advisory Bulletin instructs the FHLBanks to implement procedures to screen out these Georgia loans prior to purchase.

Advisory Bulletin 03-12, dated December 3, 2003, provides that each FHLBank should establish policies that include criteria to determine individual exposure limits to each SMI provider based on an independent credit analysis of the provider.

Advisory Bulletin 04-01, dated March 10, 2004, provides guidance on the evaluation of an organization providing services to an FHLBank whose activities could affect the FHLBank's financial condition. This includes the performance of an assessment of the service organization's internal controls, including the procurement of a service auditor's report in accordance with Statement of Auditing Standards No. 70, Reports on the Processing of Transactions by Service Organizations (SAS 70), or the performance of alternative methods necessary to gain confidence on the service organization's internal controls.

Advisory Bulletin 04-4, dated August 12, 2004, affirms that the pool size adjustment factor in LEVELS must always be used to calculate the credit enhancement for the pool, regardless of the size of the pool. In addition, the Advisory Bulletin provides that for pools to which the pool size adjustment factor was not properly applied, the FHLBank must recalculate the credit enhancement and allocate additional capital as necessary.

Advisory Bulletin 05-5, dated May 18, 2005, provides guidance on the risk management responsibilities of the FHLBank's board of directors, senior management and risk management function.

Advisory Bulletin 05-08, dated August 25, 2005, provides guidance on establishing anti-predatory lending policies to govern the FHLBank's purchasing of mortgages and calculating the level of advances that can be made to its members.

Advisory Bulletin 07-01, dated April 12, 2007, which establishes regulatory expectations for the FHLBanks to adopt and implement policies and risk management practices that establish appropriate risk limits for, and appropriate mitigation of, credit exposure on nontraditional and subprime mortgage loans.

3) ***Regulatory Interpretations of the Federal Housing Finance Board are the following:***

Regulatory Interpretation 2000-25, dated November 17, 2000, addresses some of the factors that should be considered in determining if assets meet the valid business purpose requirement of Part 955. The Regulatory Interpretation specifies that a member must have meaningful influence over or control of the assets being acquired by the FHLBank. Assets will not be considered eligible as AMA if they are merely passed from a nonmember through a member to an FHLBank without the same or equivalent degree of scrutiny as would have been the case if the member had originated the asset itself.

Regulatory Interpretation 2002-02, dated March 6, 2002, provides that under Part 955, a Participating Financial Institution (PFI) may sell the servicing rights associated with a mortgage loan to a PFI other than the PFI responsible for the credit enhancement.

Regulatory Interpretation 2002-03, dated March 6, 2002, provides that an FHLBank may obtain pool insurance to supplement the credit enhancements provided by the member. Within the context of the credit enhancement structure, the pool insurance must follow the more credit enhancement components such as the first loss account and the supplemental mortgage insurance.

Regulatory Interpretation 2005-05, dated October 21, 2005, provides that Part 955 does not allow an FHLBank to sell or transfer either the mortgage loans or the related PFI-provided credit enhancement obligation while continuing to hold the other piece of the transaction.

4) ***New Business Activity Approval Letter-FHLBank of Chicago Shared Funding Program:*** By letter dated December 4, 2002, from the Finance Board's Office of General Counsel, agency staff approved the FHLBank of Chicago's new business activity request regarding Shared Funding. This approval applied only to Shared Funding transactions as described in the FHLBank of Chicago's submissions and imposed certain conditions on the FHLBank and product.

5) ***Statements of Financial Accounting Standards (collectively, Statements of Financial Accounting Standards or individually, SFAS) adopted by the Financial Accounting Standards Board*** establish standards of financial accounting and reporting governing the preparation of financial reports and are officially recognized as authoritative by the Securities and Exchange Commission and the American Institute of Certified Accountants. Specific Statements of Financial Accounting Standards applicable to AMA activities include, but are not limited to the following:

   a) SFAS 91, Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Indirect Costs of Leases, prescribes accounting standards for nonrefundable fees and costs associated with loans,

commitments to lend, and purchases of one or more loans or group of loans. In addition, the statement prescribes permissible accounting treatment for direct fees and costs associated with leasing.

b) SFAS 114, as amended by SFAS 118, Accounting by Creditors for Impairment of a Loan, requires a creditor to recognize loan impairment through the creation of a credit loss reserve and a charge to bad debt expense. Loan impairment is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate or, as a practical expedient, at the loan's observable market price or the fair value of the collateral if the loan is collateral dependent. This statement is applicable to advances and to AMA.

c) SFAS 133, Accounting for Derivative Instruments and Hedging Activities, prescribes accounting and reporting standards for derivative instruments, including certain derivative instruments embedded in other contracts, and for hedging activities.

FHLBank Environment

AMA Programs

Two AMA programs have been authorized by the Finance Board – Mortgage Partnership Finance (MPF) and Mortgage Purchase Program (MPP). In order to offer MPF and/or MPP to its members, each FHLBank underwent an application process with the Finance Board. This application process included a safety and soundness examination to verify that the FHLBanks had in place adequate policies, procedures, and controls to manage the risks presented by these programs.

For MPF, the FHLBank of Chicago serves as "MPF Provider," providing operational support to all of the other MPF-Banks as permitted under Section 955.5(a). The services the FHLBank of Chicago provides include program development, pricing, legal services, marketing, quality control, accounting, processing, development of underwriting and other processing guides, policies, and procedures, and maintenance of the MPF website. The FHLBank of Chicago annually obtains a Type II SAS 70 report from its external auditor covering its MPF program that documents and tests the design and operational effectiveness of internal controls the institution has established in connection with the program.

In contrast, each MPP-Bank conducts its own back-office operations and operates independently from the other MPP-Banks. Unlike the MPF-Banks, each MPP-Bank has autonomy over its own processes, including pricing and execution.

The MPF-Banks and MPP-Banks maintain written guides that govern their respective administration of the AMA programs. The guides, at a minimum, govern origination, underwriting and servicing. Collectively, these materials are generally referred to as "FHLBank Guides."

The AMA programs are designed, pursuant Part 955, such that the FHLBanks manage the interest rate and prepayment risks while the FHLBanks share credit risk with members and housing associates. With the exception of certain AMA programs approved by the Finance Board at the time of Part 955's adoption, members or housing associates bear the direct economic consequences of actual credit losses on an asset or asset pool either (i) from the first dollar of loss up to the amount of expected losses or (ii) immediately following expected losses, but in an amount at least equal to expected credit losses. In either case, a member's or housing associate's direct loss obligation precedes the application of any loan-level or pool-level insurance.

How the member assumes responsibility for the credit risk varies depending upon the structure of the AMA product. Although MPF and MPP offer different products with different risk-sharing structures, there is consistency in basic AMA program elements. Following are some of the common elements found in both the MPF and MPP programs.

a) *Participating Financial Institution*. A PFI is a member or housing associate that has been approved to participate in the AMA programs. Both MPF and MPP use this term in common.

b) *PFI agreements.* An agreement between the FHLBank and PFI establishing the terms under which the PFI will deliver loans to the FHLBank and/or perform the servicing function. Under MPF, these agreements are known as "PFI Agreements." Under MPP, these agreements are known as "Mortgage Selling and Servicing Master Agreements."

c) *Master Servicer*. The MPF Provider (on behalf of the MPF-Banks) and each MPP-Bank have retained servicing firms to act as "Master Servicer." The duties of the Master Servicer include the supervision, monitoring, and oversight of the servicing of the mortgage loans and the performance of each "Servicer" of its duties and obligations pursuant to the FHLBanks' requirements. Both MPF and MPP use this term in common.

d) *Servicer*. Under both MPF and MPP, Servicers are required to be PFIs. The duties of Servicers include the collecting of funds from borrowers, preparing monthly accounting reports, reconciling cash flows, providing mortgage loan documents to a "Custodian," ensuring insurance is in force, and performing loss mitigation functions. Both MPF and MPP use this term in common.

e) *Custodial agreements.* An agreement that establishes the rights and obligations of the Custodian. Under MPF, the custody agreement is between a Custodian and the MPF Provider. Under MPP, the custodial agreement is between the Custodian and the PFI.

f) *Custodian.* An institution that verifies and maintains documents in connection with mortgage loans, including original notes and assignment of mortgages.

Under MPF, the term "Custodian" is used. Under MPP, the term "Document Custodian" is used.

g) *Master commitments.* Under both MPF and MPP, the FHLBank and PFI sign master commitment agreements that provide the terms under which the PFI may deliver loans to the FHLBank. Under MPF, these agreements are known as "Master Commitment Agreements." Under MPP, these agreements are known as "Master Commitment Contracts."

h) *Delivery commitments.* Delivery commitment agreements are entered into between the FHLBank and PFI. These commitments legally obligate the PFI to deliver loans with certain characteristics to the FHLBank within a specified period of time. Under MPF, these agreements are known as "Delivery Commitment Agreements." Under MPP, these agreements are known as "Mandatory Delivery Contracts."

i) *Accounts designed to absorb expected credit losses*. Under MPF, this account is known as the "First Loss Account" (FLA). Under MPP, the account is known as the "Lender Risk Account" (LRA).

MPF Products

When a member is approved as a PFI under MPF, it immediately enters into a Master Commitment Agreement with the FHLBank. This agreement defines and specifies the funding terms, product type, credit enhancement and servicing fees, First Loss Account, and maximum credit enhancement. When the PFI is prepared to deliver loans under the Master Commitment Agreement, it enters into a Delivery Commitment Agreement with the FHLBank. Once signed, the PFI is legally obligated to deliver the loans to the FHLBank. If the PFI fails to deliver the loans, the FHLBank, depending on the provisions of the Delivery Commitment Agreement, may assess the PFI a pair-off fee.

For each Master Commitment Agreement, the FHLBank allocates an amount to a specific First Loss Account, to be used to fund losses realized on mortgage loans allocated to the applicable master commitment. Any realized loss remaining after the application to the First Loss Account will be applied to the PFI's credit enhancement obligation for the applicable master commitment. Any remaining realized loss remaining after applications to both the First Loss Account and the PFI's credit enhancement obligation will be allocated directly to the FHLBank. Credit enhancement obligations must be secured in parallel with the Finance Board's requirements for securing advances.

The following provides a brief summary of each of the six different MPF products. Depending on the product, PFIs have the option either to sell closed loans to the FHLBank or to originate "flow" loans as agent for the FHLBank. For flow loans, the PFI performs its usual origination function; however, the FHLBank funds the loans at the time of closing. Since the FHLBank funds the loans, the PFI never books the loan as an asset on its balance sheet; the flow loans are an asset of the FHLBank immediately upon

closing. The flow loan program is available only under the MPF 100 program described below.

a) *Original MPF*. Under Original MPF, the first layer of losses (following the application of any primary mortgage insurance) is applied to an FHLBank-funded FLA in an amount specified in the master commitment agreement. The PFI then provides a second layer credit enhancement obligation for each master commitment sized to bring the master commitment to "AA" or equivalent rating. Loan losses that exceed the second layer are then absorbed by the FHLBank. For providing the credit enhancement obligation, the member typically is paid a fixed monthly credit enhancement fee specified in the master commitment agreement. Only closed loans may be sold to the FHLBank under this product.

b) *MPF 100*. Under MPF 100, the first layer of losses (following the application of any primary mortgage insurance) is applied by the FHLBank to the FLA in the amount of 100 basis points of the aggregate principal balance of the MPF Loans funded under the master commitment. The PFI then provides a second layer credit enhancement sized to bring the master commitment to "AA" or equivalent rating. Unless otherwise agreed, the PFI's minimum credit enhancement obligation is 20 basis points based on the delivered amount. Loan losses beyond the first and second layers are absorbed by the FHLBank. For providing the credit enhancement obligation, the member is paid a monthly credit enhancement specified in the master commitment agreement. The PFI's monthly credit enhancement fee becomes performance based after the first two or three years, because it is reduced by losses charge to the FLA. Only flow loans may be acquired by the FHLBank under this product.

c) *MPF 125*. Under MPF 125, the first layer of losses (following the application of any primary mortgage insurance) is applied by the FHLBank to the FLA in the amount of 100 basis points of the aggregate principal balance of the MPF Loans funded under the master commitment. The PFI then provides a second layer credit enhancement obligation sized to bring the master commitment to "AA" or equivalent rating. Loan losses beyond the first and second layers are absorbed by the FHLBank. Unless otherwise agreed, the PFI's minimum credit enhancement obligation is 25 basis points based on the delivered amount. The member receives a monthly performance-based credit enhancement fee specified in the master commitment agreement for providing the credit enhancement obligation. Only closed loans may be sold to the FHLBank under this product.

d) *MPF Plus*. Under MPF Plus, the first layer of losses (following the application of any primary mortgage insurance) is applied by the FHLBank to the FLA sized to equal to a specified percentage of the loans in the pool as of the sale date. The member procures additional credit enhancement in the form of a Supplemental Mortgage Insurance (SMI) policy to cover the second layer of losses which exceeds the deductible such as the amount equal to the FLA of the SMI policy. Losses on the pool of loans not covered by the FLA and the SMI coverage are

paid by the PFI, up to the amount of the PFI's credit enhancement obligation, if any, for the master commitment. The total credit enhancement for the pool of loans in a master commitment is set so as to achieve a credit level equivalent to an instrument rated at least "AA" or its equivalent. The PFI is paid a fixed and a performance-based credit enhancement fee specified in the master commitment agreement for providing the credit enhancement obligation. The fixed credit enhancement fee is paid monthly beginning the month after delivery. The performance-based fee accrues and is paid monthly commencing with the 13th month following delivery of the loans and is reduced by losses charged to the FLA. The FHLBank absorbs all losses in excess of the member's credit enhancement obligation. Only closed loans may be sold to the FHLBank under this product. The minimum size of a MPF Plus delivery commitment is $100 million.

e) *Original MPF for Federal Housing Authority/Veterans Administration Loans.* Under Original MPF for Federal Housing Authority (FHA) or Veterans Administration (VA) Loans, the PFI provides and maintains FHA mortgage insurance or VA guaranty for all loans. The PFI is responsible for compliance with all FHA/VA requirements and for obtaining the benefit of the FHA insurance or VA guaranty with respect to defaulted loans. The PFI is responsible for "unreimbursed servicing expenses" such as those amounts not reimbursed by the FHA or VA with respect to defaulted loans, in the same manner and to the same extent as is customary for Ginnie Mae loan servicers. Expenses that are neither covered by FHA insurance/VA guaranty nor included in the unreimbursed servicing expenses are the obligation of the FHLBank. The servicing fee for FHA insured/VA guaranteed loans is 44 basis points annualized. The PFI is paid a monthly government loan fee of 2 basis points annualized. Only closed loans may be sold to the FHLBank under this product.

f) *Shared Funding Program.* Under Shared Funding, PFIs sell MPF-eligible loans to an FHLBank of Chicago member (Depositor). The FHLBank of Chicago acts as agent for the Depositor in the sale of these loans. The Depositor will concurrently sell those loans to a special purpose third-party trust that it has organized for the purpose of securitizing the mortgages into collateralized mortgage obligations (CMOs). The trust issues two certificates – an A Certificate and B Certificate. The A Certificate represents the senior investment-grade securities and the B Certificate represents the credit support tranches. The Depositor will initially acquire both the A and B Certificate CMOs and then subsequently sell all of the A Certificate CMOs to the FHLBank of Chicago. The Depositor may either hold the B Certificate CMOs in its own portfolio or sell all or a portion of them to other investors, which may or may not be FHLBank members. The FHLBank of Chicago may sell its interests in its acquired A Certificate CMOs, but only to other FHLBanks or to members of the FHLBank. All certificates issued by the trust will receive a public credit rating from an NRSRO.

MPP Products

Similar to MPF, the two primary agreements that must be in place in order for a PFI to sell loans to an FHLBank under MPP are the Master Commitment Contract and the Mandatory Delivery Contract. The Master Commitment Contract establishes the expected composition and dollar amount of the portfolio of mortgages to be sold to the FHLBank. The Master Commitment Contract also establishes the amount that must be funded to the LRA and the premiums payable to the SMI provider. Once the Master Commitment Contract is in place, the PFI may establish a Mandatory Delivery Contract that will be allocated against the Master Commitment Contract. If the PFI fails to deliver the balance of loans specified in the Mandatory Delivery Contract, the FHLBank will assess the PFI a pair-off fee in accordance with the terms of Mandatory Delivery Contract.

Under MPP, PFIs are able to sell closed loans to the FHLBank under two products – a conventional loan product and an FHA loan product. Both of the MPP products are very similarly structured to two of the MPF products. First, the MPP conventional loan product is similar in many respects to the MPF Plus product. The two are similar in that MPP-Conventional and MPF Plus both rely on SMI to cover a portion of the credit losses (after expected losses). Additionally, the MPP-FHA product is conceptually very similar to the Original MPF for FHA/VA Loans product.

For conventional loans sold under MPP, the first layer of credit losses (following the application of any primary mortgage insurance) is allocated to a LRA, which is established by the FHLBank on behalf of the PFI for each master commitment. The LRA covers expected losses and is funded by the PFI either up-front as a portion of the purchase proceeds ("Fixed LRA") or though a portion of the interest paid by the borrower ("Spread LRA"). In general, the amount deposited into the LRA is approximately 30 to 50 basis points of the original loan balance. The PFI is eligible to receive LRA payments net of losses pursuant to the Master Commitment Contract; generally payments begin in the sixth year and end in the eleventh year.

In addition to the expected losses covered by the LRA, the PFI is required to purchase SMI as an additional credit enhancement with the FHLBank listed as the insured. The coverage provided by the combination of the LRA and the SMI is considered sufficient loss protection to raise the asset to the equivalent of an instrument rated at least at the "AA" or equivalent level.

The MPP-FHA product does not require a LRA or SMI in order to meet the requirements of Part 955 because of the presence of government insurance. For loans sold to the FHLBank under this product, the PFI is required to meet the requirements established by the FHA.

FHLBank Responsibility by Functional Area

A brief overview of the basic functions performed by the FHLBanks with respect to operations of the AMA programs follows below. Although specific responsibilities may be divided among different staff at different FHLBanks, the functional responsibilities related to the AMA programs is generally consistent across the FHLBanks.

Marketing. The FHLBank's marketing department provides technical support on the details of the AMA program during the sales and marketing process. Once a member indicates its interest in participating in the program, the marketing department provides the member with the program application instructions and assists the member through the application process. The marketing department is generally responsible for collecting and maintaining all required application documentation and approving the application.

Credit. Generally, the FHLBank's credit department is responsible for reviewing the creditworthiness of each PFI. The credit department also monitors loan delinquency levels, evaluate the adequacy of the loan loss reserve account and makes recommendations for changes in the reserve. In the case of MPF, the MPF Provider, the FHLBank of Chicago, also reviews the member applications.

Collateral. The FHLBank's collateral department is generally responsible for monitoring the PFI's collateral levels in relation to the PFI's credit enhancement exposures and delivery commitment exposures.

Information Technology (IT). The FHLBank's IT department is generally responsible for supporting the information processing and data and voice technology needs of the FHLBanks and the PFIs. In the case of an MPF-Bank, the IT department is responsible for processing the nightly posting files from the FHLBank of Chicago to the general ledger and internal reporting systems.

Accounting. The FHLBank's accounting department is responsible for establishing and maintaining the books and records of the FHLBank in accordance with Generally Accepted Accounting Principles. For an MPF-Bank, the accounting department is responsible for balancing and reconciling the MPF-related accounts to ensure that all data entries, including principal and interest accruals and payments, from the FHLBank of Chicago are posted completely to the general ledger as well as preparing adjustments and MPF recurring entries.

The accounting department is also responsible for the communication of allowance for loan and lease loss methodology approved by the FHLBank's credit committee for application by the credit departments, reclassification of nonperforming loans, analysis and assessment of the reasonableness of premium/discount amortization/accretion adjustments, the approval and recordation of charge-offs in the general ledger and any reversal thereof to record gain/loss from the sale of associated real estate owned.

Together with staff responsible for mortgage portfolio management, credit, collateral, member financial risk, the accounting staff also reviews the Type II SAS 70 report annually obtained by the FHLBank of Chicago from its external auditor covering the design and effectiveness of the internal controls it has established for its MPF program.

Mortgage Finance. The FHLBank's mortgage finance department is responsible for the acquisition of mortgage loans, including the execution of purchase transactions, the evaluation of delivery commitments, and the analysis of mortgage markets. At the FHLBank of Chicago, in its capacity as MPF Provider, and at the MPP-Banks, this function includes the oversight of the AMA pricing model and intra-day price schedule updating. The MPF Provider receives the notice of the delivery commitments from the PFIs and then notifies the MPF-Banks, so they can arrange financing. At MPF-Banks, the mortgage finance departments are responsible for monitoring and validating pricing of MPF products and monitoring and evaluating PFI's delivery commitments to identify potential hedging needs.

Risks Associated with AMA

An FHLBank's primary risks relating to AMA activities are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, assessed, and monitored.
b) Information technology is not aligned with the FHLBank's goals and strategies.
c) Exceptions to AMA policies are not properly reviewed and reported to senior management and the board of directors.
d) The FHLBank's financial performance and compliance with established goals, policies, procedures, accounting and regulatory requirements are not properly reviewed and monitored due to inadequate, inaccurate and/or untimely reporting to the board of directors and senior management.
e) Internal control weaknesses potentially affecting financial reporting have not been adequately identified, assessed and disclosed.
f) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.
g) Delegations of authority from the board of directors to the chief executive officer to the respective FHLBank personnel are not adequately reviewed and maintained.
h) Background criminal and credit investigations are not performed on personnel prior to their retention. Periodic credit investigations are not performed, and mandatory leave policies have not been established.
i) Duties, responsibilities, and liabilities are not adequately addressed with vendors.
j) Losses due to errors and fraud are not effectively mitigated through insurance or other means.
k) A business continuity plan has not been developed or adequately tested.

l) Audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise.

2) Operational Risk

a) New PFIs and new master commitments are not properly administered.
b) Deficiencies exist in internal controls or information systems.
c) Failure to execute master commitments or lack of compliance with loan delivery processes.
d) Delivery commitments and loans are not recorded accurately, completely, or in the correct period.
e) Loan payments are not calculated and/or recorded accurately, completely, or in the correct period.
f) Unauthorized/untrained users enter transactions.
g) Service providers with which the FHLBank has contracted do not adequately perform their duties and responsibilities.
h) Loan information is not accurately recorded to the general ledger.
i) Amortization of book value adjustments is not accurate.
j) Data cannot be readily recreated and/or required tasks readily performed in the event of a disaster or personnel turnover.
k) Non-compliance with record retention requirements.
l) Review of SAS 70 controls and testing is inadequate.
m) Agreements between the FHLBank and counterparties may be unenforceable or may not clearly set out the rights, duties and obligations of the parties, including the remedies available to the FHLBank in the event that a counterparty does not adequately perform its duties and satisfy its obligations thereunder.
n) Foreclosure by an FHLBank or Servicer on a mortgage loan that has not been repurchased by a PFI results in an unreimbursed liability to the FHLBank for failure to comply with applicable state law governing foreclosures, third-party injury on the property acquired through foreclosure, or the presence of environmental hazards on such property.
o) Inadequate staffing of FHLBank departments and functional areas critical to AMA activities with experienced personnel results in the compromise of key internal processes relating to the successful conduct of AMA activities.
p) Failure by the FHLBank to comply with regulatory requirements and its own internal policies relating to the conduct of AMA activities results in supervisory action, financial loss or reputational diminishment adversely affects the ability of the institution to continue to conduct AMA activities.
q) Placement by a governmental authority of a PFI or other key counterparty into conservatorship, receivership, or liquidation adversely affects the ability of an FHLBank to exercise its rights and remedies under the agreement.
r) Changes in the economy diminish the business outlook for FHLBank member institutions and reduce the demand for mortgages.
s) Industry consolidation involving member institutions that results in a reduction in FHLBank membership and reduces the demand for AMA products.
t) A change in law, judicial decision or other event curtails the ability of an

FHLBank to conduct AMA activities.

u) Increased competition from other housing GSEs and wholesale lenders results in loss of AMA business to competitors.
v) Mortgage loans are acquired from non-PFIs.
w) Lack of compliance with internal controls, policies, procedures, and specific requirements of insurance policies, resulting in rejection of claims by insurers and incurrence of losses.

3) Credit Risk

a) Mortgage loans are acquired either as whole loans or interests in whole loans that do not comply with the FHLBank's underwriting guidelines and do not meet the investment grade ratings requirements.
b) FHLBank acquires loans that do not comply with the master commitment agreement.
c) Delivery commitments and loans are not properly valued.
d) Credit enhancement obligations are not adequately satisfied or secured.
e) The FHLBank's security interest in the mortgage collateral is not perfected, resulting in establishment of superior lien status by a competing creditor that perfects its security interest in the mortgage collateral.
f) Condition and performance of PFIs is not adequately monitored to assess their continuing ability to satisfy their credit enhancement obligations.
g) PFIs do not fulfill requirements under default reporting standards or delinquent loans may be undetected.
h) Mortgage insurance providers are not adequately monitored to assess their continuing ability to satisfy their obligations.
i) Foreclosure by an FHLBank or Servicer on a mortgage loan that has not been repurchased by the PFI results in unreimbursed loss to the institution where the outstanding principal and interest due on the property exceeds the proceeds realized from the subsequent sale of the property.
j) FHLBank maintains inadequate allowance for loan losses to satisfy losses.
k) Inadequate processes to screen loans deemed to be predatory

4) Market Risk

The purchase and funding of AMA assets presents the FHLBanks with interest rate and accounting risks that need to be prudently managed, as addressed in the Interest Rate Risk Management and Financial Reporting Operations sections of the examination manual.

Specific Risk Controls Relating to the AMA Function

An FHLBank's controls relating to AMA activities are set forth below.

1) Quality Control

The FHLBank should maintain an effective quality control function, either internally or through an outside vendor, to evaluate the processes related to the acquisition and administration of AMA. The quality control function should ensure that the FHLBank's execution of AMA transactions mitigates the inherent risks. Each FHLBank should have in place controls to assure that loans satisfy the program requirements.

2) Business Continuity

The FHLBank should have written procedures for operations at its designated hot-site. All AMA production applications, including upgrades, should be installed and available at the off-site location. Testing of applications should be conducted periodically to ascertain reliability. The FHLBank should require all critical AMA counterparties to maintain an adequate disaster recovery plan and to test such plan periodically.

3) PFI Approval and Continued Monitoring

The FHLBanks should have in place adequate controls to ensure that all members requesting PFI approval are reviewed for program eligibility, including creditworthiness and documentation standards. Once approved, PFIs should be periodically monitored to ensure continued compliance with all AMA program requirements.

4) Agreements with AMA Counterparties

All relationships with AMA counterparties such as PFIs, Master Servicers, Servicers, and Custodians should be clearly documented in enforceable written agreements whose terms and provisions respond to risks presented by AMA processes, provide reasonable means of managing those risks, and clearly define the rights, duties and responsibilities of the parties, including the remedies of each FHLBank in the event that its counterparty does not adequately perform its duties and responsibilities. All such agreements should be reviewed by the FHLBank's legal counsel.

Examination Guidance

A work program for AMA accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis called for in the work program, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's AMA activities.

1) Organizational structure

a) Department organization and reporting structure;
b) Identification of key personnel;
c) Primary duties, responsibilities and technical expertise of personnel;
d) Segregation of duties;
e) Cross-training of personnel;
f) Coordination with other departments such as risk management, information technology, marketing, accounting, credit, collateral and mortgage finance;
g) Significant changes in the foregoing since the last examination; and
h) Delegations of authority.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management and the risk management function as to the risks arising from the institution's AMA activities, which may include the following:

a) Development or expansion of AMA products offered by the FHLBank and projected impact on financial condition of FHLBank;
b) Risk management processes and funding requirements to compensate for additional risk;
c) Actions taken to mitigate risk, and to control and correct deviations from risk mitigation plans;
d) Agreements for AMA transactions clearly identify and allocate between the FHLBank and its counterparties;
e) Periodic monitoring and reporting of key operating procedures, controls and deviations; and.
f) Changes to the FHLBank's AMA policies and procedures and MPF or MPP Guidelines.

3) Key FHLBank and departmental policies and procedures, which may include those relating to the following:

a) Risk management;
b) Member products policy;
c) PFI approval and monitoring;
d) Quality control;
e) Mortgage insurance monitoring;
f) Asset classification and performance monitoring;
g) Credit policy;
h) Financial risk management;
i) Business continuity and recovery;
j) Loan acquisition that address PFI eligibility, loan documents, underwriting, credit enhancement, pricing, and agreements with counterparties;
k) Assets administration such as master servicer and servicer, document custody operations; and third party quality control;

l) Capital requirements;
m) Information security;
n) Fraud prevention;
o) Background and credit investigations;
p) Whistleblower provisions of SARBOX; and
q) Business conduct and ethics.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from and controls established by the institution over AMA activities and includes quantitative and qualitative evaluations; and
b) Effectiveness of evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of the scope and testing performed by external and internal auditors, and third party quality control firms; and
b) Evaluate the adequacy of the scope and testing performed by outside consultants.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by AMA operations for processing transactions, including:

a) Authorized users;
b) Financial modeling systems, including pricing models;
c) Loan origination system (LOS);
d) Loan acquisition system (LAS), including tracking SMI and LRA;
e) eMPF transactional website;
f) Treasury pricing model (TPM);
g) Loss allocation model (LAM);
h) Utilization of spreadsheets;
i) Use of LEVELS to calculate credit enhancement;
j) Calculation of capital requirements;
k) Tracking delinquencies and foreclosures; and
l) Business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate workflow and processes as well as controls, including the level and direction of risk and the quality of risk management; and

b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the control environment such as management, systems, key personnel, regulatory requirements and processing.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to, the following:

a) Restrictions exist upon access to the pricing models or, in their absence, compensating controls to ensure proper authorization of transactions such as dual control, limitations upon system access or function capabilities, and managerial review;

b) Loan acquisition process is consistent with Finance Board regulations and AMA program requirements;

c) Credit enhancement calculated by LEVELS is appropriate;

d) Loan servicing and collection efforts are in accordance with industry standards and sub-servicing agreement between master servicer and sub-servicer;

e) Changes to loan characteristics, such as FICO score, PFI, loan-to-value, geographic location, occupancy, and exceptions to underwriting guidelines, that do not require an adjustment or amendment to the governing master loan commitment;

f) Service organization's internal controls, such as the obtainment of the external auditor's SAS 70 report, are adequate;

g) Acquisition and administration of assets complies with Finance Board regulations and AMA requirements;

h) Document custody operations comply with AMA program requirements;

i) PFI status is granted only to members and housing associates;

j) Reconciliation of AMA accounts are reconciled;

k) Classification of specific AMA loan(s) or loan pools is consistent with the institution's internal loan classification system (if significant weaknesses are identified with the FHLBank's risk identification, loan classification policies and procedures, and credit and collateral monitoring, consider performing an adverse classification review);

l) AMA loss mitigation is adequate ;

m) FHLBank maintains appropriate amount of capital against its mortgage loans;

n) Background and credit investigations are conducted, and fraud prevention procedures are adequate and are adhered to;

o) Policies, procedures and methodologies for premium amortization and grouping of loan pools is in compliance with the requirements of SFAS 91 (coordinate review with examiner or analyst assigned to review Financial Reporting Operations); and

p) Record retention procedures that pertain to automated and manual records have been established.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Acquired Member Assets (AMA)
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by board of directors. Adequacy of senior management oversight and risk management

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management and the risk management function for AMA activities, as applicable.

3) Key FHLBank and departmental policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to AMA activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and the internal control assessment under SARBOX applicable to AMA activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its AMA activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by AMA operations for processing transactions, including loan origination, loan accounting, pricing, LEVELS, loss allocation, business continuity and recovery, and eMPF, where applicable.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to AMA activities that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

Business continuity planning and recovery is the process whereby FHLBanks ensure the maintenance or recovery of operations, including services to customers, when confronted with adverse events such as natural disasters, technological or infrastructure failures, human error, or terrorism. The objectives of a business continuity plan (BCP) are to minimize financial loss to the institution, ensure the safety of employees, continue to serve customers and financial market participants; and mitigate the negative effects disruptions can have on an institution's strategic plans, reputation, operations, liquidity, credit quality, market position, and ability to remain in compliance with applicable laws and regulations. Changing business processes (internally to the FHLBank and externally among interdependent financial services companies) and new threat scenarios require FHLBanks to maintain updated and viable BCPs.

An inadequate BCP exposes an FHLBank to operational risk. The inability to fulfill legal obligations and provide continuous services in a disaster may result in legal liability to the institution well as a tarnished reputation in the marketplace.

The critical path for recovery must be well defined when responding to a widespread loss of the FHLBank's computer systems and services. The BCP must address the critical functions and processes of the FHLBank and clearly identify priorities in personnel and technology to restore business activities with maximum speed and minimum impact to customers.

Planning and processing for a disabling event not only requires a commitment from an FHLBank's management and employees, but the incurrence by the FHLBank of additional costs associated with the operation of alternate facilities and communication networks, transportation of people, equipment and supplies, and payment of overtime pay.

The BCP should be designed to communicate to appropriate FHLBank staff the activities that are to be undertaken to restore the FHLBank's operations if the facilities or critical systems are temporarily or indefinitely inaccessible. The BCP should provide for the restoration of facilities, communications, computer hardware, software, personnel, and other components necessary for the continuity of critical FHLBank functions.

Regulatory Environment

The primary regulations, standards and guidance that pertain to business continuity planning are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) Rules and Regulations of the Federal Housing Finance Board, which include the

following parts and sections relevant to business continuity planning:

Part 917 of the Finance Board's rules and regulations addresses powers and responsibilities of the FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, and Section 917.6, Internal Control System, are pertinent.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of business continuity planning are the following:

   Advisory Bulletin 03-2, dated February 10, 2003, and Advisory Bulletin 02-3, dated February 13, 2002, which provides guidance on specific attributes to be considered by FHLBanks in the formulation of their business continuity plans, and the establishment of bilateral agreements with other FHLBanks.

   Advisory Bulletin 05-05, dated May 18, 2005, which provides guidance on the risk management responsibilities of the board of directors, senior management and risk management.

3) ***The Information Technology Examination Handbooks for Business Continuity Planning and Operations and other issuances*** issued by the Federal Financial Institutions Examination Council that address specific controls and procedures as to business continuity planning.

FHLBank Environment

Within the FHLBank System, the BCP organizational structure, and content may vary. Each FHLBank and the Office of Finance (OF) approaches BCP differently due to different recovery philosophies, geographical areas, services offered, customer base, recovery needs, and technology infrastructures. Most FHLBanks have recovery plans divided by business unit (BU), and often coordinated by an enterprise-wide recovery plan. Other FHLBanks will centralize the BCP function, which consolidates the detailed recovery plans for all BUs into one master recovery plan. Regardless of the organizational structure, the following six factors are critical aspects of effective business continuity planning:

1) Business continuity planning and recovery should be conducted within an enterprise-wide framework that includes appropriate executive level sponsorship.
2) A thorough business impact analysis (BIA) and risk assessment is the foundation of an effective BCP.
3) Business continuity planning and recovery is more than the recovery of the technology; it is the recovery of business processes.
4) The effectiveness of a BCP can only be validated through thorough testing or practical application.
5) The BCP and test results should be subjected to independent audit.

6) A BCP should be periodically updated to reflect and respond to changes in the institution.

The first phase in developing a BCP is to perform a BIA. All business functions and departments should be included in the BIA, not just information technology. This phase identifies the potential impact of uncontrolled events on the FHLBank's business processes. During this phase management should determine what and how much is at risk by identifying critical business functions and prioritizing them. Management should estimate maximum allowable downtime for critical business processes, establish recovery objectives, and identify potential points for backlogged transactions. Recovery priorities for business processes should identify essential personnel, technologies, facilities, communications systems, vital records, data, and supplies.

The risk assessment is the second phase in developing a BCP. During this phase management should stress test business processes and BIA assumptions against various threat scenarios. Threat scenarios should range in severity from those with high probability of occurrence but low impact, such as brief power outages, to those with a low likelihood of occurrence but high impact such as hurricanes or terrorist attacks. The risk assessment should consider the impact of a broad range of business disruptions on the institution and its customers; the probability of occurrence; the loss impact on information services, technology, personnel, facilities, and service providers; and the safety of vital records. After completing this phase management should identify business processes having the highest priority and estimate how they may be disrupted under various threat scenarios. Worst case scenarios such as destruction of facilities and loss of life should be considered.

Management may leverage internal expertise by engaging third party consultants to assist with the BIA and/or risk assessment; however, management and the board of directors must determine how identified gaps will be addressed.

With the BIA and risk assessment as the foundation, management can develop the written BCP or address gaps in existing plans. Several FHLBanks have appointed a BCP administrator (BCP Administrator), whose primary responsibilities should include:

a) Developing and maintaining a BCP that is responsive to FHLBank's current operating environment and is based on a thorough BIA and risk assessment;
b) Coordinating periodic testing strategies with FHLBank business lines;
c) Analyzing the results of the tests and revising the BCP where appropriate;
d) Reporting the BCP readiness and results of the periodic tests to FHLBank's executive management and the board of directors; and
e) Coordinating business continuity recovery team (BCRT) activity and responding to identified incidents.

The BCRT should consist of senior management and key/technical employees of critical operations and support functions. Its primary function is to ascertain the extent of the disabling event and begin formulating recovery efforts. Once the recovery plan has been

developed, the BCRT communicates instructions to appropriate staff so that a swift and effective recovery can begin. The BCRT provides information on the status of the recovery to executive management in order to assist it in managing the FHLBank's day-to-day business.

The BCP should be focused upon the resumption of those business activities defined as critical during the BIA phase. The order of recovery should be determined by the priority of business functions. Plans should contain detailed instructions on how to resume business in manual mode when the institution's computer systems are inoperable and how to resume business during different periods of the day. Management should also plan for processing capacity should a disruption occur on high volume processing days. The BCP should also include instructions on how to communicate with employees, customers, trade groups, regulatory agencies and the press should a sudden disabling event occur.

The BCP should be reviewed and tested at least annually. Management should consider developing multi-year test strategies that progressively challenge recovery assumptions and make test exercises more complex and robust over time. Successful test strategies should identify gaps or inadequacies in recovery facilities, personnel, and assumptions so that corrective measures can be taken. Depending on the severity of gaps identified follow up tests may be warranted within short timeframes. Although recovery tests should gradually increase in complexity, management should not unduly jeopardize normal business operations when developing test plans. Each department manager or functional area supervisor should be made responsible for reviewing and, if appropriate, updating his/her area's business continuity plans and communicating any changes to the BCP Administrator. Interdependencies between departments, functional areas, and third parties should also be routinely assessed.

Recovery plans should address the manner in which any backlog of activity and/or lost transactions will be recovered and processed at the recovery site. Plans should identify how transaction records will be brought current from the time of the disaster to the expected recovery timeframes. If manual procedures are to be utilized for any period of time written procedures should be developed and employees adequately trained. Test plans should also demonstrate that the use of manual procedures is feasible and for what maximum length of time.

Recovery facilities may vary greatly within the FHLBank System. Some FHLBanks maintain designated recovery facilities while others rely on third-party vendors to provide recovery services. A combination of the two methods may also provide a viable alternative. Regardless of the arrangement, recovery facilities should be tested at least annually and when equipment or application software is changed to ensure continued compatibility. Physical work space and equipment for required personnel is as important as data processing capacity. Contingency planning for recovery facilities should take into account location, size, computer and telecommunications capacity, and required amenities needed to recover critical business functions and accommodate essential personnel. During the recovery site selection process, scalability should be evaluated in

the event that a longer-term disaster occurs. If the recovery period is of more than short duration, the BCP should be reassessed to determine if tertiary plans are warranted.

When determining the physical location of the recovery site(s), management should consider geographic diversity. Management should subject disaster recovery site alternatives to a threat analysis that assesses the likelihood of wide-spread regional events such as terrorist attacks or natural disasters. Locating a recovery center too close to the primary site or in high risk areas may not sufficiently insulate it from such regional events. In any case, management's assumptions should be thoroughly documented, carefully supported, and periodically approved by the board of directors as the board is ultimately responsible for proximity decisions. Independent third party assessments that specifically address distance issues and the FHLBank's unique location can be valuable in analyzing alternatives and validating recovery assumptions.

Risks Associated with Business Continuity Planning

An FHLBank's primary risks relating to business continuity planning are set forth below:

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, measured, monitored, and controlled within the framework of an enterprise-wide BCP methodology.
b) BCP does not receive sufficient executive level sponsorship.
c) Risk assessments and/or business impact analyses are inadequate to identify potential threats or sufficiently estimate the resulting impact.
d) Critical recovery needs and timeframes of the FHLBank and its customers are not adequately identified and reflected in recovery planning priorities.
e) Employees do not possess the technical expertise to continue operations in the event of a disaster.
f) Personnel have not been designated to administer the BCP.
g) Duties, responsibilities, and liabilities are not adequately addressed with outside service providers and vendors.
h) A BCP has not been developed and tested.
i) Testing results are not analyzed and reported to the board of directors and senior management. Necessary corrective action is not undertaken to rectify identified weaknesses.
j) Losses due to errors and fraud are not effectively mitigated through insurance or other means.
k) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise to test the control environment.

2) Operational Risk

a) The BCP has not been adequately developed, communicated to key personnel, tested and kept current commensurate with the degree of complexity of

FHLBank's technological environment to ensure all critical functions can recover in the event of a disabling event.

b) Required data cannot be recreated and required tasks cannot be performed due to a disaster.
c) The recovery site is affected by the same event as the production site.
d) Back-up data is incomplete or inaccessible.
e) The BCP does not provide for alternative manual processes in the event automation is not available at the recovery site.
f) Inadequate testing of the BCP is performed, or the results of the testing are neither reviewed nor evaluated by management. Necessary corrective action is not performed to rectify identified discrepancies.
g) Test transactions are insufficient to validate processing capacity or validate recover objectives at the recover center.
h) Insurance coverage has not been obtained to mitigate risks and exposure, and the extent of effective coverage has not been evaluated.
i) Failure to resume operations within the customer's expected timeframe has led to a damaged reputation in the marketplace.

3) Credit Risk

Legal obligations owed to the FHLBank are not timely satisfied.

Specific Risks Controls Relating to Business Continuity Planning

An FHLBank's controls relating to business continuity planning are set forth below:

1) Corporate Governance

The board of directors and senior management are responsible for identifying, assessing, prioritizing, managing and controlling risks. They should ensure necessary resources are devoted to creating, maintaining and testing the plan. This includes setting policy, prioritizing critical business functions, allocating sufficient resources and personnel, providing oversight, approving the BCP, reviewing test results and ensuring maintenance of the current plan. The effectiveness of the BCP depends on their ability to identify and understand the critical businesses processes of the FHLBank and establishing plans to meet the business process requirements in a safe and sound manner.

2) Insurance

The potential for liability to an FHLBank arising from defects in its business continuity operations and systems of control should be reflected in the FHLBank's annual risk assessment. Written procedures for operations at its designated hot-site should be developed. For example, back-up tapes should be stored off-site and be easily retrievable. Bilateral relationships with one or more FHLBanks may need to be used to effectuate the FHLBank's activities. Each FHLBank must have at least

one back-up system and must test it periodically to ascertain its reliability.

The business continuity plan should address the availability of insurance in the event of a disruption in the institution's business. The potential for losses and errors may increase due to a disabling event. For example, due to a disabling event, personnel may have to process wire transfer transactions in a manual environment, thereby increasing the possibility for losses due to errors and fraud.

The FHLBank may mitigate its risks and liability with the purchase of specific insurance and bond coverage such as director's and officer's liability, errors and omissions, data reconstruction, and fidelity bond coverage. Where an FHLBank mitigates its operational risk through the maintenance of insurance coverage, the adequacy of such coverage relative to actual loss experience should be periodically assessed.

In addition, the specific limitations, exclusions, notifications, and other clauses of each policy should be reviewed to determine their effects upon the availability of coverage under specific circumstances. Claims may be rejected if the FHLBank has weak controls or fails to follow its internal procedures.

Examination Guidance

A work program for Business Continuity Planning accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's business continuity planning.

The examiner for this area should evaluate the enterprise-wide methodology for BCP and ensure the appropriate level of coordination within the examination team.

1) Organizational structure

a) Functional organization and reporting structure;
b) Corporate level sponsorship;
c) Identification of key personnel;
d) Primary duties, responsibilities and technical expertise of personnel;
e) Segregation of duties;
f) Cross-training of personnel;
g) Coordination with other departments such as risk management, information technology, treasury and cash management, internal audit, accounting, credit and human resources; and
h) Significant changes in the foregoing since the last examination.

2) Establishment of risk tolerances and the development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for business continuity, which may include the following:

a) Approved enterprise-wide methodology;
b) Identification of various recovery scenarios ranging in severity;
c) Established maximum downtimes or other triggers for implementing recovery strategies;
d) Designation of a remote recovery site(s). The site should not be so close to the FHLBank it would be affected by the same disaster, but not so far that personnel would not be able to reach site;
e) Alternate power supplies including uninterruptible power supplies (UPS) and back up generators;
f) Adoption of a detailed BCP addressing all critical functions of the FHLBank;
g) Designation of an employee to coordinate the periodic testing of the BCP with relevant departments;
h) Review and reporting of the testing results to senior/line management. If appropriate, corrective action should be taken to rectify identified deficiencies; and
i) Reporting test results and BCP readiness at least annually to the board of directors.

3) Key FHLBank policies and procedures, which may include those relating to the following:

a) Enterprise-wide BCP plan;
b) Business impact analysis and risk assessment;
c) Department or functional area BCP plans (may be reviewed by other examiners having a working knowledge of departmental procedures);
d) Information Technology (IT) Governance;
e) Risk management;
f) Information security;
g) Fraud prevention; and
h) Wire transfer operations.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from and controls established by the FHLBank over business continuity planning and includes quantitative and qualitative evaluations; and

b) Evaluate the effectiveness of evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate

potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of the scope and testing performed by external and internal auditors; and

b) Evaluate the adequacy of the scope and testing performed by outside consultants such as penetration testing.

6) Information technology and controls

a) Identify and assess the differences between the production environment and automated and manual systems at the designated recovery site(s) for processing transactions. Coordinate with other examiners to evaluate:

(1) Systems at the recovery site(s);
(2) Timeframes and priority for system recovery;
(3) Dependence upon manual processes;
(4) Limitations on automated interfaces;
(5) Processing capacity;
(6) Physical capacity;
(7) Telecommunications;
(8) Authorized users and other security changes;
(9) Vendor technical support and access to the automated wire system; and
(10) Utilization of spreadsheets, data bases and other user-developed applications.

b) Determine if management has adequately identified and communicated functional differences at the recovery site and developed plans to address identified gaps, which may include manual procedures.

7) Identification and evaluation of controls and significant changes

a) Evaluate workflow and processes to be followed during recovery scenarios as well as controls, including the level and direction of risk and the quality of risk management; and

b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile such as management, production and recovery site systems, key personnel, regulatory requirements and processing.

8) Testing

Conduct testing as appropriate taking testing conducted by other examiners into consideration. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to the following:

a) Review and evaluate the adequacy of the enterprise-wide BCP methodology including:

   (1) Enterprise-wide plan and business impact analysis; and
   (2) Risk assessment and efforts to address identified gaps.

b) Review the adequacy of the BCP. Examples of specific attributes include, but are not limited to, the following:

   (1) Identification of and establishment of security for the recovery-site(s) including the clear identification of functional differences between the production and the recovery site(s);
   (2) Mirroring or linking critical systems to the recovery-site, back-up of critical systems and data files, and implementation of procedures to retrieve back-up tapes and manual records that are stored off-site;
   (3) Designation of a BCP Administrator, a BCRT and a public spokesman; and
   (4) Identification of critical systems including computer hardware, software, and user-developed applications for the continuation of FHLBank's key functions which includes:

      (a) The establishment of priorities for the recovery of the key functions and processes, including critical timeframes for recovery, and the identification of equipment, utilities, and supplies to be utilized in effecting their recovery; and

      (b) The identification of key/critical functions and processes and the establishment of procedures to preserve or serve as back-up to such functions or processes in the event that these cannot be recovered within established critical timeframes.

c) Review and evaluate the adequacy of a sample of departmental business continuity plans. Consider the following:

   (1) Identification of and establishment of security for the recovery-site(s), including clear identification of functional differences between the production site and recovery site(s);
   (2) Correspondent bank services function, such as wires, safekeeping, deposit services, and affordable housing;
   (3) Credit function, such as advances, collateral, acquired member assets, and

affordable housing;
(4) Finance function, such as accounting, liquidity operations, and investments;
(5) Corporate administration/services function, such as marketing, facilities, security, insurance, human resources, legal, office administration, and purchasing records management;
(6) Emergency contact listing that clearly defines decision-making authority and identifies key/critical employees, and a contact listing for employees, customers and vendors;
(7) Cross-trained employees assigned to assume back-up functions/roles in the event the key/critical employees are not available;
(8) Bilateral agreements governing Fed funds and other dealer relationships; and
(9) Internal audit function.

d) Review the adequacy of BCP test strategies to determine if they are sufficient to validate recovery assumptions;

e) Review the supporting documentation of recent testing and evaluations of key/critical outside service providers maintained by the BCP Administrator. Consider the following:

(1) Coordination of testing with all key/critical functions;
(2) Establishment of objectives and data to be utilized;
(3) Utilization of test plans that include both automated and manual processes as well as different timeframes within the plans such as high volume processing days, and start-of-day, mid-day, and end-of-day processing;
(4) Testing performed on relationships with Fed funds counterparties and securities dealers for alternative sources of liquidity and bi-lateral relationships;
(5) Review of contingency testing performed by key/critical outside service providers, such as SAS 70 reports; and
(6) Recovery testing performed by information technology personnel.

f) Verify that the results of the tests are analyzed and reported to the BCP Administrator, senior/line management, and the board of directors and that deficiencies noted were promptly corrected. Determine whether the FHLBank has taken the following actions:

(1) Evaluation of the adequacy of the test scope, including the identification of clear objectives to be achieved by testing and functions, processes, transactions to be tested;
(2) Assessment of whether the test objectives were completed;
(3) Assessment of the validity and accuracy of the data processed; and
(4) Identification and correction of problems encountered.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Business Continuity Planning (BCP)
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination. Evaluate the enterprise wide methodology for BCP within the organizational structure and ensure the appropriate level of coordination within the examination team.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for BCP activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to BCP activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and of the internal control assessment under SARBOX applicable to BCP activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its BCP activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized for processing transactions during recovery scenarios including authorized users, vendor technical support, and utilization of user developed applications. Coordinate with the IT examiner for disaster recovery capabilities (recovery of computer systems) to identify potential differences between the normal processing environment and recovery scenarios.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes to be followed during recovery scenarios as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to BCP methodology that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

Insurance is a risk management tool. Although FHLBanks also use some forms of insurance to mitigate credit risk, insurance as described here is primarily used to mitigate operational risk. The potential for liability to an FHLBank arising from its operations and its system of controls should be reflected in its annual risk assessment (Annual Risk Assessment) required to be conducted pursuant to Section 917.3 of the Finance Board regulations.

The value of insurance lies in the protection it affords an FHLBank or persons associated with it from losses arising from failures in the FHLBank's system of risk controls or from other causes. The specific insurance needs of the FHLBank must be assessed on a case-by-case basis; only by reviewing each policy in force can the actual degree of coverage and protection be determined. In addition, insurance management should be reflected in the FHLBank's business continuity operations as the potential for losses and errors may increase due to a disabling event.

The objective of an FHLBank's insurance management process should be to minimize losses and costs arising from risks undertaken by the institution, such as direct costs of loss prevention measures, insurance premiums, losses sustained, and related administrative expenses. The FHLBank's board of directors must determine the maximum loss the institution is willing to accept and should, at minimum, perform and document an annual review of FHLBank's risk and insurance management program for its adequacy. However, the maintenance by an FHLBank of adequate insurance should not, by itself, be viewed as a satisfactory substitute for the other elements of a sound risk management program. Examples of available insurance coverages are described below.

Specific Types of Insurance Coverage

The insurance industry offers various types of coverages that can be purchased which include, but are not limited to, the following:

1) Fidelity Bond Coverage is designed to protect an institution from catastrophic losses resulting from dishonest or fraudulent acts of directors, officers, employees, agents and unrelated third-parties, which include losses arising from:

a) Defalcations;
b) Use of forged documents;
c) Circulation of false securities;
d) Circulation of counterfeit money; and
e) Other criminal acts.

Customarily, a fidelity bond will contain a ***termination clause*** that should be reviewed by FHLBank personnel responsible for the administration of the insurance management program and/or by legal counsel to ascertain the circumstances under which the bond's coverage may be terminated by its underwriter. For example, the

bond may provide that its coverage terminates as to any FHLBank employee immediately upon the FHLBank's learning, or any of its officers or directors learning, of the commission by such employee of any ***dishonest act*** at any time, irrespective of whether such employee is in the employment of the institution, the act is of the type covered under the bond, or the act is committed against the institution.

2) ***Directors and Officers (D&O) Liability Insurance*** provides coverage for the indemnification of directors, officers, and other employees against legal and other expenses incurred in defending lawsuits brought against them by reason of the performance of their official duties. Such insurance does not cover instances of crime or dishonesty, personal gain, or apparent conflicts of interest.

   Levels of coverage include the following:

   a) Side A-reimburses officers and directors to the extent that they are not indemnified by the company;
   b) Side B-reimburses a company for amounts spent to indemnify directors and officers for costs, settlements and judgments, subject to a deductible or "retention"; and
   c) Side C-indemnifies a company against its own liability in connection with securities claims, subject to deductible or retention.

3) ***Banker's Professional Liability Insurance (Errors and Omissions Insurance)*** provides coverage to a company against loss from a customer's claim of negligent acts, errors or omissions in the performance of professional services. This may include loss of client data, software or system failure, and failure to perform professional duties.

   Customarily, a financial institution will maintain an error and omissions liability policy to provide protection to it from losses arising from negligent acts, errors and omissions committed by it in the provision of services to its customers. An errors and omissions liability policy protects the financial institution and its directors, officers, and employees from loss in instances where there is a written agreement between the institution and its customer to provide professional services to the customer for a fee, or other monetary consideration, or where a fee or other monetary consideration would usually be received, but for business or other reasons, the fee has been waived.

   In addition to maintaining an error and omissions liability policy to protect it from its own acts of negligence, errors and omissions in the provision of services to its own customers, an FHLBank should require that third-party vendors with whom it contracts for services maintain adequate coverage under their own error and omissions liability policy and fidelity bonds to protect the FHLBank against loss in the event of negligent acts, errors and omissions on the part of the third-party vendor in providing services to the FHLBank. An FHLBank should perform a close review of the vendor's policy coverages, exclusions, and limitations prior to entering into any agreement with the vendor to provide any service to the institution. For example,

coverage may not be provided for information technology consultants and contractors who perform services on behalf of the financial institution. Therefore, during the consultant/vendor selection process, an FHLBank should require the consultant/vendor to provide a full analysis of the coverages, exclusions and limitations contained in its errors and omissions insurance policy and fidelity bond.

4) ***Commercial General Liability Insurance*** provides coverage for bodily injury occurring on an institution's premises.

5) ***Property Insurance*** provides coverage for the theft or destruction of an institution's property and fixed assets such as computer hardware, software, and other office furnishings and equipment, up to a specified amount. Policy coverage should include "hot sites" critical to the maintenance of business continuity.

   A close evaluation of the manner in which the insurance agent/broker is notified to adjust policy coverage should be performed by FHLBank personnel responsible for the administration of the insurance management program to ensure adequacy of coverage for newly purchased or leased items. A purchased or leased item will only be insured within the general limits of a property insurance policy unless it has been placed on a specific schedule within the policy that provides for extra insurance coverage above the general policy limits for that item. For example:

   a) Furniture and owned equipment are usually not specifically scheduled with an insurer, so any claim for items lost, stolen or damaged would be based on the general policy limits.

   b) Leased equipment is usually required by the lessor to be specifically scheduled with an insurer. If new equipment is leased, the insurer is notified of the new schedule and dollar amount, endorses the additional schedule on the certificate of insurance to the lessor and sends the lessor a new certificate of insurance as required by the equipment lease.

6) ***Valuable Papers and Records Insurance*** provides coverage for the replacement of valuable papers, and records, including those generated by electronic media.

7) ***Automobile Public Liability and Property Damage Insurance*** indemnifies an institution against property and liability losses arising from injury or death when a bank-owned, leased, or rented vehicle is involved. Non-ownership liability insurance should be considered if FHLBank officers or employees use their own vehicles for business purposes.

8) ***Travel Accident Insurance*** provides coverage to directors, officers, and employees on losses sustained as a result of accidental injury or death while traveling on FHLBank business.

9) ***Umbrella Liability Insurance*** provides excess coverage over and above existing liability policies as well as basic coverage for most known risks not covered by existing liability insurance.

10) ***Internet Liability Insurance*** provides coverage against claims that the content and/or performance of an institution's website have adversely affected a customer's business.

11) ***Computer Cyber Crime Insurance*** is specialized coverage that is tailored to the specific needs of the institution, including the technology that is being used and the level of risk of cyber crime involved. Traditional insurance policies such as standard property and commercial general liability may not adequately address the risks of cyber-attack or network security failure.

    Both first- and third- party coverages can be obtained which include:

    a) Loss/corruption of data, which covers the destruction of information due to viruses, worms, Trojan horses, and the like;

    b) Business interruptions, which result in loss of income as a result of an attack on the institution's network that limits its ability to conduct business; and

    c) Liability costs such as defense costs, settlement costs, and punitive damages that may be incurred by the institution as a result of:

        (1) Breach of privacy due to theft of data;
        (2) Transmission of computer viruses, worms, Trojan horses, and the like, which causes financial loss to third parties; and
        (3) Failure of security, which causes network systems to be unavailable to third-parties.

12) ***Employment Practices Liability Insurance*** provides coverage against claims alleging an employment practices violation arising from wrongful dismissal, discharge or termination, harassment, discrimination, employment-related misrepresentation, libel, slander, defamation or wrongful discipline.

13) ***Employee Benefit Plan Fiduciary Liability Insurance*** provides coverage for specific wrongful acts as respects to a fiduciary or as an administrator of the specified employee benefit plans.

14) ***Terrorism Insurance*** is specialized coverage for losses incurred due to terrorist acts.

15) ***Kidnapping, Ransom and Extortion Insurance*** is specialized coverage for executives that travel extensively. The coverage includes international support crisis management, dedicated phone lines, and professionals who will try to resolve or diffuse incidents or situations with the least harm to the kidnapped.

Regulatory Environment

The primary rules, regulations and guidance governing insurance and risk management are set forth below:

1) ***Rules and Regulations of the Federal Housing Finance Board,*** which include parts and sections relevant to insurance management:

   Part 917 of the Finance Board rules and regulations addresses powers and responsibilities of the FHLBank boards or directors and senior management. In particular, Section 917.3, Risk Management, and Section 917. 6, Internal Control System, are pertinent.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of insurance management activities are the following:

   Advisory Bulletin 03-02, dated February 10, 2003, and Advisory Bulletin 02-3, dated February 13, 2002, which offer guidance on specific attributes to be considered by FHLBanks in the formulation of their business continuity plans and the establishment of bilateral agreements with other FHLBanks.

   Advisory Bulletin 05-05, dated May 18, 2005, which provides guidance on the risk management responsibilities of the board of directors, senior management and risk management function.

FHLBank Environment

Within the FHLBanks, the responsibility for the management of the insurance program may differ, as it may be assigned to the facilities management, administrative services, accounting, human resources and/or the legal services functions. Elements of effective insurance management include the following:

1) Coordination of the FHLBank's insurance management program among the institution's key/critical operations such as accounting, credit, collateral, cash management, executive department, funds transfers, investments, community investment services, human resources, safekeeping, document custody operations, financial management, information technology, legal services, and the like so that the risks presented by each area of operation are adequately addressed in the institution's insurance coverages.

2) Continuing communication with the FHLBank's insurance agent/broker. This includes reviewing with such agent/broker periodic surveys and documentation of trends, new issues/developments and claims histories involving the institution. The insurance broker should review changes in an FHLBank's building plans and major equipment installations. In addition, the FHLBank should review with its insurance agent/broker risk exposure changes that occur between insurance review periods.

3) Existence of sound understanding on the part of FHLBank management of changes in the insurance market and available coverages. Independent insurance agents/brokers receive commissions and are therefore financially interested in the sale of insurance policies to the institution. Consequently, they may not provide fully objective advice to an FHLBank regarding insurance needs. An FHLBank should consider engaging an independent insurance consultant to provide a "second opinion" as to the adequacy of the institution's insurance coverages which can be considered by the FHLBank in assessing the desirability of modifications to and enhancements of its insurance program.

4) Documentation and presentation of the annual review of the FHLBank's insurance management program to an appropriate FHLBank management committee for its views as to the adequacy of insurance coverage. Thereafter, the insurance program should be presented to the institution's executive management and the board of directors for review and approval.

Risks Associated with Insurance Management

The primary risks arising in connection with an FHLBank's insurance management program include the following:

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, assessed, and monitored.
b) Information technology is not aligned with the FHLBank's goals and strategies.
c) Responsibility for the operation of the insurance management program has not been assigned.
d) Assigned personnel do not have sufficient knowledge and technical expertise to manage the insurance management program.
e) An assessment of the adequacy of the insurance management program (including specific coverages, exclusions, limitations, current trends/developments) and costs is not communicated to executive management and the board of directors.
f) Background criminal and credit investigations, are not performed on personnel prior to their retention. Periodic credit investigations are not performed and mandatory leave policies have not been established.
g) Duties, responsibilities, and liabilities are not adequately addressed with vendors.
h) The institution's business continuity plan does not address the availability of insurance coverages in the event of a disruption in the institution's business.
i) Internal control weaknesses potentially affecting financial reporting have not been adequately identified, assessed and disclosed.
j) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise to test the control environment.

2) Operational Risk

a) Inadequate coordination with the insurance agent/broker on trends, new issues/developments, claims histories, and current coverages affecting the FHLBank.
b) Lack of a periodic assessment to determine the adequacy of the FHLBank's insurance coverages, taking into account accompanying exclusions, limitations, and costs.
c) Inadequate coordination by the FHLBank's insurance management function with the other key operating areas of the institution as to insurance coverages and accompanying exclusions, limitations, and notification requirements.
d) Failure to adequately address duties, responsibilities, and liabilities with vendors;
e) Failure of the business continuity plan to address insurance considerations.
f) Lack of compliance with internal controls, policies, procedures, and specific requirements of the insurance policies, resulting in rejection of claims by insurers and incurrence of losses by the FHLBank.

Specific Risk Controls Relating to Insurance Management

An FHLBank's controls relating to the insurance management program are set forth below:

1) Corporate Governance

The board of directors and senior management have the ultimate responsibility for the design, implementation, and monitoring of the FHLBank's risk management and internal control environment, including the management of operational risk.

Insurance management is utilized as a risk management tool to mitigate the FHLBank's operational risk. Specific attributes include risk identification and analysis, risk control and risk treatment (retaining or transferring the risk). The board of directors and senior management must determine the maximum loss the FHLBank is able and willing to assume and perform an annual review of the FHLBank's risk management and insurance program.

2) Business Continuity

The potential for liability to an FHLBank arising from defects in its business continuity operations and systems of control should be reflected in the FHLBank's annual risk assessment. Written procedures for operations at its designated hot-site should be developed. For example, back-up tapes should be stored off-site and be easily retrievable. Bilateral relationships with one or more FHLBanks may need to be used to effectuate the FHLBank's activities. Each FHLBank must have at least one back-up system and must test it periodically to ascertain its reliability.

The business continuity plan should address the availability of insurance in the event

of a disruption in the institution's business. The potential for losses and errors may increase due to a disabling event. For example, due to a disabling event, personnel may have to process wire transfer transactions in a manual environment, thereby increasing the possibility for losses due to errors and fraud.

The FHLBank may mitigate its risks and liability with the purchase of specific insurance and bond coverage such as director's and officer's liability, errors and omissions, data reconstruction, and fidelity bond coverage. Where an FHLBank mitigates its operational risk through the maintenance of insurance coverage, the adequacy of such coverage relative to actual loss experience should be periodically assessed.

In addition, the specific limitations, exclusions, notifications, and other clauses of each policy should be reviewed to determine their effects upon the availability of coverage under specific circumstances. Claims may be rejected if the FHLBank has weak controls or fails to follow its internal procedures.

Examination Guidance

A work program for Insurance Management accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's insurance management activities. Examiners should also be aware of and consider how significant issues or findings identified in other work programs could affect the sufficiency of insurance coverage.

1) Organizational structure

a) Functional organization and reporting structure;
b) Identification of key personnel;
c) Primary duties, responsibilities and technical expertise of personnel;
d) Segregation of duties;
e) Cross-training of personnel;
f) Coordination with other departments such as risk management, information technology, treasury and cash management, audit, accounting, credit, collateral, custody, funds transfer, financial management, legal services, and human resources; and
g) Significant changes in the foregoing since the last examination.

2) Establishment of risk tolerances and the development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for insurance management activities, which may include the following:

a) Acquiring types and amounts of coverage adequate for the FHLBank's needs;

b) Establishing an annual review of the insurance policies and applicable endorsements or riders that should be conducted by management and the board of directors to determine the adequacy of the institution's coverage when compared to the institution's perceived risks and its system of internal controls. Specific attributes to evaluate include, but are not limited to, the following:

(1) Representations in the insurance application;
(2) Declarations and insuring clauses.
(3) Conditions precedent to coverage;
(4) Exclusions;
(5) Single loss liability, aggregate limit of liability and deductible amount;
(6) Discovery and notification requirements; circumstances under which the fidelity bond coverage may be cancelled, and termination of coverage as to any employee; and
(7) Timely notice to the insurance company on legal proceedings against the FHLBank.

c) Establishing periodic independent reviews by audit and/or independent expert to assure adequate coverage levels, reasonable premiums, and acceptable terms; and

d) Designating specific personnel who are responsible for filing potential insurance claims and coordinating with senior management and legal counsel, and provide for reporting to the board of directors.

3) Key FHLBank policies and procedures, which may include those relating to the following:

a) Risk management;
b) Information security;
c) Fraud prevention;
d) Whistleblower provisions of SARBOX;
e) Background and credit investigations;
f) Business conduct and ethics;
g) Business continuity and recovery; and
h) Insurance management.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from and controls established by the institution; and

b) Evaluate the effectiveness of evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate

potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of the scope, review, and testing performed by external and internal auditors; and

b) Evaluate the adequacy of the scope, review, and testing performed by outside consultants.

6) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate the workflow, analyses, and processes, as well as controls, including the level and direction of risk and the quality of risk management. Examples of specific attributes include, but are not limited to, the following:

(1) Designation of employee(s) responsible for the management of the insurance management program;

(2) Ongoing communication and coordination with FHLBank's insurance agent/broker that includes the review and consideration of periodic surveys and documentation of trends, new issues/developments, claims histories, and changes in building and equipment installations involving the institution, as well as independent reviews of the adequacy of the institution's insurance coverages by its insurance agent/broker or consultant;

(3) Existence of a sound understanding on the part of FHLBank management (achieved either through FHLBank staff expertise or through the use of an independent insurance consultant) of changes in the insurance market and available coverage without undue reliance upon the FHLBank's insurance agent/broker;

(4) Coordination with and communication of key aspects of the insurance program, including coverages, exclusions, limitations, notification requirements, outstanding litigation and potential claims, to the principal operational areas of the FHLBank;

(5) Establishment of procedures and requirements governing the use of outside consultants/vendors and service providers such as agreements, evidence of fidelity bonds and errors and omissions liability insurance policies;

(6) Satisfaction of insurance requirements that relate to FHLBank's business continuity plans and hot-site; and

(7) Coordination with FHLBank's human resource director or his or her designee with respect to employee-related disciplinary issues which may impact the fidelity bond coverage; and periodic reporting to and review of the insurance management program with senior/line management and the board of directors.

b) Evaluate any significant changes that have been implemented and/or are under consideration with respect to the insurance management program, including systems, processes, and staffing that may affect the control environment.

7) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to, the following:

a) Determine whether revisions and/or adjustments to the insurance program should be considered based on recent surveys, trends/new developments and claims histories involving the FHLBank that have been received from its insurance agent/broker and/or an independent, third party review.

b) Determine whether there are any recommendations that should be made to enhance the insurance management program, based on the documentation of the most recent insurance review.

c) Evaluate the adequacy of insurance coverage by reviewing the FHLBank's current insurance policies, together with accompanying riders and endorsements. Examples of attributes to be reviewed include, but are not limited to, the following:

(1) Representations made in the insurance application;
(2) Declarations and insuring clauses;
(3) Conditions precedent to coverage;
(4) Exclusions such as the untimely notification to the insurance company, failure to perform criminal background and credit investigations on new employees, or inadequate corrective action with respect to employee once fraudulent act has been identified;
(5) Single loss liability, aggregate limit of liability and deductible amount;
(6) Discovery and notification requirements, circumstances under which the fidelity bond coverage may be cancelled by the underwriter and termination of coverage as to any employee; and
(7) Timely notice to the insurance company on legal proceedings against the FHLBank such as fidelity bond, D&O liability policy and errors and omissions liability policy claims.

d) Verify that the status of key attributes of the insurance program, such as specific coverages, exclusions, limitations, notification requirements, costs, comments

from the FHLBank's insurance agent/broker and assessments contained in any independent insurance review, existence of outstanding litigation and potential claims, have been communicated to the appropriate management committee of the FHLBank.

e) Verify that the status of key attributes of the insurance management program have been reported annually to senior management and the board of directors.

f) Obtain personnel files for newly- hired, -transferred and -terminated employees, as well as employees subject to disciplinary action, and perform the following procedures:

(1) Select a sample of personnel files of new employees and verify that the appropriate criminal and credit investigations were performed prior to the employee's retention;

(2) Select a sample of files on current employees in high-risk positions and verify compliance with the FHLBank's anti-fraud policies; and

(3) Review and evaluate disciplinary action taken with respect to the employees and determine if the circumstances giving to the actions potentially affect the fidelity bond coverage of the FHLBank and whether timely corrective action was undertaken by the institution.

g) Evaluate whether requirements under the FHLBank's insurance policies have been addressed in the FHLBank's business continuity plan. Determine if any conditions precedent to coverage may not be satisfied due to a disabling event, such as operating in a manual environment and being unable to record customer transaction requests, verify customer authorizations, or perform callbacks.

8) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

9) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for insurance management activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to insurance management activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and the internal control assessment under SARBOX applicable to insurance management activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its insurance management activities.

6) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow, analyses, and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes in insurance management processes, staffing, or coverage that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

7) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

8) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of risk (low, moderate, high); the direction of risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

9) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

Critical to the success of an organization is the effective management of its information technology (IT). Today's business environment requires increased quality, system integration, functionality and ease of use, decreased delivery time, and continuously improving service levels, while demanding that costs be controlled.

An effective IT program addresses the following key areas:

a) IT governance;
b) Risk management;
c) IT Strategic planning;
d) Project management;
e) Information security;
f) Electronic banking;
g) IT operations;
h) Vendor risk management;
i) Business continuity planning;
j) Audit coverage; and
k) Management Information Systems (MIS).

The term, "key areas" or "key functions" as used in this document refers to the above list.

IT Governance

IT governance is critical to the performance and success of all business activities since IT is an enabler for the various lines of business to succeed. Ultimately, it is the board of directors' responsibility to ensure a satisfactory governance process is in place.

The board of directors typically charters a separate IT Steering Committee (ITSC) to help provide the oversight of the many key areas that present risks to the organization; but, the board itself maintains the ultimate responsibility to ensure that risks from any IT activities are well controlled. It is not uncommon for organizations to have a number of other IT committees to support each key area according to the needs of the organization.

Due to the complexities of IT, governance processes need to be sufficiently robust to determine the level of day-to-day compliance with established policies, practices and procedures in each of the key areas of IT organization. This is achieved in a number of ways and may include the following:

a) Board approved IT policies.
b) Board Packages with timely and informative key-area information.
c) Written IT departmental policies.
d) Written procedures in each of the key functions.

e) Formal processes for line management to self-identify their level of compliance with any relevant IT policy, practice or procedure pertaining to their function, and
f) Formal process to determine if overall policies, practices and procedures are acceptable, if management complies with them, and if any changes are warranted in them.

Risk Management

The ability to mitigate IT risks is dependent upon sound risk assessments. Senior management needs to identify, measure, monitor and control technology to mitigate risks that threaten the efficient operation and the safety and soundness of an institution. Institutions ***plan*** for use of technology; ***assess*** the risk associated with technology; decide how to ***implement*** the technology; and establish a process to ***measure and monitor*** risk that exists in their organizations. All organizations need:

a) An effective planning process that aligns IT with business objectives;
b) An ongoing risk assessment process that evaluates the environment and potential changes;
c) Technology implementation procedures that include appropriate controls; and
d) Quantifiable measurements identified and implemented to effectively monitor efforts that identify risk exposures.

The board should implement policies that establish a satisfactory program to identify, manage, and report risk levels. The program should identify the institution's tolerance for risk, measure the effectiveness of internal controls, establish management's accountability, and identify processes to manage IT effectively.

Strategic Planning

Strategic planning should address short and long-term goals and the allocation of IT resources to achieve them. Tactical plans outline specific steps and timetables to achieve the strategic goals. These should include hardware and software architecture, end-user computing resources, and any processing done by outside vendors. The strategic plan should address the budget, periodic board reporting, and the status of risk management controls.

The board of directors and management should consider a number of factors when planning the institution's use of technology, including:

a) Member demographics;
b) Organizational growth targets;
c) Technology capabilities;
d) Regulatory requirements such as privacy, security, and disclosures;
e) Cost containment;
f) Process improvement and efficiency gains;

g) Customer service and technology performance quality;
h) Outsourcing vs. in-house expertise;
i) Optimal infrastructure for the future; and
j) Ability to adopt and integrate new technology.

The board should oversee management's efforts to create and maintain an alignment between IT and corporate-wide strategies by:

a) Confirming IT strategic plans are aligned with the business strategy;
b) Determining that IT budgets support the planned strategy;
c) Ensuring the IT department is delivering on time, within budget, and to specification;
d) Directing IT strategy to balance investments between systems that support current operations, and systems that transform operations and enable business lines to grow and compete in new areas; and
e) Focusing IT resource decisions on specific objectives such as entry into new markets, enhanced competitive position, revenue growth, improved customer satisfaction, or customer retention.

Operational plans should flow logically from the strategic plan. Management should review and revise them at least annually. Operational planning focuses on short-term actions and incorporates the annual budget process. Management should reference the strategic plans and adjust operational plans based on changes in the underlying business needs.

Operational planning addresses the near-term support for business operations. Specifically, operational planning focuses on immediate concerns such as adequate IT resources, sufficient budget, and appropriate risk identification.

IT Related Project Management

An organization's ability to manage projects successfully is dependent on clearly defined expectations, satisfactory project management processes, realistic budgets, effective communications and adequate oversight by the board and executive management. Ineffectively managed projects often result in late deliveries, cost-overruns, or poor quality applications and may expose the organization to data loss, reputation risk and inability to meet business goals.

Financial institutions use various methods to manage technology projects. The systems development life cycle (SDLC) provides a systematic way to control the numerous tasks associated with development projects. Large projects should be well defined both in time, money or impact to the organization and processes often differ from smaller projects that present less risk.

Each large project should have a well documented cost-benefit analysis, clearly identified project management methodologies, and budgetary controls to help meet desired goals in

an acceptable manner. Smaller projects should be itemized in a centralized list and tracked to ensure that controls are effective. The board, or board-designated committee should periodically review the status of all significant projects as well as keep abreast of smaller projects via the centralized list. Proper documentation should be available to support significant deviations from approved procedures, goals, time-frames, or major changes.

The size and complexity of a project dictates the required number and qualifications of project personnel. Duties may overlap in smaller organizations or lower-risk projects; however, all projects should include appropriate segregation of duties or compensating controls.

Information Security

Information security is the process by which an organization protects and secures systems, media, and facilities that process and maintain information vital to its operations. The FHLBanks and their service providers should maintain effective security programs adequate for their operational complexity, and the security programs should have satisfactory board and senior management level support, integration of security responsibilities and controls throughout the organization's business processes, and clear accountability for carrying out security responsibilities.

Institutions protect their information by instituting a security process that identifies risks, forms a strategy to manage the risks, implements the strategy, tests the implementation, and monitors the environment to control the risks. This is accomplished by meeting the following objectives:

a) ***Availability***-addresses the processes, policies, and controls used to ensure authorized users have prompt access to information. This objective protects against intentional or accidental attempts to deny legitimate users access to information and/or systems.

b) ***Confidentiality of data or systems***-addresses the processes, policies, and controls employed to protect information of customers and the institution against unauthorized access or use.

c) ***Integrity of data or systems***-relates to the processes, policies, and controls used to ensure information has not been altered in an unauthorized manner and that systems are free from unauthorized manipulation that will compromise accuracy, completeness, and reliability.

d) ***Accountability***-involves the processes, policies, and controls necessary to trace actions to their source. Accountability directly supports non-repudiation, deterrence, intrusion prevention, intrusion detection, recovery, and legal admissibility of records.

e) ***Assurance***-addresses the processes, policies, and controls used to develop confidence that technical and operational security measures work as intended. Assurance levels are part of the system design and include availability, integrity, confidentiality, and accountability.

The security process is the method an organization uses to implement and achieve its security objectives.

a) ***Information Security Risk Assessment-***A process to identify threats, vulnerabilities, attacks, probabilities of occurrence, and outcomes.

b) ***Information Security Strategy-***A plan to mitigate risk that integrates technology, policies, procedures and training. The plan should be reviewed and approved by the board of directors.

c) ***Security Controls Implementation-***The acquisition and operation of technology, the specific assignment of duties and responsibilities to managers and staff, the deployment of risk-appropriate controls, and assurance that management and staff understand their responsibilities and have the knowledge, skills, and motivation necessary to fulfill their duties.

d) ***Security Testing-***The use of various methodologies to gain assurance that risks are appropriately assessed and mitigated. These testing methodologies should verify that significant controls are effective and performing as intended.

e) ***Monitoring and Updating-***The process of continuously gathering and analyzing information regarding new threats and vulnerabilities, actual attacks on the institution or others combined with the effectiveness of the existing security controls. This information is used to update the risk assessment, strategy, and controls. Monitoring and updating makes the process continuous instead of a one-time event.

Information security is the responsibility of everyone at the institution, as well as the institution's service providers and contractors. The board, management, and employees all have different roles in developing and implementing an effective security process. A failure in any one group impacts the entire organization.

The board of directors is responsible for overseeing the development, implementation, and maintenance of the institution's information security program. Oversight requires the board to provide management with adequate guidance and appropriately review security reports on the effectiveness of the overall information security program.

The board needs to approve written information security policies and the information security program at least annually. The board should provide management with its expectations and requirements for:

a) Central oversight and coordination;
b) Areas of responsibility;
c) Risk measurement;
d) Monitoring and testing;
e) Reporting; and
f) Acceptable residual risk.

Security officers are responsible and accountable for security administration. At a minimum, they should directly manage or oversee risk assessment, development of policies, standards, and procedures, testing, and security reporting processes. Security officers are responsible for responding to security events and need to have sufficient authority to order emergency actions to protect the financial institution and its members from an imminent loss of information or value. They need to have sufficient knowledge, background, and training, as well as be in an organizational position which enables them to perform their assigned tasks.

A central authority should be responsible for establishing and monitoring the security program. Preferably, this should be performed within the context of a comprehensive, enterprise-wide compliance program that also includes IT. Security management responsibilities, however, may be distributed throughout the institution from the IT department to various lines of business depending on the institution's size, complexity, culture, nature of operations, and other factors. The distribution of duties should ensure an appropriate segregation of duties between individuals or organizational groups.

Senior management is responsible for ensuring the integration of security controls across the organization. Effectively integrated controls will:

a) Ensure the security process is governed by organizational policies and practices that are consistently applied;
b) Require that data with similar criticality and sensitivity characteristics be protected consistently regardless of where in the organization it resides;
c) Enforce compliance with the security program in a balanced and consistent manner across the organization;
d) Develop an acceptable data classification program;
e) Develop an acceptable document retention program; and
f) Coordinate information security with physical security.

Employees should know, understand, and be held accountable for fulfilling their security responsibilities. Institutions should define these responsibilities in their security policy. Job descriptions or contracts should specify any additional security responsibilities beyond the general policies. Financial institutions can achieve effective employee awareness and understanding through security training, employee certifications of compliance, self-assessments, audits, and monitoring.

Management also should consider the roles and responsibilities of external parties. Technology Service Providers (TSPs), contractors, customers, and others who have access to the institution's systems and data should have their security responsibilities clearly delineated and documented in contracts.

Electronic Banking

Electronic banking (E-Banking) is defined as the automated delivery of banking products and services directly to customers through electronic, interactive communication channels. E-Banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the internet. The primary access to the products and services are obtained through informational and transactional websites.

Informational websites provide members access to general information about the financial institution and its products or services. Specific risks to be considered are as follows:

a) Potential liability and violations for inaccurate or incomplete information about products, services, and advance pricing presented on the website;
b) Potential access to confidential financial institution or member information if the website server is not properly isolated from the financial institution's internal network;
c) Potential liability for spreading viruses and other malicious code to computers communicating with the institution's website; and
d) Negative public perception if the institution's on-line services are unavailable during normal business hours, are disrupted for an extended period, or if its website is defaced or otherwise presents inappropriate or offensive material.

Transactional websites provide members with the ability to view and/or conduct transactions through the financial institution's website by initiating banking transactions or buying products and services. Transactions can range from something as basic as viewing a member's demand deposit account to implementing a recurring wire transfer to pre-established beneficiaries, conducting a security purchase and/or sale(s), or submitting an advance request.

Since transactional websites typically enable the viewing of account balances, or conduct an electronic exchange of confidential member information and the transfer of funds, services provided through these websites expose the FHLBank to higher risk than basic informational websites.

Wholesale E-Banking systems such as wire transfers typically expose FHLBanks to the highest risk per transaction, since commercial transactions usually involve larger dollar amounts. Specific risks to be considered include:

a) Security controls for safeguarding member information;
b) Authentication processes necessary to initially verify the identity of new members and authenticate existing members who access electronic banking services;
c) Liability for unauthorized transactions;
d) Losses from fraud if the institution fails to verify the identity of individuals or businesses applying for new accounts or credit on-line;
e) Possible violations of laws or regulations pertaining to privacy, anti-money laundering, anti-terrorism, or the content, timing, or delivery of required disclosures; and
f) Negative public perception, member dissatisfaction, and potential liability resulting from failure to process third-party payments as directed or within specified time frames, lack of availability of on-line services, or unauthorized access to confidential information during transmission or storage.

IT Operations

One of the primary responsibilities of IT operations management is to ensure the institution's current and planned infrastructure can satisfactorily support the strategic plans of senior management and the board in a safe and sound manner. To accomplish this objective, operations management should ensure the institution has sufficient personnel in knowledge, experience, and number, system capacity and availability, program integration, and storage capacity to achieve strategic objectives. Operations management should select or recommend technology solutions that can meet strategic requirements with reduced resources to control capital expenditures and operating costs.

Management should have an inventory of all of the institution's technology assets, maintain documentation noting all interdependencies of these systems and should understand how these systems support the associated business lines. Additionally, management should understand the flow of data across and between systems. Adequate documentation of infrastructure and data flow facilitates risk identification, application of controls, and ongoing maintenance of information systems. Procedures should be established to identify and remove outdated and/or unsupported hardware and software.

IT operations management should establish procedures to stay abreast of security patches, to test them in a segregated environment, and to install them when appropriate. Change management procedures should require documentation of any patch installations. Procedures should be established to address the version controls of operating and application software to ensure the implementation of the latest releases such as maintaining a record of versions in place, and ongoing monitoring for product enhancements, security issues, patches or upgrades, or other problems with current versions of the software.

Management should implement a cost-effective and risk-focused control environment. The control environment should provide guidance, accountability, and enforceability while mitigating risk. Management should periodically assess the effectiveness of the

control environment, which may be evaluated through self-assessments or other means. Management should also regularly test the results of the assessments through audits or other independent verification. Detailed internal control assessments performed to meet Sarbanes-Oxley (SARBOX) Act requirements are an adjunct to the internal audit process, and not a substitute for internal audits.

To ensure sound recovery operations management should develop a business continuity plan (BCP). IT systems should have robustness, resiliency, redundancy and capacity sufficient to accommodate ordinary interruptions to operations and to facilitate prompt restoration without escalating to more drastic and costly disaster recovery procedures. Operations management staff should recognize any limitations of IT operations staff and be prepared to obtain professional assistance. At times, it may be more efficient and cost effective to acquire outside expertise than to hire and train new employees, especially for functions that do not require full-time personnel.

Operations management should ensure the operating environment is physically and logically secure. Sound IT operations management also includes providing adequate staffing through personnel selection, succession plans, and employee training. Hiring practices that result in an appropriate number of skilled staff promote smooth, continuous, and efficient operations. Ongoing training is vital to maintaining creative, motivated, and knowledgeable employees.

Operations management needs to have a good set of automated tools to help assist in monitoring key performance indicators (KPIs). Essential KPIs include memory capacities, storage capacity, bandwidth, key utilizations by time of day per unit and an enterprise-wide assessment of these factors. KPI monitoring expands as complexities increase.

Vendor Risk Management

Financial institutions increasingly rely on external or third-party TSP service providers for a variety of technology-related services. External service providers can sometimes provide low-cost processing and other IT-related services that are more adaptive to the enterprise than internally provided services. Generally, the term “outsourcing” is used to describe these types of arrangements.

Outsourcing, however, does not reduce the fundamental risks associated with information technology nor does it remove the FHLBank’s responsibilities for controlling risk. Risks such as loss of funds, loss of competitive advantage, damaged reputation, improper disclosure of information, and regulatory action remain. When the functions are performed by an organization outside the financial institution, the risks may be realized in a different manner than if the functions were inside the financial institution, resulting in the need for controls designed to monitor such risks.

Financial institutions can outsource many areas of operations, including all or part of any service, process, or system operation. Examples of information technology operations frequently outsourced by institutions include: the origination, processing, and settlement of payments and financial transactions; information processing related to customer account creation and maintenance; information and transaction processing activities that support critical banking functions, such as loan processing, deposit processing, fiduciary and trading activities; payroll; security monitoring and testing; system development and maintenance; network operations; help desk operations; and call centers.

Management may choose to outsource operations for various reasons. These include:

a) Gain operational or financial efficiencies;
b) Increase management focus on core business functions;
c) Refocus limited internal resources on core functions;
d) Obtain specialized expertise;
e) Increase availability of services;
f) Accelerate delivery of products or services through new delivery channels;
g) Increase ability to acquire and support current technology and avoid obsolescence; and
h) Conserve capital for other business ventures.

Before considering the outsourcing of significant functions, an institution's directors and senior management should ensure such actions are consistent with their strategic plans and should evaluate proposals against well-developed acceptance criteria. The degree of oversight and review of outsourced activities will depend on the criticality of the service, process, or system to the institution's operation. Management should consider the following factors in evaluating the quantity of risk at the inception of an outsourcing decision.

Risks pertaining to the function outsourced include:

a) Sensitivity of data accessed, protected, or controlled by the service provider;
b) Volume of transactions; and
c) Criticality to the financial institution's business.

Risks pertaining to the service provider include:

a) Strength of financial condition;
b) Turnover of management and employees;
c) Ability to maintain business continuity;
d) Ability to provide accurate, relevant, and timely applications;
e) Experience with the function outsourced;
f) Reliance on subcontractors;
g) Location, particularly if cross-border or foreign-based third party service providers; and

h) Redundancy and reliability of data lines.

Risks pertaining to the technology utilized include:

a) Reliability;
b) Security; and
c) Scalability to accommodate growth.

Financial institutions should have a comprehensive outsourcing risk management process to govern their TSP relationships. The process should include risk assessment, selection of service providers, contract review and service level agreements, and monitoring of service providers such as SAS 70 reports, evaluation of financial condition, insurance, etc.

Outsourced relationships should be subject to the same risk management, security, privacy, and other policies that would be expected if the financial institution were conducting the activities in-house. Depending on the type of outsourced process, there may be SARBOX compliance implications if the SAS 70 scope is not of the correct type. A "Type 1" controls attestation SAS 70 may not be adequate for a mission-critical or financial type process. A more detailed, control testing "Type 2" SAS 70 would be required for a TSP providing a mission-critical service that affects financial statements.

Business Continuity Planning and Recovery

Section 917.3(b)(3)(v) of the Finance Board's regulations requires each FHLBank's board of directors to set forth standards for the FHLBank's management regarding business risk including contingency plans, where appropriate. The Finance Board's Advisory Bulletin 03-2, Business Continuation Contingency Planning, discusses bilateral agreements to act as surrogates for each other in the event a debilitating event affected one of the FHLBanks.

The following factors are critical aspects of effective business continuity planning:

Distance between the production site and the recovery site should be carefully assessed. A recovery site that is too close may not be available in certain type of circumstances, and a recovery site that is too far may be a hindrance to realize a fast recovery and meet the recovery goals of the FHLBanks and the Office of Finance.

a) Business continuity planning and recovery should be conducted on an enterprise-wide basis at least annually, and more often if the test revealed issues that need to be addressed.
b) A thorough business impact analysis and risk assessment (BIA) is the foundation of an effective BCP and therefore, the BIA should be updated at least annually.
c) Business continuity planning and recovery is more than the recovery of the technology; it is aimed at the recovery of the business. Line management should

ascertain how long they can function without electronic processes and should clearly identify what responsibilities/functions should continue to be done in the absence of electronic processes being available.

d) The effectiveness of a BCP can only be validated through thorough volume testing. Volume testing for this purpose denotes a level of test transactions that affirms the ability of the back up system to accept input, process, and generate output acceptable to conduct the FHLBank's various lines of businesses.
e) The BCP and test results should be subjected to independent audit or assessment.
f) A BCP should be periodically updated to reflect and respond to changes in the institution, and
g) The IT Division should also have a business resumption plan that covers personnel, equipment, and key contracts for the support of IT activities.

IT Audit (Internal, External, and Outsourced)

A well-planned, properly structured audit program is essential to evaluate risk management practices, internal control systems, and compliance with corporate policies concerning IT-related risks at institutions of every size and complexity. The audit program should address IT risk exposures throughout the institution, including the areas of IT management and strategic planning, data center operations, client/server architecture, local and wide-area networks, telecommunications, physical and information security, electronic banking, systems development, and business continuity planning. IT audit should also focus on how management determines the risk exposure from its operations and controls or mitigates that risk.

Examiners should consider the following issues when evaluating the IT audit function:

a) Independence of the audit function and its reporting relationship to the board of directors or its audit committee;
b) Identification of the IT audit universe, risk assessment, scope, and frequency of IT audits;
c) Processes in place to ensure timely tracking and resolution of reported weaknesses; and
d) Documentation of IT audits, including work papers, audit reports, and follow-up.

It is important to note that SARBOX control self-assessments are not audits since the self-assessments are usually performed by the business lines and thus are not independent. Internal/External audit should not rely on these self-assessments or substitute them for independent audit work but can utilize them to gain an understanding of the controls in a functional area.

Management Information Systems (MIS)

A management information system (MIS) is a system or process that provides the information necessary to manage the FHLBank effectively and efficiently. MIS and the

information it generates are generally considered essential components of prudent and reasonable business decisions and are designed to:

a) Facilitate the assessment of and management of risks within the institution;
b) Provide management with an adequate decision support system by providing information that is timely, accurate, consistent, complete and relevant;
c) Deliver complex material throughout the institution;
d) Support the organization's strategic goals and objectives;
e) Provide an objective system for recording and aggregating information;
f) Reduce expenses related to labor-intensive manual activities; and
g) Enhance communication with employees and customers.

The importance of maintaining a consistent approach to the development, use and review of MIS systems within the institution should be an ongoing concern of both FHLBank management and the examiners. Every line of business in the FHLBanks is heavily dependent upon technology to be successful, thus MIS should have a clearly defined framework of guidelines, policies or practices, standards, and procedures for the organization. These should be followed throughout the institution in the development, maintenance and use of all MIS.

Regulatory Environment

The primary authorities governing, or relevant to, information technology of the FHLBanks are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to information technology:

Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4 Bank Member Products Policy, and Section 917.6, Internal Control System, are pertinent.

Section 917.5 requiring the FHLBank's board of directors to have a strategic business plan that describes how the business activities of the FHLBank will achieve its mission consistent with Part 940 (Core mission activities).

Section 917.7, addresses the powers, duties and responsibilities of the audit committees and oversight of the internal audit function. These responsibilities should be detailed in a charter and approved by the board of directors. The charter should be re-approved at least every three years.

Section 917.8, requires the board of directors to be responsible for the adoption of the FHLBank's annual operating expense budget and capital expenditures, and with the FHLBank's responsibility to protect both its members and the public interest by keeping its costs to an efficient and effective minimum.

Section 989.3, addresses the preparation and completion of the FHLBank's financial statements, and the distribution of financial information and other information to the Finance Board and the Office of Finance.

2) ***Advisory Bulletins of the Federal Housing Finance Board that provide supervisory guidance relating to the topic of information technology activities are:***

Advisory Bulletin 02-02 dated February 13, 2002, which provides guidance on the annual reporting of the FHLBank's strategic plan to the Finance Board.

Advisory Bulletin 03-02 dated February 10, 2003 and Advisory Bulletin 02-3 dated February 13, 2002, which provides guidance on specific attributes to be considered by FHLBanks in the formulation of their business continuity plans, and the establishment of bilateral agreements with other FHLBanks.

Advisory Bulletin 04-01 dated March 10, 2004, which provides guidance on the evaluation of a service organization providing services to an FHLBank whose activities could affect the FHLBank's financial condition. This includes the performance of an assessment of the service organization's internal controls, such as the procurement of a service auditor's report in accordance with Statement of Auditing Standards No. 70 (SAS 70) or the performance of alternative methods.

Advisory Bulletin 05-05 dated May 18, 2005, which provides guidance on the risk management responsibilities of the board, senior management and risk management function.

3) ***United States Code Title 18 Section 1030-Fraud and related activity in connection with computers*** provides for fines and/or imprisonment for the unauthorized access or exceeding authorized access to a computer and thus obtaining protected information, including nonpublic financial information.

4) ***Issuances of the Federal Financial Institutions Examination Council (FFIEC)*** that address specific guidance, controls and procedures applicable to information technology examinations. Specific FFIEC examination booklets are available covering such topics as:

a) IT Audit;
b) Business Continuity Planning;
c) Development and Acquisition;
d) E-Banking;

e) Information Security;
f) Management;
g) Operations;
h) Outsourcing Technology Services;
i) Retail Payment Systems;
j) Supervision of Technology Service Providers; and
k) Wholesale Payment Systems.

5) Federal Reserve Bank Operating Circulars and Appendices that set forth the terms for maintaining accounts with and obtaining other services from the Federal Reserve Banks. Specifically:

a) Operating Circular No. 1-Account Relationships, Agreements and Forms;
b) Operating Circular No. 5-Electronic Access, Certification Practice Statement, and Password Practice Statement;
c) Operating Circular No. 6-Funds Transfers Through the Fedwire Funds Service; and
d) Operating Circular No. 12-Multilateral Settlement.

6) Issuances of the Board of Governors of the Federal Reserve System (Board) and Federal Financial Institutions Examination Council that address specific controls and procedures as to Fedwire and privately operated payment systems. Specifically:

a) Board of Governors System FedLine Advantage References;
b) FFIEC Information Technology Handbooks, such as Information Security, Business Continuity Planning and Wholesale Payment Systems; and
c) FFIEC Guidance-Authentication in an Internet Banking Environment.

FHLBank Environment

Information technology environments vary due to various factors such as corporate governance, business strategies, risk management/assessment, products, services, personnel, hardware/software, and processing methodologies. In addition, due to staffing limitations and required technical expertise, specific processes and independent testing may be outsourced.

When evaluating the adequacy and effectiveness of information technology activities, examiners should review the FHLBank's policies and procedures against actual practices. If the review of actual practices discloses significant internal control deficiencies, the examiners should be alert to overall weaknesses with corporate governance and independent testing.

Risks Associated with Information Technology

An FHLBank's primary risks relating to the information technology are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Information technology is not aligned with the bank's goals and strategies.
b) Key risks and controls are not adequately identified, assessed, and monitored.
c) The FHLBank's financial performance and compliance with established risk tolerances, goals, policies, procedures, accounting and regulatory requirements are not properly reviewed and monitored due to inadequate, inaccurate and/or untimely reporting to the board of directors and senior/line management. Original establishment of risk tolerances, threshold guidelines, etc., are not well documented on how they were determined.
d) A lack of establishment of an acceptable IT Compliance Program that provides ongoing process to identify missing controls, or controls that are not meeting expectations.
e) Weak architecture design which may not support current operations as well as future operations that meet the corporate goals of growth, capacity needs, etc.
f) Lack of a robust firewall architecture to implement a satisfactory physical dual-layered firewall architecture with sufficient redundancy at the primary (network facing) firewall layer as well as at the perimeter (internet facing) firewall layer.
g) Lack of satisfactory separation of duties for the security administration function. Maintaining insufficient security tools, lack of security policy monitoring, and lack of self-identification.
h) Security is built and monitored by the same individuals versus separating the security functions into at least two major areas - the policy and testing function from that of the day-to-day build, add, modify and or delete functions.
i) Internal control weaknesses potentially affecting financial reporting have not been adequately identified, assessed and disclosed, or evaluated for the determination of the risk imposed as a result of control weaknesses.
j) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.
k) Background credit and criminal investigations are not performed on personnel prior to their retention. Periodic credit investigations are not performed and mandatory leave policies have not been established or enforced.
l) Duties, responsibilities, and liabilities are not adequately addressed with outside service providers and vendors.
m) Losses due to errors and fraud are not effectively mitigated through insurance or other means.
n) Regulatory requirements are not complied with due to errors and/or deficiencies affecting the vendor software.
o) Independent audit coverage and testing is limited. Staff is inexperienced or lacks the technical expertise to test the control environment.

p) Lack of data classification policies and document retention policies and supporting processes to provide guidance how to store, protect, and, archive data in a sound manner.
q) Lack of End User Computing (EUC) policies and supporting processes to ensure adequate controls are in place to safeguard data, maintain proper documentation and ensure all IT policies, standards and guidelines are satisfactory met.

2) Operational Risk

a) Management information systems do not adequately meet the needs of the FHLBank's lines of business resulting in various manual processes such as user developed applications and workarounds which can result in errors and misstated financial results.
b) IT key performance standards (KPIs) are not identified or not based on historical information and business goals. IT KPIs are not being measured and reported to line management.
c) Inside and/or an outside threat gains unauthorized access to system information, or an internal or external user inadvertently damages the integrity of critical information resulting in the following:
   i) Possible financial loss due to an unauthorized transaction;
   ii) Loss of data integrity due to an unauthorized modification, deletion or input of erroneous transactions;
   iii) Loss of availability due to use of malicious software, software with viruses, etc. that make the systems unavailable;
   iv) Loss of confidentiality; and
   v) Loss of public confidence and credibility due to compromise of the external website and/or internal bank systems.
d) Viruses, worms and/or other malware infiltrate the FHLBank's systems resulting in corrupt files, loss or stolen data, system unavailability, slow response times, etc.
e) Unauthorized purchase of new applications or modifications/changes to existing systems which may be incompatible with the operating system.
f) Patches and updates to existing applications are not being monitored, reviewed and tested for compatibility to the operating system.
g) Systems are impacted by hurricane, flood, bomb, fire, etc. Power issues such as a long term outage or spike surge could cause the FHLBank and customers to lose availability of critical systems and data.
h) Technology inventory such as hardware, software, network components, media storage, etc. is not accurate, updated or completed on an on-going basis.
i) SAS 70 reviews are not obtained, nor alternative methods performed to obtain assurances on the outside service provider's internal control environment.
j) Insurance coverage had not been evaluated and obtained to mitigate the FHLBank's risks and exposure.
k) Procedures that pertain to the destruction and retention of records have not been established.

l) A lack of pre-planning capacity estimation processes, or omission of key capacity monitoring such as memory, telecommunication channels, central processing units, etc.
m) Maintaining inadequate separation between production process environment and development and/or testing environments.
n) End User Computing lacks adequate processes to ensure that all lines of business adequately control EUC processes, that a complete inventory is maintained and that sufficient controls are in place for each EUC application to ensure safe, accurate and timely outputs is achieved.
o) Not establishing sufficient controls to prevent unauthorized software from being introduced into the FHLBank's or the Office of Finance's processing environments. Not establishing sufficient controls to detect unauthorized software.

Specific Risk Controls Related to Information Technology

An FHLBank's controls relating to information technology are set forth below.

1) Corporate Governance

The board of directors and senior management have the ultimate responsibility for the design, implementation, and monitoring of the FHLBank's internal control environment. The internal controls should address the FHLBank's tolerance for risk, the effectiveness of internal controls, management's accountability in regards to risk mitigation, and the processes needed to manage information technology effectively and efficiently.

Specific internal control environment include the identification of the key risks, implementation of controls, organizational structure, departmental policies and procedures, managerial review and exception reporting, hiring practices and business contingency planning, and retention of staff possessing the necessary technical expertise. Ideally, information technology should be included in an enterprise-wide compliance program to ensure that policies and procedures are complied with and functioning as intended.

2) Business Continuity and Recovery

Business continuity planning is the process whereby the FHLBank ensures the maintenance or recovery of operations, including services to members, when confronted with adverse events such as natural disasters, technological failures, human error, or terrorism. The objectives of a business continuity plan are to minimize financial loss to the institution, continue to serve members and financial market participants; and mitigate the negative effects disruptions can have on an FHLBank's strategic plans, reputation, operations, liquidity, credit quality, market position and ability to remain in compliance with applicable laws and regulations.

Information technology personnel have a leadership role in the FHLBank's business continuity plan. This includes prioritizing critical business functions, and identifying the necessary resources to creating, maintaining and testing the plan.

For example, the FHLBank should have written procedures for operations at its designated hot-site. Back-up tapes should be stored off-site and be easily retrievable. Bilateral agreements with one or more FHLBanks may need to be used to effectuate the FHLBank's activities. Each FHLBank should have at least one back-up system and should test it periodically to ascertain its reliability.

3) Insurance

The potential for liability to an FHLBank arising from its information technology activities and its system of control should be reflected in the FHLBank's annual risk assessment. The FHLBank may mitigate its risks and liability with the purchase of specific insurance and bond coverage such as directors and officers' liability, errors and omissions, computer cyber crime policies and fidelity bond coverage. Where an FHLBank mitigates its operational risk through the maintenance of insurance coverage, the adequacy of such coverage relative to actual loss experience should be periodically assessed.

In addition, the specific limitations, exclusions, notifications, and other clauses of each policy should be reviewed to determine their effects upon the availability of coverage under specific circumstances. Claims may be rejected if the FHLBank has weak controls or fails to follow its internal procedures.

Examination Guidance

A work program for Information Technology accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's information technology activities.

1) Organizational Structure

a) Evaluate the organizational chart and determine if there is sufficient separation of duties at the functional level to achieve the desired IT goals of the enterprise;
b) Functional organization and reporting structure;
c) Identification of key personnel;
d) Primary duties, responsibilities and technical expertise of personnel;
e) Segregation of duties;
f) Cross-training of personnel;

g) Coordination with other departments such as risk management, business lines, executive management, and human resources; and
h) Significant changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for information technology, which may include the following:

a) Determine if the organization has adopted sufficient board approved policies that support all key areas of the IT function;
b) Determine if senior management has appropriately complemented board policies with departmental policies, procedures, guidelines, standards and practices;
c) Determine if any key policy, procedure, or standards have not been formalized and implemented;
d) Determine if the organization has established sufficient oversight. Consider all committees, management groups, etc., to effectively monitor IT activities, establish adequate controls, monitor projects, identify risks and provide proper oversight to all key areas of IT operations;
e) Evaluate the information provided to the board of directors and/or committees and evaluate the completeness of IT information provided;
f) Determine the effectiveness of how the organization aligns business needs with IT activities;
g) Determine if the organization has implemented an effective IT Compliance Program to ensure a satisfactory compliance with key policies, procedures, guidelines and thresholds desired;
h) Determine how management identifies, updates and maintains a satisfactory level of compliance with applicable federal and state regulations;
i) Determine if the FHLBank has formally implemented a process to maintain an effective and updated IT Standards Manual(s);
j) Determine if management information systems (MIS) are adequate to measure the performance based on clearly defined goals and objectives; and
k) Interview management and determine if any significant changes have been implemented and/or are under consideration with respect to information technology activities. Consider systems, processes, staffing, and utilization of outside consultants that may affect the processing, telecommunications or recovery environments.

3) Key FHLBank policies and procedures, which may include those relating to the following:

a) Enterprise-wide IT policy;
b) Risk management policy;
c) Information security policy;
d) Business resumption policy;

e) Systems programming and development policy (System Development Life Cycle);
f) Change management policy;
g) Document retention policy;
h) Data classification policy;
i) Vendor management policy;
j) Fraud prevention policy;
k) Whistleblower provisions of SARBOX;
l) End-user computing;
m) Database management;
n) Evaluate the work flow and processes used to implement an effective network architecture and maintain related documentation and work flow diagram current; and
o) Identify changes from the prior examination and determine if management has complied with acceptable change management practices.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from technology use.
b) Evaluate controls established by the institution concerning technology use and determine if management has an acceptable process in place to verify the effectiveness of those controls. Note, this is a management driven task and audits do not eliminate the need for management to self-assess;
c) Evaluate the effectiveness of evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external and internal audit and outside consultants

a) Evaluate the effectiveness of internal audit activities; consider audit staff participation in key IT meetings such as project discussions, strategic planning, and security planning.
b) Evaluate the effectiveness of audits completed by selecting audit reports and audit work papers.
c) Evaluate the effectiveness of audit reporting by reviewing audit reports to the board of directors and/or committees of the board.
d) Evaluate the effectiveness of scope and testing performed by outside consultants specific to technology.

6) Information Security Administration

a) Evaluate the enterprise-wide data security program. Specific attributes include, but are not limited to the following:

(1) Security automated tools;
(2) Intrusion detection tools;
(3) Staff skill set(s);
(4) Data classification policies;
(5) Network architecture, including demilitarized zones;
(6) Firewall rules;
(7) Intrusion detection systems and alert reporting;
(8) Incident response strategies;
(9) Database protection schemes;
(10) Data encryption;
(11) Segmentation of production, test, and development environments;
(12) Separation of duties at the IT level as well as the line of business level;
(13) User education;
(14) Vulnerability assessments;
(15) Penetration tests;
(16) Reporting to senior management as well as to committees and the board;
(17) Post mortems assessments;
(18) Consultants, technical service providers, temporary employees; and
(19) End-user computing.

b) Evaluate the effectiveness of board oversight concerning security related events.
c) Identify changes from the prior examination and determine if management has complied with acceptable change management practices.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate workflow and processes as well as controls, including the level and direction of risk and the quality of risk management; and
b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the FHLBank's operational risk profile.

8) Testing

Conduct testing as appropriate taking testing performed by other examiners into consideration. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to, the following:

a) Obtain and evaluate management information system reports used by management to determine their level of compliance with established policies, procedures, guidelines, thresholds and determine if management takes appropriate action when weaknesses are identified.
b) Review the documentation used to develop the risk assessment and determine if sufficient quantifiable data was used to make informed decisions.

c) Review minutes of any strategic planning done between the IT division and executive management for the purpose of aligning IT Strategic Plans and determine if appropriate documentation evident an effective process.
d) Select a major project either recently completed, in-process or in early stages of planning and review documentation to determine if the organization is in compliance with satisfactory policies, practices or procedures concerning that project. Determine how management determines they are in satisfactory compliance. Consider if major projects have control points before releasing additional funding.
e) Select a key element of information provided to the board and determine how the information was gathered, how management determined its accuracy and if it properly reflects what it reports.
f) Obtain a list of all information security reports that are completed on a frequency basis, and evaluate the effectiveness of the information and management's action(s) to address risks identified.
g) Interview security officers and evaluate their ability to prevent, detect and report and take corrective action when warranted.
h) Obtain copies of network diagrams that detail servers, routers, firewalls, and supporting system components. Determine if these diagrams are current and if any risks are evident as a result of work flows or lack of security points.
i) Obtain and review management asset inventories. Evaluate the process used to maintain the inventories current.
j) Review documentation supporting Systems Development and Programming.
k) Evaluate the effectiveness of monitoring system reliabilities, capacities, and response times. Consider if the organization does adequate assessments for these key performance indicators as well as being able to identify trends.
l) Select a recent outsource project and evaluate if management has implemented sufficient controls to ensure data protection.
m) Evaluate the effectiveness of the organization's data classification policy.
n) Evaluate the effectiveness of the organization's document retention policy.
o) Evaluate the effectiveness of user-acceptance processes; consider how scripts are developed as well as how achievements are defined.
p) Select a recent change to an application and evaluate the effectiveness of change control procedures; considering the organization's Change Control Policy. Identify any weakness in the Policy or in the process.
q) Evaluate the effectiveness of the organization's database processes; consider the level of database use, separation of duties, sensitivity of information, access controls and platforms used to support databases.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit,

operational); the level of risk (low, moderate, high); the direction of risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Information Technology
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for information technology activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank information technology policies and procedures. Determine if the policies and procedures promote a sound technology control environment that ensures integrity of financial data.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and the internal control assessment under SARBOX applicable to information technology activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its information technology activities.

6) Information Security Administration

Evaluate the effectiveness of the enterprise-wide information security administration of the organization, taking into consideration internal and external threats to data.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the dataflow and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to information technology that have been implemented since the last examination or are being considered that may affect the FHLBank's operational risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of risk (low, moderate, high); the direction of risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

The core purpose of liquidity management for an FHLBank is being able to obtain funding when it is needed. Section 917.1 of the Finance Board regulations defines liquidity risk as the risk that an FHLBank will be unable to meet its financial obligations as they come due or meet the credit needs of its members and associates in a timely and cost-efficient manner. Section 917.3 also establishes guidelines requiring all FHLBanks to maintain a risk management policy that addresses standards regarding day-to-day operational liquidity needs and contingent liquidity needs, including: an enumeration of specific types of investments to be held for such liquidity purposes; and the methodology to be used for determining the FHLBank's operational and contingency liquidity needs.

In general, FHLBank System liquidity is high. The primary source of funding is the consolidated obligations (COs) issued by the Office of Finance. Each FHLBank has uninterrupted access to these CO bonds and other debt securities as a government sponsored enterprise (GSE), allowing it to raise sufficient funds to meet its potential liquidity needs. However, liquidity issues may arise when an FHLBank's access to capital markets is impeded due to a disaster or the inability of the Office of Finance to issue COs.

While FHLBank System liquidity is generally high, the increasingly complex funding of mortgage-related and option-embedded or structured assets can create liquidity management challenges for the FHLBanks. Such option-embedded assets and liabilities make it difficult for the FHLBanks to accurately estimate cash flows and the amount of cash needed to meet both operational liquidity needs (funds needed in the normal course of business) and contingent liquidity needs (funds needed for operational needs when access to capital markets is impeded). The increased use of global wholesale funds providers and the growth of assets, liabilities, and derivative financial instruments with uncertain maturities make it increasingly important for FHLBanks to properly manage their liquidity.

Traditionally, FHLBanks have relied upon domestic and global institutional investors. These wholesale sources of funds are generally highly stable and low cost. FHLBanks may also accept demand and time deposits from members; however, member deposits historically constitute an insignificant part of the FHLBank's total funding. FHLBanks successfully use market sources to diversify their funding bases among funds providers and across maturities. Unlike deposits, whose maturities are generally determined by the preferences of the member, funds in the capital markets can be accessed at a variety of tenors. The many choices among market funding alternatives have provided FHLBanks with greater flexibility in managing their cash flows and liquidity needs.

Reliance on market funding sources, however, has left FHLBanks more exposed to the price and credit sensitivities of major funds providers. As a general rule, institutional funds providers are more credit sensitive and will be less willing than members to

provide funds to an FHLBank facing real or perceived financial difficulties. An FHLBank's ability to access the capital markets may also be adversely affected by outside events. For example, market exposure and accounting problems experienced by another GSE may "spill over" to the FHLBanks and adversely affect the FHLBank System's ability to access funding at a reasonable cost.

Technological advancements intensify challenges for liquidity managers. Large sums of money can now move electronically from one account to another very rapidly. Evolving technology is changing how the FHLBanks obtain and disburse funds. Internet or website portals and evolving electronic funds transfer mechanisms are just a few of the products and services that an FHLBank should consider when assessing and managing liquidity.

In view of recent complexities in the FHLBanks' balance sheets and rapid changes in the financial marketplace, the FHLBanks must establish an effective funds management function that is independent of trading activities. Funds management is the core of effective planning and financial management. It encompasses the management of the FHLBank's liquidity position and management of its assets and liabilities to provide adequate financial resources to meet anticipated funding demands. Effective liquidity planning includes the consideration of the effect that future events may have on funding requirements, as well as the probability of such events occurring.

All FHLBanks should also have contingency plans in case projections are incorrect. Effective contingency planning involves identifying minimum and maximum liquidity needs under various scenarios and weighing alternative courses of action designed to meet those needs.

Regulatory Environment

The primary authorities governing liquidity management activities are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) ***Rules and Regulations of the Federal Housing Finance Board,*** which include the following parts and sections relevant to liquidity management:

   Part 917 of the Finance Board regulation addresses powers and responsibilities of the FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, is pertinent.

   Part 965 of the Finance Board regulations sets forth sources of funds for business operations for which an FHLBank is authorized to incur liabilities, including COs,

demand deposits, cash accounts, purchased Federal funds (Fed Funds) and repurchase agreements (Repos).

Part 965 also requires each FHLBank to hold liquidity reserves against members' deposits. In addition to these reserves, Section 932.8 requires that each FHLBank hold contingency liquidity in the amount sufficient to enable the institution to meet its liquidity needs, at a minimum to cover five business days of inability to access the consolidated obligation debt markets.

Section 966.9(b) requires each FHLBank president to certify that the FHLBank will remain in compliance with the liquidity requirements in Section 11(g) of the FHLBank Act and the Finance Board Financial Management Policy and will remain capable of making full and timely payment of all of its current obligations, including direct obligations, coming due during the next quarter.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of liquidity management activities are the following:

Advisory Bulletin 02-06, dated April 9, 2002, provides that the quarterly certification required to be filed by each FHLBank president pursuant to Section 966.9 (b)(1) of the Finance Board regulations should specify that the certificate is filed to comply Sections 932.8 and 965.3.

Advisory Bulletin 03-2, dated February 10, 2003 and Advisory Bulletin 02-3, dated February 13, 2002, which offer guidance on specific attributes to be considered by FHLBanks in the formulation of their business continuity plans, and the establishment of bilateral agreements with other FHLBanks.

Advisory Bulletin 05-05, dated May 18, 2005, provides guidance on the risk management responsibilities of the board of directors, senior management, and risk management function.

3) ***Issuance of the Board of Governors of the Federal Reserve System that address Intraday Liquidity Management and Payment System Risk Policy.***

In July 2006, the Board of Governors of the Federal Reserve System implemented changes in their daylight overdraft policy for GSEs and certain international organizations. The changes required these organizations to eliminate their daylight overdrafts at the Federal Reserve Banks relating to their interest and redemption payments and to pay a penalty fee if daylight overdrafts occur in their accounts as a result of their general corporate payment activity.

FHLBank Environment

Within the FHLBank system, liquidity management is a day-to-day activity. Cash management/treasury personnel generally have the responsibility for ensuring that the FHLBank has sufficient funds to meet its day-to-day obligations, commitments, and the financing needs of customers. This requires adequate forecasting of these needs and ensuring that the FHLBank not only has the financial capacity to raise funds, but also the balance sheet capacity to leverage capital and comply with the applicable regulatory requirements.

Close coordination with other key operating areas of the institution is required including:

1) Customer funding;
2) Acquired member assets;
3) Correspondent bank services;
4) Capital markets; and
5) Accounting.

The key processes associated with liquidity management are as follows:

1) Liquidity requirements are addressed in the FHLBank's risk management policy detailing guidelines for how risks to the institution's liquidity are measured, monitored, and controlled. The risk management policy must address: statutory requirements with respect to deposit reserves; maintenance and management of operational and contingency liquidity; and the FHLBank's ability to meet potential funding needs arising from credit demand, deposit withdrawals and debt redemption in a timely and cost-efficient manner.

2) Duties and responsibilities that pertain to liquidity management should be segregated between the key/critical functions of the FHLBank, such as capital markets, cash management/treasury, correspondent bank services, and accounting and management committees. Specific examples may include, but are not limited to, the following:

    a) Specific capital markets personnel are authorized to execute investment transactions;
    b) Cash management/treasury personnel are responsible for forecasting financing and liquidity needs and obtaining funding on a daily basis to satisfy those needs. Target balances have been established to meet start-of-day and end-of-day liquidity needs. Excess funds are usually invested in money market transactions;
    c) Correspondent bank personnel are responsible for processing wire transactions;
    d) Accounting personnel are responsible for posting transactions to the general ledger and reconciling the accounts;
    e) Asset/liability management personnel provide reports to management that should reflect the institution's degree of compliance with liquidity requirements; and

f) Liquidity planning and funding is periodically reviewed with the applicable management committee(s).

3) The responsibility for monitoring the FHLBank's position with the Federal Reserve Bank is usually assigned to the FHLBank's cash management/treasury personnel. They should have inquiry access to the wire system allowing them to monitor large incoming/outgoing wire activity. In addition, the automated wire system should have software controls that establish internal dollar limits to reduce the potential for daylight overdrafts.

4) The FHLBank's investment policies should authorize specific individuals to execute investments, restrict investments to only highly-rated counterparties, and require the diversification of money market transactions, reducing concentrations with specific counterparties.

5) The FHLBank's credit personnel should monitor the credit quality and collateral of advance borrowers, and unsecured credit counterparties.

6) The FHLBank should establish agreements with other FHLBanks to serve as a surrogate for liquidity in times of need.

7) The following information should be periodically reported to the asset liability committee and the board of directors:

   a) Liquidity position and compliance;
   b) Regulatory liquidity and reserve position compliance; and
   c) Projected asset and liability maturity gaps to assess whether liquidity targets in excess of policy requirements should be maintained.

8) Section 931.3 of the Finance Board regulations requires members to purchase capital stock of the FHLBank in accordance with the institution's capital plan. Requests for large capital redemptions require review by cash management/treasury personnel to ensure sufficient consolidated obligation capacity will be available to meet forecasted activity.

9) Credit lines should be established and agreements entered into with approved counterparties in order to permit the FHLBank to purchase Fed Funds or enter into Repos. The FHLBank's legal counsel should review the legal agreements, including master repurchase agreements, and be able to opine that the FHLBank's interests are adequately protected under them.

10) Duties, responsibilities, and liabilities of the respective parties to agreements among the FHLBank and its key/critical vendors and outside service providers should be addressed in such legal agreements. The FHLBank's legal counsel should review the

relevant legal agreements and be able to opine that the FHLBank's interests are adequately protected. In addition, SAS 70 reviews should be obtained, or alternative methods performed to obtain assurances on the internal control structure of outside service providers that are utilized by the FHLBank.

11) Insurance should be obtained to mitigate the FHLBank's risk and exposure.

12) A business continuity plan should be established to ensure continuation of FHLBank's operations due to a disabling event. The plan should include the establishment and periodic testing of bilateral or "buddy bank" relationships with one or more other FHLBanks.

FHLBank Funding Sources

FHLBanks rely heavily on liquidity generated on the liability side of the balance sheet. Generally, they have ready access to CO debt markets. By managing liabilities instead of assets, FHLBanks can tailor liabilities to fit their cash flow needs instead of apportioning asset types and amounts to a given liability base. Locking-in term funding can also reduce risk to an FHLBank's liquidity, especially if an FHLBank can extend the duration of its liability structure. By accessing wholesale funding sources, they also can obtain funds quickly and in large amounts instead of slowly accumulating demand or time deposits. FHLBanks also use derivatives as an effective interest rate risk management tool. By using derivatives, they can convert their fixed-rate asset and liabilities in to floating rate or convert floating-rate assets and liabilities into fixed-rate instruments. The use of derivatives can facilitate the management of interest rate risk as well as help reduce funding costs.

Below is the summary of the FHLBank's funding instruments:

1) FHLBank CO Debt Program

Discount Note (DN) funding is the most economical way for FHLBanks to meet short-term or unanticipated demand for funds. Discount notes are offered into the market through the window, or through regularly scheduled competitive auctions. DNs are auctioned twice weekly, on Tuesdays and Thursdays, to the selling group members. After issuance, DNs can be traded in the secondary market through securities dealers and banks. OF has an Extended Hours Program that extends the trading day to 22 hours.

FHLBank CO bonds are issued in a wide variety of sizes, structures and maturities. All earn the highest ratings from both Moody's and S&P (Aaa/AAA). In addition, customized debt products tailored for specific investors/markets are actively considered, subject to the FHLBank System's funding requirements. COs are available in maturities ranging from less than one year to 30 years, with the majority

of issues between one and five years. Issue sizes can range from under $1 billion to $7 billion, and individual bonds can be reopened to meet additional demand.

Global Bonds are known for their flexibility; all can be investor-customized with different structures, terms and currencies. The most common global structures are bullets, floaters (both callable and non-callable) and fixed-rate callable bonds, with maturities of 18 months through 5 years. Global Bonds are available in maturities ranging from 1 year to 30 years. Issue sizes can range from $10 million to $7 billion or more.

The TAP Issue Program was launched on July 6, 1999, as a refinement to the FHLBank bullet bond auction process. Rather than frequently bringing numerous small bullet issues of similar maturities to market, the TAP Issue Program aggregates the most common maturities (2-, 3-, 5-, and 7-year) by reopening them over a three-month period. As a result, these "on-the-run" issues grow to $1 billion to $3.5 billion in each cycle. TAP Issues generally remain open for three months, after which they are closed and a new series of TAP Issues is opened to replace them. Among other things, the TAP Issue Program has reduced the number of separate bullet bonds issued and provided enhanced funding diversification for the FHLBanks.

Because the FHLBank System runs a conservative matched-book of assets and liabilities, particularly for advances, and is an active user of swaps to reduce risk, there is a great deal of flexibility with the structures and terms of issues brought to market. Bullets and fixed-rate callables predominate, but the FHLBank System can place floaters, step-ups/downs, zeros, and many others, including range notes and amortizing prepayment-linked bonds. These option-embedded debt securities have improved the FHLBanks' funding costs, but have also created complexity in the funding structure. Nonetheless, the ability to issue option-embedded debt securities is an important interest rate risk management tool.

2) Member Deposit Funding

Deposit funding is supplied by the deposits an FHLBank receives from its members. These deposits represent a limited funding source, but are a relatively stable source of funds. Members' customers usually maintain transaction accounts that include demand deposit accounts (DDAs) and time certificates of deposit (CDs). The returns from investment alternatives may affect the amount of funds provided by members.

For example, if higher returns are available from alternative investments, an FHLBank's deposit funding may decline. On the other hand, a sudden economic downturn may adversely affect the returns from investment alternatives and could result in significant cash inflows if investors perceive FHLBanks as safe havens for their money during times of market turmoil. Generally, deposits as a funding source

are insignificant and on an average, may not represent more than two percent of the FHLBanks' total funding.

3) Other Borrowings

The FHLBank may borrow Fed Funds from the interbank market. The Fed Funds market is the day-to-day unsecured lending of excess reserve funds between banks. Such lending is referred to as "Fed Funds sold" by the lending bank and "Fed Funds purchased" by the borrowing bank. If a bank has excess reserves, it can sell the reserves and record the sale as an asset. If an FHLBank needs funds to meet either its reserve requirements or other obligations, it can purchase the excess reserves of another bank. The primary Fed Funds market is overnight, but maturities may extend a few days or weeks. Fed Funds are not deposits. Credit risk exists for the seller; however, if an FHLBank experiences financial difficulties, it may find its ability to borrow in the Fed Funds market hampered or eliminated. Historically, FHLBanks have rarely used Fed Funds as a funding source.

4) Assets as Liquidity Sources

FHLBanks typically hold liquid assets to supplement liquidity from deposits and other liabilities. These assets can be quickly and easily converted to cash at a reasonable cost, or are timed to mature when the managers anticipate a need for additional liquidity. Also, liquid assets include those that can be pledged or used in a repurchase agreement. Money market investments are usually the most liquid assets of an FHLBank. They include overnight and term Fed Funds, certificate of deposits, and Bankers Acceptances. These are funds that normally can be withdrawn or transferred within one to two business days. However, a large money market investment portfolio may cause reputation risk for the FHLBank as it could be deemed as an arbitrage strategy for the purpose of profits.

An FHLBank's investment securities can provide liquidity in three ways: (1) the maturity of a security; (2) the sale of securities for cash; or (3) the use of securities as collateral in a repurchase agreement or other borrowing. For an investment security to be saleable, it must not be encumbered. A security that is severely depreciated, has a small face amount, is already pledged or encumbered, or of poor credit quality is not a good candidate for collateral.

In accordance with Financial Accounting Standard 115, "Accounting for Certain Investments in Debt and Equity Securities," investment securities are separated into three categories; trading, available-for-sale (AFS) and held-to-maturity (HTM). HTM securities can be pledged or used as collateral in a repurchase agreement and, in this manner, provide an FHLBank with a source of secondary liquidity. Because securities held for trading and available-for-sale are not subject to the "intent and

ability" restrictions of HTM securities, the FHLBank can sell, pledge, or use these trading and AFS securities as collateral for liquidity.

5) Other Off-Balance-Sheet Activities

Off-balance sheet activities, which have become increasingly important in the management and analysis of liquidity, can either supply or use liquidity, depending on the transaction as well as the level of interest rates at the time. For example, an FHLBank enters into an interest rate swap agreement in which it pays a floating rate and receives a fixed rate. If the fixed rate is higher than the floating rate when the agreement commences, the FHLBank receives a payment for the difference between the two rates. If the floating rate subsequently becomes higher than the fixed rate, the FHLBank will be required to pay the difference between the two rates, and what was originally a cash inflow will become a cash outflow. Potential cash inflows and outflows from the derivative portfolio should be considered in determining an FHLBank's liquidity needs.

Loan commitments, such as fee-paid letters of credit used as backup lines, are traditional uses of funds that are off-balance-sheet. Commitments to purchase a security "when issued" are another example of off-balance sheet uses of funds. Management should be able to estimate the amount of unfunded commitments that will require funding over various time horizons. Liquidity managers should assess how these and other off-balance-sheet activities will affect the FHLBank's cash flows and liquidity.

Risks Associated with Liquidity Management

The FHLBank's primary risks relating to liquidity operations are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, measured, monitored, and controlled.
b) A sound risk management framework composed of policies and procedures, risk measurement and reporting systems, and independent oversight and control processes has not been developed and implemented.
c) Senior management has not adequately analyzed new products or activities, taking into account pricing, processing, accounting, legal, risk measurement, audit, and technology considerations.
d) Risk management, monitoring, and control functions are not sufficiently independent of the position-taking functions.
e) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.

f) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise to test the control environment.

2) Operational Risk

Although not exhaustive, the following provides a list of events or lack of actions that can result in increased operational risk:

a) Inability of the FHLBank to meet its critical needs and those of its customers or to fulfill its legal obligations resulting from inaccurate estimates of funding needs and available sources of liquidity.
b) Daily monitoring and future forecasting of the FHLBank's liquidity position and the critical needs of its customers are not performed.
c) Credit lines and agreements have not been completed with applicable counterparties to access the Fed Funds and Repo markets.
d) Daylight overdrafts are not monitored and minimized, resulting in the discontinuation of Federal Reserve Bank services.
e) Funding commitments and available cash for funding are not reconciled.
f) A business continuity plan, which includes the identification and periodic testing of bilateral agreements with one or more other FHLBanks, has not been adequately developed, communicated to key personnel, tested and kept current with the technical environment to ensure that all critical functions can recover in the event of a disabling event. An inadequate business continuity plan, or a plan that is inadequately tested may result in the following risks:

    (1) The FHLBank relies on consolidated debt issuance as a source of primary funding to meet its financial obligations. The institution may be unable to issue debt due to a disabling event at the Office of Finance.
    (2) The FHLBank relies on the Federal Reserve Bank and correspondent bank relationships to wire funds, process automated clearing house (ACH) transactions and settle securities transactions. The inability to send/receive wires, process ACH transactions and deliver/receive securities could result in the FHLBank's defaulting on its financial obligations.
    (3) The FHLBank relies on the Federal Reserve Bank, correspondent bank and securities dealer relationships to obtain secondary funding. The institution may be unable to obtain access to the Fed Funds and Repo markets to obtain such funding.
    (4) FHLBank management relies heavily on spreadsheets and electronic information obtained from various systems. In the event of a disabling event, FHLBank personnel may not be able to recreate and/or obtain the necessary information to manage the FHLBank's liquidity position.

Operational risk may also arise from the FHLBank's failure to manage liquidity in accordance with Finance Board regulations such as:

a) The FHLBank has not established the risk management policy required by Section 917.3 that includes each of the following elements:

   (1) Standards for day-to-day operational liquidity needs and contingency liquidity needs;
   (2) An enumeration of specific types of investments to be held for such liquidity purposes; and
   (3) The methodology to be used for determining the operational and contingency liquidity needs.

b) The FHLBank has not maintained liquidity reserves for deposits as required by Section 965.3 and has not held contingency liquidity as required by Section 932.8.

c) The FHLBank has not provided the Finance Board with certification of compliance with applicable regulations required by Section 966.9(b).

An FHLBank's lack of compliance with regulations and supervisory guidance is indicative of poor corporate governance. When sufficiently severe, poor corporate governance could cause the rating agencies to downgrade the credit rating of the FHLBank System, thereby making the FHLBank System's debt securities less attractive to investors. Consequently, the FHLBank's funding cost advantage and uninterrupted access to capital markets could suffer.

Operational risk may also arise when management uses the FHLBank as an outlet for arbitrage activities for the sole purpose of profitable gains. For the purpose of liquidity management, the FHLBank may hold certain amounts of liquid assets such as investments in money market instruments, including overnight and term Fed Funds.

However, holding a large money market investment portfolio relative to the FHLBank's liquidity needs and/or engaging in active trading may be indicative of an arbitrage strategy. In such cases, the FHLBank issues discount notes and invest the proceeds in overnight Fed Funds or other short-term instruments in order to take advantage of the spread difference between Fed Funds and discount note rates. Such a strategy may cause reputation risk for the FHLBank.

3) Credit Risk

Credit events may occur when the FHLBank relies on the maturities of investments and advances to provide cash flow for future needs and obligations. The inability of customers and investment counterparties to meet their obligations to the FHLBank could compromise the institution's ability to meet its cash needs under certain circumstances. Management must periodically review the creditworthiness of

counterparties and must be able to estimate potential credit losses. The potential losses should be considered in determining contingency liquidity needs.

4) Financial Condition and Performance

Off-balance-sheet instruments that an FHLBank uses to manage its interest rate risk may also adversely affect the level and adequacy of the institution's liquidity reserves and thereby its financial condition and performance. The cash flows of those instruments often are very sensitive to changes in rates, and if not properly managed, can result in unexpected funding requirements or other cash outflows during periods of volatile interest rates. In addition, the FHLBank's inability to profitably unwind its derivative portfolio in times of need due to adverse market conditions may increase pressure upon its liquidity reserves.

If the FHLBank relies heavily on the proceeds from the sales of its investment securities to meet the liquidity needs in times of emergency, the FHLBank may face serious liquidity inadequacy under adverse market conditions.

Specific Risk Controls Related to Liquidity Management

Regardless of organizational structure, an FHLBank's risk management process should include systems to identify, measure, monitor, and control its liquidity exposures. Management should be able to accurately identify and quantify the primary sources of risk to an FHLBank's liquidity. To properly identify the sources, management should understand both existing risks and the risks associated with new business or legal initiatives. Management should always be alert for new sources of risk to the institution's liquidity at both the transaction and portfolio levels.

Key elements of an effective risk management process include adequate board of directors and senior management oversight; appropriate liquidity management policies and procedures; appropriate risk measurement methodology, monitoring, and reporting systems; adequate management information systems and internal controls; and an effective contingency funding plan.

1) Board of Directors and Senior Management Oversight

The board of directors and senior management have the ultimate responsibility for the design, implementation, and monitoring of the FHLBank's liquidity management. Specific attributes of board and senior management oversight in the context of liquidity include establishing comprehensive liquidity management and anti-fraud policies; developing a thorough risk assessment process, and implementing sound internal controls, information systems, and business contingency plans.

The board of directors should:

a) Establish and guide the FHLBank's strategic direction and tolerance for risks to the institutions' liquidity.
b) Select senior managers who will have the authority and responsibility to manage liquidity.
c) Monitor the FHLBank's performance and overall adequacy of liquidity.
d) Ensure that risks to liquidity are identified, measured, monitored, and controlled.
e) Establish a liquidity management policy that must address:

1. Operational liquidity (day-to-day operational liquidity requirements);
2. Contingency liquidity (specific liquidity requirements in the event that the FHLBank cannot obtain access to the consolidated obligation debt markets);
3. Regulatory liquidity (specific liquidity requirements in relation to the deposits received from its members); and
4. The methodology to be used for determining the FHLBank's operational and contingency liquidity needs.

Senior management oversees the daily and long-term management of liquidity and should:

a) Develop and implement procedures and practices that translate the board of director's goals, objectives, and risk tolerances into operating standards that are well understood by FHLBank personnel and consistent with the board's intent.
b) Adhere to the lines of authority and responsibility that the board of directors has established for managing liquidity.
c) Oversee the implementation and maintenance of management information and other systems that identify, measure, monitor, and control the risks to the FHLBank's liquidity.
d) Establish effective internal controls over the liquidity management process.

2) Measuring, Monitoring and Reporting Risk Exposures

The FHLBank must establish an appropriate liquidity model to accurately identify and measure its liquidity exposure. In selecting the systems that are appropriate for the FHLBank, management should understand the nature and mix of the FHLBank's products and activities. FHLBanks that rely significantly on wholesale funding should have sophisticated measurement systems. In determining potential liquidity needs and risk management strategies, the estimate of losses from potential credit and market events should be considered.

Management should periodically validate the integrity of its risk management processes. For example, the funds flow analysis report or a similar management report should be reviewed periodically to ensure that it captures and reflects all significant on- and off-balance-sheet items. Measuring and reporting systems should be adjusted as products or risks change.

Senior management and the board of directors, or a committee thereof, should receive reports on the adequacy of the FHLBank's liquidity, including the level and trend of risks to the institution's liquidity, at least quarterly. If the exposure is high or if it is moderate and increasing, the reports should be more frequent. From these reports, senior management and the board should be able to determine how much risk the FHLBank is assuming, whether management is complying with risk limits, and whether management's strategies are consistent with the board's expressed risk tolerance.

3) Contingency Funding Plans

Section 917.1 of the Finance Board's regulations defines "contingency liquidity" to mean the sources of cash an FHLBank may use to meet its operational requirements when its access to the capital markets is impeded, which includes: (1) marketable assets with a maturity of one year or less; (2) self-liquidating assets with a maturity of seven days or less; (3) assets that are generally accepted as collateral in the repurchase agreement market; and (4) irrevocable lines of credit from financial institutions rated not lower than the second highest credit rating category by an NRSRO.

In addition to meeting the deposit liquidity requirements contained in Section 965.3 of this chapter, Section 932.8 requires each FHLBank to hold contingency liquidity in an amount sufficient to enable the FHLBank to meet its liquidity needs, which shall, at a minimum, cover five business days of inability to access the consolidated obligation debt markets. An asset that has been pledged under a Repo cannot be used to satisfy minimum liquidity requirements.

As part of a comprehensive liquidity management program, all FHLBanks should develop and maintain a contingency funding plan (CFP). A CFP is a cash flow projection and comprehensive funding plan that forecasts funding needs and funding sources under market scenarios including aggressive asset growth or rapid liability erosion. The CFP should represent management's best estimate of balance sheet changes that may result from a liquidity or credit event. The CFP can help manage day-to-day liquidity adequacy by demonstrating that the FHLBank can find sources of funds to cover its uses of funds in the event of a liquidity or credit event. A CFP helps ensure that an FHLBank can prudently and efficiently manage routine and extraordinary fluctuations in liquidity.

To reduce the risk of inadequate funding and liquidity, FHLBanks should: (1) maintain a sizable liquid asset portfolio; (2) monitor maturity and repricing gaps between assets and liabilities; and (3) gain an ability to estimate the cash flow impact of embedded options in the balance sheet.

4) Business Continuity and Recovery

The FHLBank should have written procedures for operations at its designated hot-site. Back-up tapes should be stored off-site and be easily retrievable. If the automated wire system is not available at the hot-site, FedLine terminals, off-line codeword authorizations, and bilateral agreements with one or more FHLBanks may need to be used to effectuate the FHLBank's transaction requests. Each FHLBank must have at least one back-up system and must test it periodically to ascertain its reliability.

Examination Guidance

A work program for Liquidity Management accompanies this narrative. What follows below are examples of attributes that should be considered by the examiner in completing the analyses required in the work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management policies, procedures, and practices, internal controls and audit coverage relating to liquidity management.

1) Organizational structure

Evaluate the effectiveness of the functional organizational structure, including board of directors and management committees to determine whether the current structure is efficient and effective for the purpose of liquidity management. Specific examples to consider include, but are not limited to the following:

a) Identification of functional department and reporting responsibilities;
b) Identification of key personnel responsible for liquidity management activities and reporting lines;
c) Identification of primary duties, responsibilities and technical expertise of personnel;
d) Segregation of duties, ensuring that liquidity management responsibilities are segregated from lending, investment, funding, hedging derivatives, accounting, wire transfer and safekeeping activities;
e) Cross-training of personnel;
f) Coordination with other departments such as risk management, information technology, treasury, investment, cash management, accounting, and wire transfer;
g) Identification of management and board of directors committees with the responsibility of monitoring risks to the FHLBank's liquidity ; and
h) Identification of significant changes since the last examination and changes anticipated.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances and the development of key liquidity policies and procedures for liquidity management, as well as oversight by the board of directors. Evaluate the adequacy of senior management oversight over the liquidity management activities, which may include the following:

a) The establishment of board and management committees to oversee liquidity management function;
b) The development, review and approval of risk measurement methodology and risk management strategies;
c) The development, adoption, and periodic review of the liquidity management policy that establishes:

    1. Sources of operational and contingency liquidity;
    2. Methodologies for measuring operational and contingency liquidity needs;
    3. Guidelines for periodic monitoring and reporting liquidity positions;
    4. Requirement for submission of monthly certification of compliance with regulations to the Finance Board;
    5. Internal control structure and parameters;
    6. Business continuity and recovery plans; and
    7. Guidelines for monitoring liquidity position and policy exception reporting.

3) Key FHLBank policies and procedures, which may include those relating to the following:

a) Departmental liquidity operating procedures;
b) Risk management;
c) Information security;
d) Fraud prevention;
e) Whistleblower provisions of SARBOX;
f) Background and credit investigations;
g) Business conduct and ethics; and
h) Business continuity and recovery.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from and controls established by the institution over liquidity management activities and includes quantitative and qualitative evaluations;
b) Evaluate the effectiveness of evaluations conducted pursuant to SARBOX that

identify the key risks and controls pertaining to financial reporting and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment; and

c) Assess corrective actions on control weaknesses identified by the annual risk assessments and evaluations conducted under SARBOX.

5) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of the scope and testing performed by external and internal auditors;
b) Evaluate the adequacy of the scope and testing performed by outside consultants; and
c) Assess the adequacy of tracking systems for monitoring implementation of corrective actions.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by liquidity management activities for processing funding, measuring liquidity needs and available liquidity, including cash flow projection reports, and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function.

a) Evaluate workflow and processes as well as controls, including the level and direction of risks to liquidity adequacy and quality of liquidity management;
b) Evaluate any significant changes to liquidity management activities that have been implemented since the last examination or are being considered that may impact the FHLBank's risk profile such as management, systems, key personnel, product lines, funding, investment and derivative strategies, regulatory requirements and processing; and
c) In coordination with the examiner or FHLBank analyst reviewing Financial Condition and Performance, evaluate the effect of the FHLBank's liquidity management upon the institution's financial condition and performance, including the adequacy of the institution's liquidity reserves relative to its risk exposures and regulatory requirements.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific attributes to consider include, but are not limited to the following:

a) Validations of the appropriateness of assumptions and methodologies that underlie the liquidity model used to calculate operational and contingency liquidity needs.
b) Validations of sources of funds to be available for contingency liquidity needs by reconciling management reports to general ledger.
c) Validations of the accuracy of the FHLBank's cash flow projections, including maturity gap, repricing gap, and option gap reports.
d) Verification of records of periodic testing of business contingency and recovery plans.
e) Verifications of contingency liquidity agreements with other FHLBanks and verify that the effectiveness of the agreements are tested periodically.
f) Verifications of credit lines with other financial institutions for the purpose of meeting liquidity needs in case of emergency.
g) Validations of FHLBank adherence to regulations and the risk management policy. Obtain recent general ledger and subsidiary system reports, as well as spreadsheets/databases, and verify compliance with the FHLBank's contingency, operational and regulatory liquidity policies and the requirements of Sections 965.3 and 932.8 of the Finance Board regulations. Verify that securities that have been pledged under a Repo are excluded from the calculation utilized to satisfy contingency liquidity requirements.
h) Verifications of the FHLBank's liquidity status and compliance with its liquidity policies and regulatory requirements are periodically reported to management and board of directors committees. Also, verify that the management's quarterly liquidity certification report has been timely filed with the Finance Board.
i) Verifications of agreements that are in place with Fed Funds counterparties and/or securities dealers for alternative sources of liquidity, and at least annually, the FHLBank purchases Fed Funds and/or borrow into Repos.
j) Evaluations of the process for receiving information from key systems in order to monitor the FHLBank's liquidity position and needs through discussions with examiners and management. Examples include:

    1. Wire system, such as large incoming, outgoing and late wires;
    2. On-going monitoring of the target balance maintained at the Federal Reserve Bank;
    3. Daylight overdraft notices received from the Federal Reserve Bank;
    4. Automated clearing house transactions, such as large incoming and outgoing transactions;
    5. Safekeeping;
    6. Member deposit overdrafts;
    7. Acquired member assets, such as large paydowns and funding;
    8. Office of Finance reports utilized to monitor bond activity;
    9. Trading activity;
    10. Advances, such as large advances, paydowns and maturities;
    11. Outstanding loan commitments and letters of credit; and

12. General ledger reports.

k) Reviews of the most recent deposit overdraft report and daylight overdraft notifications received from the Federal Reserve Bank. Review with line management the situations that caused the customer deposit and/or daylight overdraft and the corrective action implemented. Evaluate whether the situations were isolated and whether they were the result of weaknesses in the design of the internal control environment or noncompliance with existing policies and procedures.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak).

The memorandum should also discuss effects of the FHLBank's liquidity management practices upon its financial condition and performance, including the institution's level of liquidity reserves relative to its risk exposures and its compliance with regulatory liquidity requirements. A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Liquidity Management
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and significant changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances and the development of key policies and procedures for liquidity management, as well as oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function over liquidity management activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to liquidity management activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and of the internal control assessment under SARBOX applicable to liquidity management activities as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit, or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over liquidity management activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by liquidity management activities for processing funding, measuring liquidity needs and available liquidity, including cash flow projection reports, utilization of user developed applications and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function.

Evaluate the workflow and processes as well as controls, including the level and direction of risks to liquidity adequacy and the quality of liquidity management. If applicable, conduct an assessment of any significant changes to liquidity management activities that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls, and audit coverage.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak).

The memorandum should also discuss the effects of the FHLBank's liquidity management practices upon its financial condition and performance, including the institution's level of liquidity reserves relative to its risk exposures and its compliance with regulatory liquidity requirements. A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

In the United States, payment and securities settlement systems consist of numerous financial intermediaries, financial services firms, and non-bank businesses that create, distribute, and process electronic transactions to purchase, sell, or finance securities transactions; disburse or repay loans; settle real estate transactions; and make large-value time-critical payments, such as payments for the settlement of Interbank purchases and sales of federal funds, settlement of foreign exchange transactions, or other financial market transactions. Wire transfers are used for making large-value payments by both financial and non-financial organizations.

The automated clearing house (ACH) is a nationwide mechanism that processes electronically originated batches of high-volume, low-value credit and debit transfers. Rather than sending each payment separately, ACH transactions are accumulated and sorted by destination for transmission during a predetermined time period. This provides significant economies of scale and faster processing than paper checks. More recently, the ACH network is used to convert check payments into ACH debit transfers which provides faster processing and reduces payment processing costs.

A discussion of wire transfers and ACH follows below:

Wire Transfers

The primary function of wire transfer systems is to transfer assets from the control and guardianship of one institution to the control and guardianship of another institution in a timely and efficient manner. Most financial transactions are conducted through telecommunications systems designed to handle the daily exchange of large volumes of funds and securities. Although several different mechanisms comprise the U.S. payments system, most of the dollar value of all funds transfers and much of the associated risk is concentrated in two electronic systems used principally to transfer large-dollar payments between financial institutions. Foremost is the Federal Reserve Banks' Fedwire® Funds Service (Fedwire). The Clearing House InterBank Payments System (CHIPS), operated by the New York Clearing House Association, is utilized primarily for international transfers.

A given funds transfer is a series of payment orders, beginning with the originator's instruction to its "sending bank" and ending with the acceptance by the "receiving bank" of the payment order for the benefit of a beneficiary. A "payment order" is an instruction from a sending bank to a receiving bank to pay or cause another bank to pay a fixed amount to a beneficiary. The order must be transmitted directly or through an agent to the receiving bank.

Controls at both sending and receiving banks must focus on the authentication of payment orders. Acceptance of a payment order by the receiving bank is based on a

belief that the sender properly authorized the order. Acceptance means that the receiving bank is obliged to pay the beneficiary.

Whether a loss resulting from the transmission of an erroneous or fraudulent payment order will be borne by the receiving bank or the sending bank depends on whether a "commercially reasonable security procedure" was in place by the respective financial institutions and whether practice complied with the security procedure. A material erroneous or fraudulent transaction could have a significant impact on the financial condition of the FHLBank and result in a poor image and reputation in the marketplace.

Automated Clearing House (ACH)

The following are examples of payment transactions that can be conducted through the ACH Network:

a) Payroll payments;
b) Cash concentrations and disbursements;
c) Pension payments;
d) Loan and interest payments;
e) Tax payments;
f) Corporate-to-corporate payments;
g) Vendor payments;
h) Point-of sale-payments;
i) Insurance payments;
j) Utility payments; and
k) Customer initiated transactions.

It is important to identify the role played by the FHLBank in the ACH transaction as there are different rules and requirements for the various participants. In addition, different rules and requirements exist for corporate and consumer accounts. The primary participants in an ACH transaction are described below.

1) Originator

An originator (Originator) is a person or entity that agrees to initiate ACH entries into the payment system according to an arrangement with a receiving person or entity (Receiver). The Originator is usually a company or an individual directing a transfer of funds to or from a consumer's or a company's account. Examples of Originators are:

a) A corporate employer offering its employees direct deposit of payroll;
b) A merchant or financial institution that offers point-of-sale activity to consumers; and
c) An individual that initiates an entry through a bill payment service to a company

for monies owed.

The Originator must initiate the transmission of batches into the ACH Network according to an arrangement with an originating depository financial institution (ODFI). The primary participant relationships for the Originator are with the Receiver and the ODFI, both of which should be identified and defined in relevant legal agreements.

2) Originating Depository Financial Institution (ODFI)

The ODFI is the institution that receives payment instructions from Originators and forwards the entries to an ACH operator (ACH Operator). A depository financial institution (DFI) may participate in the ACH system as a receiving depository financial institution (RDFI) without acting as an ODFI; however, if a DFI chooses to originate ACH entries, it must also agree to act as an RDFI.

Primary ODFI responsibilities include:

a) Ensuring that all entries are authorized;
b) Transmitting the entries to the ACH Network in a timely manner in order to effect the transfer of funds on the appropriate date;
c) Terminating the origination of entries when appropriate;
d) Meeting the requirements for data security and personal identification numbers when applicable;
e) Ensuring that the entries contain the appropriate information;
f) Ensuring that information contained within reclamation entries is accurate;
g) Ensuring that an agreement has been entered into with a sending point when a sending point is used to transmit ACH entries;
h) Ensuring that the ODFI and any third-party service provider that performs a function of ACH processing on behalf of the ODFI are in compliance with the audit requirements as defined by National Automated Clearing House Association (NACHA); and
i) Compliance with ACH operating rules adopted by NACHA (NACHA ACH Operating Rules).

The ODFI is solely responsible for entries originated by its corporate customers. The ODFI must execute a written agreement with its corporate customer that will, at a minimum, require the latter to adhere to NACHA ACH Operating Rules.

ODFIs are required to establish limits upon and monitor their exposure to risk when transmitting ACH credit and debit entries on behalf of their corporate customers. The limits should reflect ACH processing activity and should be monitored as a part of daily operations.

3) Automated Clearing House Operator

The ACH Operator is the central clearing facility operated by a private organization or a Federal Reserve Bank acting on behalf of DFIs, to or from which participating DFIs transmit or receive ACH entries. In some cases, there are two ACH Operators involved in a transaction, one operating as an originating ACH Operator and the other as a receiving ACH Operator. ACH Operators provide ACH processing services to DFIs under a written agreement or contract.

4) Receiving Depository Financial Institution (RDFI)

An RDFI is a participating depository financial institution that receives entries directly or indirectly from its ACH Operator for debit or credit to the accounts of its customers as Receivers.

An RDFI's responsibilities include the following in regard to receipt of ACH files:

a) Timely receipt and validation of all ACH entries;
b) Timely posting to the Receiver's accounts;
c) Timely validation of prenotifications;
d) Timely return of entries not posted;
e) Timely return of prenotification entries;
f) Notification to Originators of incorrect information on accepted entries;
g) Timely handling of remittance data as required by NACHA ACH Operating Rules; and
h) Transmission to a federal government agency of a consumer's or company's automated enrollment for a future credit or debit application.

The RDFI must execute the appropriate agreements with its ACH Operator in order to have ACH files delivered to the proper receiving point (Receiving Point).

5) Receiver

A Receiver is a natural person or an organization that has authorized an Originator to initiate an ACH entry to the Receiver's account with the RDFI.

6) Receiving Point

A Receiving Point is any site where entries are received from an ACH for processing. This may be a financial institution, its data center, or a data processing service authorized to receive entries on behalf of the financial institution.

7) Net Settlement

Net settlement (Net Settlement) allows participants in private-sector clearing arrangements to exchange and settle transactions on a net basis through reserve or clearing account balances. Net Settlement is available to transactions that settle across Federal Reserve Districts as well as transactions that settle entirely within a single Federal Reserve Bank.

The net debit and credit positions of the financial institutions are calculated and debited or credited to the reserve accounts of the financial institutions. A daily settlement occurs with the Federal Reserve Bank unless the financial institutions designate another member to settle on its behalf.

An agreement should exist between the financial institutions and the Federal Reserve Bank that establishes the terms of ACH funds transfers.

8) Sending Point

A sending point (Sending Point) is a processing site that sends entries to an ACH. This may be a financial institution or a data processing service operating on its behalf. An agreement should exist between the financial institutions and/or the data processing service and the Federal Reserve Bank that establishes the terms of the ACH funds transfers.

9) Third-Party Service Providers and Third-Party Senders

A third-party service provider (Third-Party Service Provider) is an entity other than an Originator, ODFI, or RDFI that performs any functions on behalf of the Originator, the ODFI, or the RDFI related to the ACH processing of entries, including but not limited to, the creation of ACH files or acting as a Sending Point or Receiving Point on behalf of a participating DFI.

A third-party sender (Third-Party Sender) is an entity that is not an Originator that has authorized an ODFI or another Third-Party Sender to transmit, for the account of the Third-Party Sender or another Third-Party Sender, (i) a credit entry to the account of a Receiver with an RDFI in order to effect a payment from the Originator to the Receiver, or (ii) a debit entry to the Receiver's transaction account or general ledger account with an RDFI in order to effect a payment from the Receiver to the Originator.

In distinguishing between a Third-Party Service Provider and a Third-Party Sender, ACH participants should understand that Third-Party Senders are a subset of Third-Party Service Providers. A Third-Party Sender is always a Third-Party Service Provider that acts on behalf of an Originator, but a Third-Party Service Provider does

not always act as a Third-Party Sender.

NACHA's ACH Operating Rules require that an Originator and an ODFI have an agreement that binds the Originator to these rules. However, in today's environment, it is a common practice among some Originators and ODFIs to have agreements with a Third-Party Service Provider that stands between the Originator and the ODFI and acts in an intermediary capacity between these two parties. In such circumstances, the lack of a direct contractual relationship between the Originator and the ODFI has the potential to increase the risk incurred by the ODFI since it may be unable to establish a claim against the Originator in the event of loss.

Examples of a Third-Party Service Provider include a data processing service bureau, payroll processor, correspondent bank, payable-through bank, or a financial institution acting as an agent on behalf of another financial institution. Specific duties and responsibilities should be detailed in the applicable legal agreements.

10) Gateway Operators

A gateway operator (Gateway Operator) is a financial institution that receives an ACH file from a customer and transmits the file to another financial institution which, in turn, sends the file to a foreign financial institution.

Regulatory Environment

The primary authorities governing, or relevant to, wire transfer and ACH activities of the FHLBanks are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to wire transfers and ACH activities:

Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4, Bank Member Products Policy, and Section 917.6, Internal Control System, are pertinent.

2) Advisory Bulletins of the Federal Housing Finance Board that provide supervisory guidance relating to the topic of wire transfer and ACH activities are:

Advisory Bulletin 03-2, dated February 10, 2003 and Advisory Bulletin 02-3, dated February 13, 2002, which offer guidance on specific attributes to be considered by

FHLBanks in the formulation of their business continuity plans, and the establishment of bilateral agreements with other FHLBanks.

Advisory Bulletin 04-01, dated March 10, 2004, which offers guidance on the evaluation of a service organization providing services to an FHLBank whose activities could affect the FHLBank's financial condition. This includes the performance of an assessment of the service organization's internal controls, such as the procurement of a service auditor's report in accordance with Statement of Auditing Standards No. 70 (SAS 70) or the performance of alternative methods necessary to gain confidence in the service organization's internal controls.

Advisory Bulletin 04-05, dated September 29, 2004, and Advisory Bulletin 05-05, dated May 18, 2005, which provide guidance on the risk management responsibilities of the board of directors, senior management and risk management function.

3) ***Regulation J of the Board of Governors (Board of Governors) of the Federal Reserve System (Regulation J), Collection of Checks and Other Items by Federal Reserve Banks and Funds Transfer through FedWire, and Article 4A of the Uniform Commercial Code (Funds Transfer) (UCC- 4A).***

Regulation J and UCC-4A promote efficient payment systems by establishing the respective responsibilities of sending and receiving banks and establish incentives to ensure appropriate controls against unauthorized transactions. In the process, they allocate liability for failure of transaction participants to comply with their assigned responsibilities under each.

The UCC is a uniform nonbinding code which, to be effective in any domestic jurisdiction, must be adopted into law by that jurisdiction. As a result, there are sometimes variations in the UCC's provisions in particular jurisdictions. The FHLBanks should coordinate periodic reviews of their documents and operating practices with legal counsel to ensure compliance with current UCC requirements.

4) ***NACHA ACH Operating Rules.*** NACHA oversees the ACH network and its primary roles are to develop and maintain the NACHA ACH Operating Rules, promote growth, and provide educational services to its members.

5) ***Federal Reserve Bank Operating Circulars and Appendices that set forth the terms for maintaining accounts with and obtaining other services from the Federal Reserve Banks. Specifically:***

a) Operating Circular No. 1-Account Relationships, Agreements and Forms;
b) Operating Circular No. 4-Automated Clearing House Items (Applies to ACH only);
c) Operating Circular No. 5-Electronic Access, Certification Practice Statement, and

Password Practice Statement; and

d) Operating Circular No. 6-Funds Transfers Through the Fedwire Funds Service (Applies to wire transfers only).
e) Operating Circular No. 9-Federal Tax Payments and Treasury Tax and Loan Depositories (Applies to ACH only); and
f) Operating Circular No. 12-Multilateral Settlement (Applies to ACH only).

6) Issuances by the Federal Reserve Banks and Federal Financial Institutions Examination Council (FFIEC) that address specific controls and procedures as to Fedwire, FedACH Services, privately operated payment systems and the Electronic Payments Network. Specifically:

a) Federal Reserve Banks' FedLine Advantage References;
b) FFIEC Information Technology Handbooks such as Information Security, Business Continuity Planning, Wholesale Payment Services and Retail Payment Systems; and
c) FFIEC Guidance-Authentication in an Internet Bank Environment.

7) Issuance of the Board of Governors of the Federal Reserve System that addresses Intraday Liquidity Management and Payment System Risk Policy.

In July 2006, the Board of Governors implemented changes in its daylight overdraft policy for government sponsored enterprises and certain international organizations. The changes require these organizations to eliminate their daylight overdrafts at the Federal Reserve Banks relating to their interest and redemption payments and to pay a penalty fee and post collateral if daylight overdrafts occur in their accounts as a result of their general corporate payment activity.

8) The Bank Secrecy Act (BSA), as amended by the USA Patriot Act, and the regulations and interpretations of the U.S. Department of the Treasury and Financial Crimes Enforcement Network (FinCEN) thereunder.

The BSA was enacted to address money laundering and other illegal activity. Specific requirements under the BSA for wire transfer include the procurement and retention of specific information on transactions of $3,000 or more that include:

a) The name and, if payment is ordered from an account, the account number of the transmittor;
b) The address of the transmittor;
c) The amount of the transmittal;
d) The execution date of the transmittal;
e) The identity of the recipient's financial institution;
f) The name and address of the recipient, the account number of the recipient, and any other specific identifier of the recipient; and

g) Either the name and address or numerical identifier of the transmittor's financial institution.

Other requirements include the identification and reporting of suspicious activity to FinCEN.

9) Statutes and Regulations administered by the Office of Foreign Asset Control (OFAC).

OFAC administers and enforces a series of laws that impose economic sanctions against targeted foreign countries, terrorist sponsoring organizations, and narcotics traffickers. These are described in "Foreign Assets Control Regulations For The Financial Community," a brochure issued by OFAC which is available on its website. Financial institutions are prohibited from conducting transactions with businesses or individuals that have been identified by OFAC. Prohibited transactions are defined broadly and include the provision of deposit, lending, letter of credit, wire transfer, and ACH services. If a financial institution's counterparty to a banking transaction is identified by OFAC, the financial institution is required to follow specific procedures such as blocking or freezing the counterparty's assets and providing reports to OFAC and the institution's board of directors.

Failure by an institution to comply with the NACHA, BSA and OFAC requirements can result in the imposition of severe civil and criminal penalties and damage the institution's reputation in the marketplace.

10) State privacy laws that require disclosures to customers of the recording of conversations to which they are a party.

Specific requirements may vary by state jurisdiction.

FHLBank Environment

Wire transfers

Wire transfers are a critical operation in an FHLBank's activities for purposes of the purchase/sale of money market transactions and on behalf of its customers. FHLBank customers use the wire system to transfer funds between their accounts at other financial institutions, purchase/sale of advances, securities, money market instruments, and to make payments to the customer's third-party relationships. The FHLBanks do not participate in the CHIPS network. Therefore, international wires are processed through a correspondent bank relationship and others.

The FHLBanks often rely on vendor software to process wires. The software provides an audit trail necessary to comply with UCC-4A and BSA requirements. There are several

different vendors of funds transfer software packages. Each package offers a variety of control features such as automated segregation of duties, risk and OFAC queues. The Federal Reserve Banks have replaced DOS-based FedLine terminals with its internet product, FedLine Advantage® (FedLine Advantage). This will provide access to the Federal Reserve Banks' payment services in an on-line environment.

Vendor software is customarily used by the FHLBanks to ensure compliance with OFAC requirements. The software must be compatible with the functionality of the wire system.

ACH

Transactional Capacity

The capacities in which FHLBanks are principally involved in ACH transactions follow below.

a) Originator. In this capacity, an FHLBank coordinates the processing of FHLBank's payroll with an outside service provider, who will transmit the file to an ODFI. Generally, the FHLBank's human resource function has the responsibility for the review, processing and reconciliation of the payroll.

b) Receiving Point and RDFI. In these capacities, an FHLBank receives debit and credit entries on behalf of its customers.

c) Net Settlement. In this capacity, an FHLBank initiates the settlement of the FHLBank customer's ACH files through a Federal Reserve Bank.

d) Sending Point. In this capacity, an FHLBank creates entries using the routing number of the ODFI, which is transmitted to the ACH Operator on behalf of the ODFI.

ACH responsibility is usually assigned to the demand deposit or the correspondent bank services functions of an FHLBank. The systems principally used for ACH transactions that provide access to the Federal Reserve System's on-line services and information include the following:

a) Fedwire and FedLine Web® (FedLine Web) and/or FedLine Advantage operated by the Federal Reserve System. Transactions carried out through these systems are processed through the Federal Reserve System's website.

b) Electronic payment network operated by the local automated clearing house. These transactions are processed through its website and transmitted through the Federal Reserve System.

Settlement Processing and Reconciliation

ACH files are usually received, processed and reconciled in the manner set forth below.

a) An ACH file is transmitted from a Federal Reserve Bank and/or an electronic payment network. It is processed in batch form through the FHLBank's demand deposit account system by an FHLBank's information technology personnel. Financial information should not be posted to the individual accounts until it has been reviewed/reconciled by designated personnel.

b) Designated personnel of an FHLBank reconcile the batch that was processed by information technology personnel to ACH summary reports, deposit reports, general ledger and the Federal Reserve Bank's statements.

c) Exceptions, as well as rejected and returned items, are researched and resolved prior to posting. Rejected transactions are transactions that cannot be sent through the Federal Reserve Bank or that the Federal Reserve Bank has rejected. Rejected transactions can occur for the following reasons:

(1) There is an error in the routing number or the account number.

(2) The account is a "problem" account. The account may be coded "Post No Debits" due to being overdrawn. The FHLBank should review all ACH transactions prior to their posting to an account to determine if the account will become overdrawn if the transaction is posted.

(3) The account may be in the process of closing. The FHLBank should review any or all transactions that will post to the account to ensure there are sufficient funds for the transactions.

d) The RDFI has the responsibility to verify and confirm to the Originator that the account number in the prenotification is for a valid account. A "prenotification" is a non-dollar entry sent through the ACH Network by an Originator to an RDFI.

A "notification of change" is a non-dollar entry transmitted by an RDFI to the ACH Operator for transmission back to the Originator through the ODFI. It is created when the RDFI receives a prenotification or a live dollar entry that contains incorrect information.

e) The existence of overdrafts should be communicated to key line management, such as FHLBank operations and treasury operations. FHLBank treasury operations personnel should conduct ongoing monitoring to prevent the creation of daylight overdrafts.

Risks Associated with Wire Transfer and ACH Activities

An FHLBank's primary risks relating to wire transfer and ACH activities are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, assessed, and monitored.
b) Information technology is not aligned with wire transfer and ACH department goals and strategies.
c) Internal control weaknesses potentially affecting financial reporting have not been adequately identified, assessed and disclosed.
d) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.
e) Background and credit investigations are not performed on personnel prior to their retention. Periodic credit investigations are not performed and mandatory leave policies have not been established.
f) Duties, responsibilities, and liabilities are not adequately addressed with vendors.
g) Losses due to errors and fraud are not effectively mitigated through insurance or other means.
h) A business continuity and recovery plan has not been developed and tested.
i) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise to test the control environment.

2) Operational Risk

a) Unauthorized (FHLBank and/or customer) wire transfers and ACH transactions are processed.
b) Wire transfer and ACH transactions are not properly recorded and reconciled.
c) Lack of compliance with internal controls, policies, procedures, and specific requirements of insurance policies, resulting in rejection of claims by insurers and incurrence of losses.
d) The FHLBank's liquidity needs are not being met owing to impaired wire transfer and ACH operations and its financial obligations are not satisfied.
e) Data cannot be readily recreated and/or required tasks readily performed in the event of a disaster or personnel turnover.
f) Agreements have not been completed for wire transfer and ACH services.
g) Fines and/or losses are sustained due to noncompliance with UCC-4A, NACHA, OFAC and BSA requirements.
h) Losses sustained due to noncompliance with Federal Reserve Bank Operating Circulars.
i) Daylight overdrafts are not monitored and minimized resulting in discontinuation of Federal Reserve Bank services.

j) Record retention requirements are not complied with.

3) ***Credit Risk***

Daylight and customer deposit overdrafts are not monitored and minimized.

Specific Risk Controls Relating to Wire Transfer and ACH Activities

An FHLBank's controls relating to wire transfer and ACH activities are set forth below.

1) Origination and Authorization

The primary control for processing wires is the adequate segregation of duties that relate to the input of the wire request, the review and release of the wire, the review and release of wires that require supervisory review such as risk and OFAC queues, the establishment and maintenance of customer profiles, and the establishment and distribution of personal identification numbers and testcodes.

Customers may originate outgoing wires by telephone, fax, FedLine, and the internet. Outgoing wire transfers are categorized as repetitive or non-repetitive. Repetitive wires are wire transfers sent to destinations with the same bank and account number to be credited that has been preauthorized and is generally used as a routine matter by the customer. A non-repetitive wire is not preauthorized and requires closer review and performance of callbacks to ensure proper authorization.

Wire requests that lack necessary information and/or contain incorrect information such as the routing number or the customer's account number, or requests that seek to transfer funds from accounts containing insufficient funds, are transferred to the risk queue, which requires supervisory review and release of the transaction. A similar process occurs with the OFAC queue if potential "hits" are identified.

Non-repetitive wire requests represent a higher degree of risk due to error and the potential for defalcation. Therefore, such requests must require two, and sometimes three, levels of authorization, and callback verifications. For a non-repetitive wire, there must be segregation of duties between the employee that inputs the wire transaction and the employee that verifies and releases the wire transaction. Wire transfer agreements and applicable addenda such as resolutions, repetitive agreements, and authorizations schedules for each customer must be maintained by the FHLBank.

In accordance with UCC-4A, the agreements should detail the duties, responsibilities, and liabilities of the FHLBank and its customers. The repetitive wire addendum details the account(s) at other financial institutions to which the customer wishes to transfer funds, and the authorization schedules detail the personnel that the customer

has authorized to either initiate and/or verify wire transfers on the customer's behalf. The FHLBanks should review and update the customer's authorization schedules on a regular basis.

Once completed, repetitive wire information is automated and controlled through wire templates. Specific authorizations are required to add or change a repetitive wire template. This responsibility should be assigned to personnel who are not involved with the daily processing of wire transactions. Once established, a single person may process them, and unless required by the wire transfer authorization schedules, a callback verification does not have to be performed.

As it pertains to originating ACH transactions, the primary control is the adequate segregation of duties that relate to the input, review and release of the ACH request, the completion of agreements and establishment of security procedures in accordance with UCC-4A and NACHA requirements.

2) Recording and Reconciliation

Wire transfer and ACH entries are processed and recorded to the members' demand deposit accounts and applicable FHLBank general ledger accounts such as the "Federal Reserve Bank," or "correspondent." The responsibility for the review and reconciliation of the entries should be segregated from that for the processing of the daily transactions.

Critical access controls and segregation of duties must be in place to prevent the processing of erroneous and fraudulent transactions. A material erroneous or fraudulent transaction could have a significant impact on the financial condition of the FHLBank and result in a poor image and reputation in the marketplace.

3) Daylight and Customer Deposit Overdrafts

The Federal Reserve Banks provide the unsecured intraday credit needed to support clearing of the large transactional volumes. Such credit extensions occur when a Federal Reserve Bank allows institutions to initiate transactions that exceed, at a given moment, the balance in their reserve or clearing accounts, which leaves the institution in a net debit position with the Federal Reserve Bank. These intraday overdrafts of accounts are referred to as "daylight overdrafts."

The amount of credit available to any institution is usually limited by "net debit sender caps," which establish the maximum unsecured exposure that a Federal Reserve Bank is willing to accept. As the FHLBanks do not have any net debit sender caps, they must monitor their position with the Federal Reserve Bank continuously.

Although FHLBanks are not allowed to incur daylight overdrafts, repeated daylight overdrafts may result in discontinuation by the Federal Reserve Bank of services such as wires, ACH, securities, and access to capital markets, which could limit an FHLBank's ability to meet its financial obligations and provide services to its customers.

The responsibility for monitoring the FHLBank's position with a Federal Reserve Bank is usually assigned to cash management/treasury personnel. Such personnel customarily have inquiry access to the wire system, which allows them to monitor large incoming/outgoing activity. In addition, the automated wire system has software controls that establish internal dollar limits and mitigate daylight overdraft possibilities. Customer deposit overdrafts represent an unsecured credit exposure, and should require the approval of credit personnel and line management.

4) Legal

In connection with wire transfer and ACH activities, FHLBank legal staff reviews applicable regulatory requirements, vendor contracts and other FHLBank documentation to protect the FHLBank's interests. In addition, the business units coordinate a periodic review with legal staff to ensure current operating practices comply with regulatory requirements.

5) Business Continuity and Recovery

The FHLBank should have written procedures for operations at its designated hot-site. Back-up tapes should be stored off-site and be easily retrievable. If the automated wire system is not available at the hot-site, FedLine terminals, off-line codeword authorizations, and bilateral agreements with one or more FHLBanks may need to be used to effectuate the FHLBank's wire transfer and ACH activities. Each FHLBank must have at least one back-up system and must test it periodically to ascertain its reliability.

Examination Guidance

A work program for Payment Systems-Wire Transfers and ACH accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's payment systems activities.

1) Organizational structure

a) Functional organization and reporting structure;
b) Identification of key personnel;
c) Primary duties, responsibilities and technical expertise of personnel;
d) Segregation of duties;
e) Cross-training of personnel;
f) Coordination with other departments such as risk management, information technology, treasury and cash management, accounting, credit and human resources; and
g) Significant changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for wire transfer and ACH activities, which may include the following:

a) Prohibiting or limiting specific types of wire transactions such as international and/or third-party wires;
b) Limiting or restricting ACH services offered;
c) Establishing timeframes and requiring customer notification for estimated large dollar wire activity;
d) Requiring specific procedures to authenticate wire transfer requests such as agreements, personal identification numbers, passwords, tokens and the performance of callback procedures;
e) Requiring the completion of specific agreements to ensure compliance with UCC-4A and NACHA requirements.
f) If operating as an ODFI, requiring specific security procedures to authenticate ACH requests received from an Originator or a Third-Party Sender, and establishing policies and procedures to review and monitor credit exposure limits for each of its corporate Originators;
g) Requiring supervisory reviews of exceptions such as rejected items, deposit and daylight overdrafts, transactions with parties identified on OFAC's "Specially Designated Nationals and Blocked Persons" list, and wire requests that exceed a specific dollar amount;
h) Restricting system access and function capabilities;
i) Segregating processing, recording and reconciliation duties in transactions;
j) Requiring periodic reissuance of wire transfer personal identification numbers and testcodes and reconfirming authorizations with customers;
k) Mitigating risks and liability with the purchase of specific insurance and bond coverage such as directors and officers liability, errors and omissions, computer cyber crime policies and fidelity bond coverage, and establishing compensating procedures and controls to address any exclusions in the policies;
l) Reviewing key management reports of wire transfer and ACH activities; and

m) Periodic managerial monitoring and reporting of key operating procedures controls and deviations to senior management and operations committee.

3) Key FHLBank policies and procedures, which may include those relating to the following:

a) Wire transfer and ACH operations;
b) Risk management;
c) Information security;
d) Fraud prevention;
e) Whistleblower provisions of SARBOX;
f) Background and credit investigations;
g) Business conduct and ethics;
h) Business continuity and recovery;
i) Member products; and
j) Vendors' risk.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from and controls established by the FHLBank over wire transfer and ACH activities and includes quantitative and qualitative evaluations; and
b) Evaluate the effectiveness of evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of the scope and testing performed by external and internal auditors on wire transfer and ACH activities. In addition, verify that an annual audit was conducted to determine compliance with ACH rules no later than December 1 of each year.
b) Evaluate the adequacy of the scope and testing performed by outside consultants such as penetration testing.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls by wire transfer and ACH activities for processing transactions, including:

a) Authorized users;
b) Vendor technical support and access to the automated wire system;

c) Utilization of spreadsheets;
d) Exception tracking, escalation, and reporting; and
e) Business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate workflow and processes as well as controls, including the level and direction of risk and the quality of risk management; and
b) Evaluate any significant changes to wire transfer and ACH activities that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile such as management, systems, key personnel, regulatory requirements and processing.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to, the following:

Wire Transfers

a) Restrictions upon physical access to the wire terminals or, in their absence, compensating controls to ensure proper authorization of transactions such as dual control, limitations upon system access or function capabilities, and managerial review;
b) Verification procedures to ensure proper authorization of wire requests received by telephone, fax, internet, letter and departmental communication such as agreements, personal identification numbers, testcodes, tokens, callback procedures, and customer confirmations;
c) System controls applicable to the automated wire system such as the review and establishment of employees' system capabilities, access and function capabilities, system defaults pertaining to user identifications, password composition and length, number of attempts before being locked-out, expiration and timeout, and dollar limitations;
d) Timely recording and reconciliation of wire transactions;
e) Evaluation of deposit and daylight overdrafts that were the result of wire transfer activity and whether the occurrences were isolated or the result of weaknesses in the internal control environment;
f) Periodic coordination with legal counsel to ensure that governing agreements and addenda adequately address UCC 4A requirements;
g) Adequacy of software to identify potential suspects on OFAC's "Specially Designated Nationals and Blocked Persons" list;
h) Recoverability of telephone recordings and compliance with applicable state

privacy requirements mandating disclosures to customers when conversations are being recorded;

i) Background and credit investigations and fraud prevention;
j) Reissuance of wire transfer personal identification numbers and testcodes as well as confirmation of authorizations with the customers;
k) Completion of applicable vendor agreements and compliance with vendors' risk policies; and
l) Establishment of record retention procedures that pertain to automated and manual records.

ACH

a) ACH transactions are requested and processed by authorized personnel. Observe that physical security has been established over the terminals, or in their absence, compensating controls to ensure proper authorization has been established. Specific attributes to consider are as follows:

   (1) Identify the FHLBank's ACH transactional capacity and evaluate the methodology of receiving the ACH request, such as FedLine Advantage, telephone, fax, internet, or letter. If the FHLBank is operating as an ODFI, evaluate the adequacy of the security procedures established with the Originator and/or Third-Party Sender, and limiting credit risk exposures with its corporate Originators.
   (2) Review the system controls applicable to the terminals such as the review and establishment of employees' system capabilities, access and function capabilities, system defaults pertaining to user identification, password composition and length, number of attempts before being locked-out, expiration and timeout.
   (3) Observe the processing of an ACH transaction. If applicable, verify compliance with dual control requirements.
   (4) Review a sample of incoming, outgoing and future-dated ACH transactions. Verify member authorization, including agreements and resolutions, and the timeliness and accuracy of posting to the member's account. Also, if applicable, select a current transaction and trace to a member's confirmation.
   (5) If applicable, review the supporting documentation of a recently completed pre-notification and determine compliance with NACHA's requirements.
   (6) If applicable, review the supporting documentation of a recently completed Notification of Change and determine compliance with NACHA requirements.

b) ACH Transactions are properly recorded and reconciled.

   Review the ACH reconciliation as of the examination date. In addition, evaluate the adequacy of the following attributes:

(1) Segregation of duties;
(2) In the event the assigned employee is absent, another employee has been designated to reconcile the accounts;
(3) Timely review, reconciliation of balances and resolution of differences and rejected items;
(4) Managerial review of the reconciliations; and
(5) Periodic reporting to accounting personnel.

c) Daylight and customer overdrafts are minimized.

Review the most recent deposit overdraft report and daylight overdrafts. If the overdrafts were the result of ACH activity, review with line management the situations that caused the customer deposit and/or daylight overdraft, and corrective action implemented. Evaluate whether the overdrafts were isolated, and whether they were the result of weaknesses in the design of the internal control environment, or lack of compliance with existing policies and procedures.

d) Compliance with federal and state regulatory requirements

Review a sample of ACH agreements and applicable resolutions. Verify that legal counsel conduct periodic reviews to ensure that the agreements adequately address NACHA, UCC-4A and OFAC requirements.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Payment Systems
Wire Transfers and Automated Clearing House (ACH)
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for wire transfer and ACH activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to wire transfer and ACH activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and the internal control assessment under SARBOX applicable to wire transfer and ACH activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over wire transfer and ACH activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by wire transfer and ACH activities for processing transactions, including authorized users, vendor technical support, utilization of user developed applications and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to wire transfer and ACH activities that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

9) Assessment of Risks

Summarize the results of the activities or functions examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

The FHLBanks are a government-sponsored enterprise with an assigned mission to further housing finance and to foster community investment. This mission is largely accomplished by providing advances to members. Member advances are the FHLBanks' oldest and primary business, and the principal form of secured credit in an FHLBank. The FHLBank provides short and long-term advances that are used by members to support mortgage lending, community investment, and other operational needs of their customers. Members may use long-term advances only to support residential housing finance and, in the case of community financial institutions, to support lending (through collateral acceptance) to small businesses, small farms, and small agricultural businesses. Since the FHLBanks are designed to serve members, advances are a low-margin business. FHLBank advance activity is generally a low-risk business as all advances are fully secured and FHLBanks typically hold or can claim collateral substantially in excess of total advances outstanding.

In accordance with Section 917.3 of Finance Board's regulations, each FHLBank must have in effect at all times a risk management policy that addresses the FHLBank's exposure to credit, operations, business, liquidity and market risk. The risk management policy should identify each of the aforementioned risks as they relate to secured credit activities, and establish standards and tolerances that can be measured and monitored. In addition, each FHLBank is required to perform, at least annually, a written risk assessment that identifies and evaluates all material risks that could adversely affect the achievement of the FHLBank's performance objectives and the satisfaction of compliance requirements. A description of the risks applicable to secured credit activities follows below.

1) ***Credit Risk.*** Credit risk is the potential that a borrower or counterparty will fail to meet its obligations in accordance with agreed terms. This risk is mitigated with the implementation of the following practices:

   a) Establishing an appropriate credit risk management environment that includes credit strategies, credit and collateral policies and procedures, reserve for credit losses, and other elements;

   b) Operating under a sound credit granting process that includes the review and approval of new and existing relationships, establishment of credit and collateral limits, and other elements;

   c) Maintaining an effective credit administration process that includes the on-going monitoring of relationships, the maintenance of information systems to monitor and measure the composition and quality of the portfolios, and other elements; and

   d) Ensuring the maintenance of adequate controls over credit risk, including the independent and on-going assessments of the processes and controls that are

communicated to senior management and the board of directors, segregation of duties, implementation of a monitoring process to identify and correct deviations from established policies, procedures and controls, and other elements.

2) ***Operational Risk (including both operations and business risk under Section 917.3 of the Finance Board regulations).*** By extending credit, an FHLBank assumes both credit risk and operational risk. Operational risk is the potential that the FHLBank could incur an unexpected loss resulting from human error, fraud, unenforceability of legal contracts, deficiencies in internal controls or information systems, or experience an adverse impact on profitability due to external factors, such as changing economic conditions, increased competition, and changes in legal or regulatory requirements. Certain of these risks may be mitigated through the segregation of key duties and the maintenance of sound credit management and administration policies and procedures, including automated systems related to these functions.

Specific to secured credit products, Section 917.4 of the Finance Board's regulations requires each FHLBank to have in effect at all times a member products policy that addresses the institution's management of products offered to its members and housing associates. The member products policy should address, among other matters, credit underwriting, criteria, appropriate levels of collateralization, valuation and discounts of collateral, fees, pricing, and the maintenance of appropriate systems, procedures and internal controls as well as appropriate operational and personnel capacity.

Regulatory Environment

The primary authorities governing, or relevant to, secured credit activities of the FHLBanks are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to secured credit:

Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4 Bank Member Products Policy, and Section 917.6, Internal Control System, are pertinent.

Section 932.4 requires an FHLBank to maintain capital to offset its credit risk capital charge for all assets, off-balance sheet items and derivative contracts.

Part 950 of the Finance Board regulations addresses advances. Subpart A of Part 950 is a general section dealing with definitions, authorizations, and limitations. Subpart

B addresses advances to housing associates and Subpart C deals with advances to out-of-district members and housing associates.

Part 960 of the Finance Board regulations addresses standby letters of credit (SLOC).

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of secured credit activities are:

Advisory Bulletin 98-2, dated January 30, 1998, which offers guidance on the use of advance proceeds. The bulletin addresses prohibitions on use of advance proceeds.

Advisory Bulletin 99-15, dated November 10, 1999, which offers guidance on collateral for sub-prime and high loan-to-value single family mortgage loans.

Advisory Bulletin 00-4, dated May 26, 2000, which offers guidance on providing quantitative disclosures as to putable advances to prospective borrowers.

Advisory Bulletin 01-5, dated May 1, 2001, which offers guidance on credit underwriting and collateral coverage for housing associates.

Advisory Bulletin 01-8, dated October 4, 2001, which offers guidance on establishing procedures to address the periodic review, classification and reporting of problem assets.

Advisory Bulletin 05-05, dated May 18, 2005, which provides guidance on the risk management responsibilities of the board of directors, senior management and risk management function of an FHLBank.

Advisory Bulletin 05-08, dated August 25, 2005, which provides guidance on establishing anti-predatory lending policies to govern the FHLBank's purchase of mortgages and calculation of the level of advances that can be made to its members.

Advisory Bulletin 06-02, dated March 20, 2006, which provides guidance on proper validation and documentation on the use of models. Each FHLBank and the Office of Finance should have policies and procedures to ensure that its various models are appropriately documented and validated.

Advisory Bulletin 07-01, dated April 12, 2007, which establishes regulatory expectations for the FHLBanks to adopt and implement policies and risk management practices that establish appropriate risk limits for, and appropriate mitigation of, credit exposure on nontraditional and subprime mortgage loans.

3) Article 9 (Secured Transactions) and Article 5 (Letters of Credit) of the Uniform Commercial Code (UCC).

Article 9 of the UCC applies to any transaction which is intended to create a security interest in personal property or fixtures including goods, documents, instruments, general intangibles, chattel paper or accounts, the sale of any accounts or chattel paper, and security interests created by contract including pledge, assignment, chattel mortgage, chattel trust, trust deed, factor's lien, equipment trust, conditional sale, trust receipt, other lien or title contract and lease or consignment intended as security.

Specific requirements that pertain to attachment and perfection of security interests, including the method of perfecting a security interest in specific types of collateral, the contents and filing of financing statements, changes in name and identity of debtors, rights and duties in connection with default, and enforcement, must be complied with in order to create and maintain a priority security interest in the collateral.

Article 5 of the UCC applies to letters of credit and to certain rights and obligations arising out of transactions involving letters of credit.

The UCC is a uniform nonbinding code which, to be effective in any domestic jurisdiction, must be adopted into law by that jurisdiction. As a result, there are sometimes variations in the UCC's provisions in particular jurisdictions. The FHLBanks should coordinate periodic reviews of their documents and operating practices with legal counsel to ensure compliance with current UCC requirements.

4) Statements of Financial Accounting Standards (collectively, Statements of Financial Accounting Standards or individually, SFAS) adopted by the Financial Accounting Standards Board establish standards of financial accounting and reporting governing the preparation of financial reports and are officially recognized as authoritative by the Securities and Exchange Commission and the American Institute of Certified Accountants. Specific Statements of Financial Accounting Standards applicable to secured credit activities, include, but are not limited to, the following:

a) SFAS 5, Accounting for Contingencies establishes standards of financial accounting and reporting for loss contingencies. It requires a creditor's accrual by a charge to income (and disclosure) for an estimated loss from a loss contingency if two conditions are met: (1) information available prior to the issuance of the financial statements indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statements; and (2) the amount of loss can be reasonably estimated.

b) SFAS 114, as amended by SFAS 118, Accounting by Creditors for Impairment of a Loan, requires a creditor to recognize loan impairment through the creation of a

credit loss reserve and a charge to bad debt expense. Loan impairment is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate or, as a practical expedient, at the loan's observable market price or the fair value of the collateral if the loan is collateral dependent. This statement is applicable to advances and to Acquired Member Advances.

5) ***State privacy laws that require disclosures to customers of the recording of conversations to which they are a party.*** Specific requirements may vary by state jurisdiction.

FHLBank Environment

Within the FHLBank System, organizational structures for secured credit may vary and require coordination with other functions such as customer funding, credit underwriting/administration, collateral operations, securities safekeeping operations, and wire transfer operations, as well as with board of directors and management committees such as the credit, asset/liability, operations, information technology and risk management committees . The primary processes are set out below.

Customer funding

An FHLBank's customer funding function receives the funding request from the member, housing associate or State Housing Finance Authority (SHFA) associate on recorded telephone lines, reviews loan documents that have been submitted, and enters the request into the FHLBank's advance system, which is updated with all relevant credit underwriting and collateral information. The advance system automatically checks all of the required borrowing criteria such as the amount, term, and sufficiency of collateral. Any discrepancies are noted by the system; a credit review is thereafter performed by designated credit personnel. If approved, advance proceeds are credited to the borrower's deposit account at the FHLBank.

FHLBank customer funding personnel have responsibility for the maintenance of the advance system, answering of questions on advance products, generation and distribution of confirmations, disclosures, statements to the member, housing associate or SHFA associate, maintenance of loan documents and share transaction reconciliation responsibility with accounting personnel.

Credit underwriting/administration

An FHLBank's credit underwriting/administration function is responsible for managing the performance and quality of the advance portfolio, including:

a) Establishing credit and collateral policies that address underwriting guidelines for the evaluation and monitoring of the borrower and collateral, maximum portfolio

exposures for specific types of concentrations, limits and standards for the approval of credit, eligible collateral, collateral valuation, collateral "haircuts," compliance with federal and state requirements (such as the UCC and state predatory lending laws) and periodic reporting to the FHLBank's credit committee and board of directors.

b) Coordinating the periodic review of loan and letter of credit documents with the FHLBank's legal counsel and perfecting the FHLBank's security interest in the underlying collateral.

c) Performing the initial review, approval and on-going monitoring of credit availability and credit maintenance levels of borrowers and overall credit risk profile of the FHLBank. This is performed by evaluating various factors relating to the borrower's business, financial condition and posted collateral including, but are not limited to, the following:

(1) Borrower's business profile;
(2) Total outstanding obligations to the FHLBank;
(3) Adequacy of qualifying collateral;
(4) Results of regulatory examinations and annual audited financial statements;
(5) Adequacy and stability of capital position;
(6) Net income and prospects for future earnings;
(7) Trends in operating ratios such as return on assets, net interest margin, efficiency, and liquidity;
(8) Quality and composition of assets; and
(9) Interest rate risk management.

These evaluations include the analysis of financial data and credit scoring derived from financial reports periodically filed by members with their regulators. The review of credit scores, examination reports, audited financial reports, and other information assists in the determination of the borrower's credit lines, collateral lien or pledge status, frequency of reviews by the FHLBank's credit committee, performance of on-site collateral verifications, and timely identification and classification of potential problem relationships.

Collateral operations

The primary duties and responsibilities customarily assigned to an FHLBank's collateral operations function are:

a) Receipt and safekeeping of collateral in delivery status and the conduct of verifications for collateral in blanket and specific listing lien status;

b) Valuation of the collateral and coordination with FHLBank's securities safekeeping operations function for securities pledged as collateral;

c) Filing of UCC-1 financing statements; and

d) Receipt of credit committee information to permit adjustment of collateral maintenance and/or haircut requirements, as well as the maintenance of the collateral system.

Advances and standby letters of credit are secured using the following methods:

a) Blanket lien-the blanket lien is used for the most creditworthy borrowers and is the most cost effective method of securing the FHLBank's advance because it requires fewer personnel resources to administer. Required collateral haircuts are the most severe when a blanket lien is employed.

b) Specific listing-specific listing of collateral enables the FHLBank to estimate the market value of the listed collateral and requires a less severe haircut than would be required for collateral pledged using a blanket lien.

c) Delivery-the FHLBank has possession of the collateral. The FHLBank's securities safekeeping department generally maintains custody of the notes or securities.

Depending on the risk identified with the borrower and type of collateral, valuations are performed of financial data derived from financial reports periodically filed by members with their regulators, as well as interim reports, using vendor software. In addition, periodic on-site reviews and/or the review of independent collateral verifications are performed with respect to members, housing associates or SHFA associates, as the case may be, to determine the accuracy of the collateral information that is reported.

Securities safekeeping operations

An FHLBank's securities safekeeping operations function generally has responsibility for the control of securities that are pledged as collateral, including the review, receipt and release of, and accounting for, principal and interest payments received. The close coordination of the activities of this function with those of the FHLBank's collateral operations function is necessary to ensure timely and accurate valuation of the collateral.

Wire transfer operations

An FHLBank's wire transfer operations function generally has responsibility for the control of disbursements and payments received from the members and housing associates. The coordination of the activities of this function with those of the FHLBank's credit function is necessary to identify relationships that require monitoring or additional approvals.

Management committees

Various committees are established to assist the board of directors and senior management in the oversight of secured credit activities. Specific examples of these include, but are not limited to, the following:

Credit committee. The credit committee customarily has the responsibility for the management of the credit risk arising from the FHLBank's activities. Examples of specific duties and responsibilities of this committee include:

(1) Approval of extensions of credit in accordance with delegated authorization;

(2) Monitoring of asset quality, composition, trends and risk diversification in the portfolios; and

(3) Monitoring of compliance with credit and collateral policies, including the identification and reporting of exceptions, and the review of the adequacy of the reserve for credit losses.

Asset/liability committee. The asset/liability committee or "ALCO" customarily has the responsibility for monitoring the FHLBank's financial management activities and exposures, ensuring that they are consistent with the FHLBank's mission, limits and strategic objectives. Examples of specific duties and responsibilities of this committee include:

(1) Development of asset/liability risk management philosophy and policy and recommending risk limits to the FHLBank's board of directors;

(2) Monitoring and management of the FHLBank's interest rate and liquidity risk exposures in accordance with established limits, including the oversight of the process for the periodic valuation of the FHLBank's interest rate risk model;

(3) Review of new emerging accounting and regulatory issues that may affect the FHLBank's financial strategies or performance;

(4) Approval of specific investment, credit, funding, hedging and pricing policies and programs;

(5) Review of new business or product initiatives, or of material changes to existing products, including the review of the overall portfolio and product line performance in accordance with the FHLBank's strategic goals; and

(6) Review of pricing objectives and philosophies, balancing profitability, member value and market penetration; monitoring of business activities that were negotiated with discretionary pricing.

Risk management committee. The risk management committee customarily assists senior management in the review and evaluation of risk exposures, tolerance limits and compliance with established controls that are associated with the business activities, operational areas and departments of, and risks undertaken by, the FHLBank.

Risks Associated with Secured Credit Activities

An FHLBank's primary risks relating to secured credit activities are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, assessed, and monitored.
b) Information technology is not aligned with the FHLBank's goals and strategies.
c) Exceptions to credit and collateral policies are not properly reviewed and reported to senior management and the board of directors.
d) The FHLBank's financial performance and compliance with established goals, policies, procedures, accounting and regulatory requirements are not properly reviewed and monitored due to inadequate, inaccurate and/or untimely reporting to the board of directors and senior management.
e) Internal control weaknesses potentially affecting financial reporting have not been adequately identified, assessed and disclosed.
f) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.
g) Background criminal and credit investigations are not performed as to personnel responsible for advance, credit and collateral prior to their retention. Periodic credit investigations are not performed with respect to such staff and mandatory leave policies have not been established or monitored.
h) Duties, responsibilities, and liabilities are not adequately addressed with outside service providers and vendors.
i) Losses due to errors and fraud are not effectively mitigated through insurance or other means.
j) A business continuity plan has not been developed and tested.
k) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise to test the control environment.

2) Credit Risk

a) Inadequate credit and collateral policies, procedures and internal controls exist to manage and monitor the overall credit risk profile of the FHLBank.
b) The borrower's creditworthiness and collateral capacity are not being analyzed and monitored. Requests for advances may be in excess of eligible collateral. Inadequate monitoring of the borrower could result in the conversion/sale of collateral without the knowledge or consent of the FHLBank.

c) Inadequate collateral valuations and liquidation procedures could result in losses in the event of credit deterioration and default.
d) Inadequate procedures to identify and classify problem relationships could result in deficiencies in the reserve for credit losses.
e) Customer deposit overdrafts are not monitored and minimized.
f) Potential external factors such as economic downturns, natural disasters, etc. are not adequately identified or accounted for that may adversely affect the recoverability of advances extended by an FHLBank.

3) Operational Risk

a) Management information systems do not adequately meet the needs of the FHLBank's lines of business resulting in the use of various manual processes and workarounds which can result in errors and misstated financial results.
b) Lack of technical expertise and experience may imperil the continuation of operations in the event of key personnel turnover or absences.
c) Legal documents are incomplete, missing, unenforceable, not in compliance with federal and state requirements or otherwise inadequate to protect the FHLBank's interests, resulting in the failure to provide a perfectible security interest. In addition, the FHLBank's lien may not be perfected and/or may be allowed to expire.
d) Loan documents held by a third-party custodian could be lost, stolen or destroyed or may not adequately identify the FHLBank as the party for whose benefit the custodian is acting.
e) Unauthorized or erroneous advances, collateral and standby letter of credit information may be entered into the advance, credit and collateral systems.
f) Published rate and product information that is provided to the members and housing associates may be inaccurate or outdated.
g) Legal documents and data cannot be readily recreated and/or required tasks performed in the event of a disaster.
h) SAS 70 reviews are not obtained, or alternative methods not performed, to obtain assurances on the outside service provider's internal control environment.
i) Economic downturns, natural disasters or other external factors are not adequately identified or accounted for that may adversely affect the recoverability of advances extended by an FHLBank.
j) Member consolidations, competition, adverse legislation, judicial decisions, or other external factors result in reduced FHLBank membership or advance activity.
k) Insurance coverage had not been evaluated and obtained to mitigate the FHLBank's risks and exposure.
l) Procedures that pertain to the destruction and retention of records have not been established or followed.
m) Noncompliance with federal or and state requirements that relate to predatory lending result in potential civil liabilities and a tarnished reputation in the market place.

Specific Risk Controls Related to Secured Credit Activities

An FHLBank's controls relating to its secured credit activities are set forth below.

1) Credit and Collateral Administration

The development and maintenance of sound and effective credit and collateral administration are critical elements in the identification, management and monitoring of the risk exposures associated with secured credit activities.

2) Legal

In connection with new or revised products, services or business prospects, FHLBank legal staff reviews applicable regulatory requirements, consultant and vendor contracts, credit and collateral documents and other FHLBank documentation to protect the FHLBank's interests.

Examination Guidance

A work program for Secured Credit accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in the work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's secured credit activities.

1) Organizational structure

a) Assess compliance by FHLBank management and staff with the applicable laws, policies, and guidelines.
b) Identify the key personnel and their primary duties, responsibilities and technical expertise.
c) Evaluate the staffing and skill level, segregation of duties, and cross-training of personnel.
d) Review coordination with other departments such as risk management, information technology, treasury and cash management, and accounting.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for secured credit activities, which may include the following:

a) Review the Risk Management Policy (RMP) for compliance with Section 917.3(b)(2) of the Finance Board regulations as it relates to secured credit. Determine what, if any, limits are established and how they are monitored.
b) Review the Member Products Policy (MPP) for compliance with Section 917.4(b) of the Finance Board regulations as it relates to secured credit.
c) Review the strategic business plan for compliance with Section 917.5(a) of the Finance Board regulations as it relates to secured credit. Determine the status of goals and objectives and how these are monitored.
d) Evaluate the reporting to the board of directors of RMP and MPP exceptions/waivers and periodic reporting to the board on the status of the strategic business plan goals and objectives as it relates to secured credit.
e) Review the asset review and classification practices for compliance with AB 01-8. Specifically, review the frequency of the classifications, reporting to management and the board of directors, the assets classified less than satisfactory, and the corrective actions taken to resolve problem assets.
f) Review the Anti-Predatory Lending Policy for compliance with AB 05-08. Specifically, determine the status of the member certifications, as well as, the FHLBank's ongoing compliance verification activities.
g) Review relevant board of directors committee structure and delegated authorities.
h) Review relevant management committee structure and delegated authorities.

3) Key FHLBank policies and procedures, which may include those relating to the following:

Advances

a) Determine how advances applications are accepted (fax, telephone, and secured website) and processed. Evaluate the controls and the trends.
b) Review advances applications and agreements and determine if they have been reviewed by the FHLBank's legal counsel and approved by the board of directors as required under Section 950.2 of the Finance Board regulations.
c) Determine if all advances are fully secured pursuant to Section 950.2(c) of the Finance Board regulations. If not, evaluate the collateral deficiencies, monitoring, reporting, and corrective actions.
d) Determine the controls and application of the long-term advances proxy test contained in Section 950.3 of the Finance Board regulations. Evaluate any instances of non-compliance and the reasons for these.
e) Determine if the FHLBank has established limitations on advances for any members under Section 950.4(a) of the Finance Board regulations. If so, evaluate the reasons for the limitations and how they are monitored.
f) Determine if the FHLBank has any advances outstanding to capital deficient members. Evaluate compliance with Sections 950.4(b), (c), and (d) of the Finance Board regulations.
g) Review the terms and conditions for advances and determine compliance with Section 950.5 of the Finance Board regulations. Specifically, determine how the

FHLBank prices its advances and evaluate who has authority for pricing advances. With putable and convertible advances, review the disclosures provided to members.

h) Determine if the FHLBank uses differential pricing of advances. If so, evaluate compliance with Section 950.5(b)(2) of the Finance Board regulations.
i) Review the FHLBank's fees for compliance with Section 950.6 of the Finance Board regulations. Specifically, determine if any prepayment fees have been waived and evaluate the reasons for such actions.
j) Review the new advances/product development process. Specifically, determine if the process is guided by a comprehensive vetting policy involving all appropriate departments and is driven by overall membership needs.
k) Review any new advances/products for compliance with applicable policies and regulations. Determine the impact of the new products.
l) Review departmental policies and procedures and determine if they are current, relevant, sufficiently detailed, and consistent with the FHLBank's policies and regulations.
m) Determine if any intradistrict transfer of advances has occurred. If so, evaluate compliance with Section 950.12 of the Finance Board regulations.
n) Determine the FHLBank's practices regarding advances upon termination of membership. Evaluate compliance with Section 950.15 of the Finance Board regulations.
o) Determine if the FHLBank has any advances to housing associates. If so, evaluate compliance with Section 950.17 of the Finance Board regulations.
p) Determine if the FHLBank has any advances outstanding to out-of-district members. If so, evaluate compliance Section 950.25 of the Finance Board regulations.
q) Review advances concentrations with members and product types. Determine trends and analyze factors mitigating risk.

Standby Letters of Credit

a) Review the purposes that the FHLBank issues or confirms SLOC for compliance with Section 960.2(a) of the Finance Board regulations.
b) Determine if all SLOCs are fully secured pursuant to Section 960.2(b) of the Finance Board regulations. If not, evaluate the collateral deficiencies, monitoring, reporting, and corrective actions.
c) Review the SLOC fees for compliance with Section 917.4(b) of the Finance Board regulations.
d) Determine if any draws on SLOC have occurred. If so, and repayment was financed with an advance, determine compliance with Section 960.4 of the Finance Board regulations.
e) Review departmental policies and procedures and determine if they are current, relevant, sufficiently detailed, and consistent with FHLBank policies and regulations.

Collateral

a) Evaluate the collateral types accepted for compliance with Sections 950.7(a) and (b) of the Finance Board regulations.
b) Review security or collateral agreements and determine if they have been reviewed by the FHLBank's legal counsel and approved by the board of directors as required under Section 950.2 of the Finance Board regulations.
c) Determine if the FHLBank has perfected its lien by filing a UCC-1 on all borrowers regardless of collateral status. Determine if there are any conflicting UCC-1 lien filings between the FHLBank and other lender(s). Review and assess FHLBank management's actions to remedy any conflicting lien issues.
d) Determine if the FHLBank uses a vendor or completes the filings internally. Evaluate the UCC-1 renewal and follow-up processes and internal controls.
e) Review the FHLBank's practices for accepting collateral pledged by affiliates of members. Specifically, determine compliance with Section 950.7(g) of the Finance Board regulations.
f) Review the FHLBank's practices for using third party custodians. Specifically, are third party custodians used for securities, mortgages, and/or other collateral? Evaluate the agreements and controls regarding member access to collateral.
g) Review the FHLBank's collateral verification policies and procedures and determine compliance with Section 950.9(b) of the Finance Board regulations. Specifically, evaluate how the verifications are performed, the frequency of the verifications, and the overall adequacy of the verification process.
h) Review the FHLBank's collateral valuation policies and procedures and determine compliance with Section 950.10 of the Finance Board regulations. Specifically, evaluate the use of book value and market value, and/or methodology, the frequency of the valuations, and the overall adequacy of the valuation process.
i) Determine the market value pricing programs or software used to periodically value the pledged loans and securities. Analyze staff experience and knowledge, policies, procedures, periodic testing and validation, and guidance and standards for using the valuation models or pricing software to determine market and/or lendable collateral values. As needed, test market values of securities collateral obtained from external third party pricing services.
j) Review the subprime and high loan-to-value identification process for compliance with AB 99-15 and AB 07-01. Specifically, determine how the FHLBank identifies these loans, particularly with the blanket status members. Evaluate the use of quarterly certifications and/or the onsite collateral verification process regarding subprime collateral.
k) Determine how the FHLBank identifies and excludes potential predatory loan collateral in compliance with AB 05-08, particularly with the blanket status members. Evaluate the use of quarterly certifications and/or the onsite collateral verification process regarding potential predatory collateral.

l) Review departmental policies and procedures and determine if they are current, relevant, sufficiently detailed, and consistent with the FHLBank policies and regulations.
m) Review the collateral liquidation plan and determine if it is current, relevant, sufficiently detailed, and consistent with FHLBank policies and regulations.
n) Review collateral concentrations with pledge types. Determine trends and analyze the factors mitigating risk for the non-traditional collateral types.

Monitoring

a) Review the ongoing analysis and monitoring of members' financial condition and performance. Identify the sources and adequacy of information used such as call report data, FIRE data, regulatory websites and examination reports, NRSRO ratings, and stock prices and trends. Assess the reporting to board of directors and management.
b) Determine if the FHLBank uses an internal credit review and/or model/scoring program for members. Evaluate the adequacy of the process including the use of a watch list and reporting to the board and management.
c) Determine if the FHLBank uses a watch list to identify and monitor members exhibiting higher than normal risk. Evaluate the adequacy of the credit criteria, financial analysis and reporting mechanisms that are used by the FHLBank's board of directors, senior management, and board and management committees to identify, manage and monitor troubled, financially weakened, problem and/or adversely classified member.
d) Review departmental policies and procedures and determine if they are current, relevant, sufficiently detailed, and consistent with the FHLBank policies and regulations.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment and determine if it reasonably identifies and evaluates all material risks, both quantitative and qualitative aspects, of the secured credit activities. Investigate any actions plans arising from the assessment and check corrective actions.
b) Evaluate the effectiveness of the evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Internal audit, external audit, and outside consultants reports

a) Evaluate the adequacy of the scope, testing, and workpapers completed by internal audit and determine the status of corrective actions for findings.
b) Evaluate the adequacy of the scope and testing completed by external audit and determine the status of corrective actions for findings.

c) Evaluate the adequacy of the objectives and scopes of reviews performed by outside consultants and determine the status of management's actions regarding recommendations.
d) Review the corrective actions taken in response internal and external audit findings.
e) Review the actions taken in response to consultant recommendations.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls for processing transactions for advances, SLOC, collateral, and members, including:

a) Authorized users;
b) Authorized functions for each user;
c) Utilization of spreadsheets;
d) Credit risk and/or collateral valuation models; and
e) Business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate workflow and processes as well as controls, including the level and direction of risk and the quality of risk management; and
b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile such as management, systems, key personnel, products, regulatory requirements and processing.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to the following:

Advances

a) Review a sample of advances for authorization, pricing, disclosure, recording, and disbursement. The sample should include a variety of advance types, as well as, some that are differentially priced.
b) Review a sample of account reconciliations to the FHLBank's general ledger for advances, standby letters of credit and/or loan commitments as of the examination date. Determine if outstanding reconciling items are supported and cleared and/or written off in a timely manner.
c) Check a sample of advances limits calculations for accuracy.
d) Evaluate the adequacy and accuracy of reports used by management and the

board of directors.

SLOC

a) Sample SLOCs to assess whether the FHLBank is in compliance with policies, procedures (including those governing purpose, authorization, expiration date, and fees) and internal controls, and to assess the adequacy thereof.
b) Evaluate the adequacy and accuracy of reports used by management and the board of directors.

Collateral

a) Investigate any collateral deficiencies and how they were or will be cured.
b) Review a sample of members for appropriate collateral status and collateral maintenance level or "haircut." The sample should include a variety of members including those on the watch list, the top borrowers, and those experiencing significant advance growths, those under advance limitations, those receiving policy waivers, and those receiving internal credit review/score downgrades.
c) Review a sample of collateral in delivery status for appropriate documents and reconcile to collateral reports. The sample should include collateral from more than one member if available.
d) Verify the accuracy of the latest collateral vault inventory.
e) Review a sample of collateral verifications for compliance with policies and procedures and reasonableness given type, volume, and characteristics of collateral. Verify that planned adjustments were entered into the collateral system.

Risk Identification and Adversely Classified Credits

Analyze a sample of recent member monitoring reports for accuracy and appropriate risk identification. Determine if internal credit scores/grades are accurate, current and reflective of the risks, and review a sample of assets classified less than satisfactory for justification.

If ***significant weaknesses*** exist in the FHLBank's member risk identification, adverse classification policies and procedures, and credit and collateral monitoring, an expanded member exposure and adverse classification review should be considered. Specific examples of attributes to consider include, but are not limited to the following:

a) Review and evaluate the analysis performed on the FHLBank's member "Watch List." For example, assess whether the analysis determines the cause of financial weakness, the risk exposure to the FHLBank, establishes the strategy to monitor, control and limit the risk, and if applicable, remedial action.

b) Perform a credit risk review and classify the member's exposure. Specific criteria to consider in developing the asset classification include, but are not limited to an evaluation of the following:

(1) Ability of the member to repay advances and any other extensions of credit extended by the FHLBank; and

(2) Ability of the member to repay advances and unsecured extensions of credit from secondary sources of income, such as collateral.

c) Adversely classify those members' exposures that represent a significant credit risk to the FHLBank, using the following adverse classification categories:

(1) ***Substandard***-Member exposure classified ***Substandard*** is protected inadequately by the current net worth and paying capacity of the member, or by the collateral pledged, if any. Member exposure so classified must have a well-defined weakness or weaknesses that jeopardize the FHLBank's ability to liquidate the exposure. This level of member exposure is characterized by the distinct possibility that the FHLBank will sustain some loss if the deficiencies are not corrected.

(2) ***Doubtful-***Member exposure classified ***Doubtful*** has all the weaknesses inherent in those exposures classified ***Substandard*** with the added characteristic that the weaknesses make collection of liquidation in full, on the basis of currently known facts, conditions and values, highly questionable and improbable.

(3) ***Loss***-Member exposure classified Loss is considered uncollectible and of such little value that the exposure's continuance as a bankable asset is not warranted. This classification does not mean that the exposure has absolutely no recovery or salvage value; rather, it is not practical or desirable to defer writing off this basically worthless asset, even though partial recovery may occur in the future.

(4) ***Special Mention***-A ***Special Mention*** member exposure has potential weaknesses that deserve management's close attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the exposure or in the FHLBank's credit position at some future date. ***Special Mention*** is not adversely classified and does not exposure an FHLBank to sufficient risk to warrant adverse classification.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of

those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for secured credit activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to secured credit activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and of the internal control assessment under SARBOX applicable to secured credit activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Internal audit, external audit, and outside consultants reports

Evaluate testing performed by the FHLBank's internal auditors, external auditors, and/or consultants over secured credit activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by the secured credit function for processing transactions, including authorized users, vendor technical support, utilization of user-developed applications, credit risk and/or collateral valuation models and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to secured credit activities that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation

Introduction

Pursuant to Section 4 of the FHLBank Act, any building and loan association, savings and loan association, cooperative bank, homestead association, insurance company, savings bank, or any insured depository institution satisfying the requirements of that section may become a member of an FHLBank. Although an FHLBank's grant of membership to an institution generally does not itself expose the FHLBank to risk, the membership approval process still requires the adoption and implementation of an adequate risk management process. This is particularly true because almost all members will utilize various FHLBank products and services, such as obtaining credit and using correspondent banking services. Granting membership to an ineligible entity or failing to perform sufficient due diligence in the approval process can potentially expose the FHLBank to significant risk, especially credit and operational risk. Regardless of the type of member, management must establish and follow prudent membership approval procedures.

In order to become a member of an FHLBank, an eligible institution must be authorized under state law to engage in the activities associated with membership, such as owning FHLBank stock, borrowing funds, and pledging assets to secure those borrowings. Lending to a member that is not federally insured may pose greater risks in the event of a receivership, bankruptcy or conservatorship because of risks relating to the priority of its claim and ability to recover collateral not present in an FDIC receivership.

Part 925 of the Finance Board regulations establishes eligibility requirements, a membership application process and capital stock requirements for FHLBank membership, as well as procedures for the termination of FHLBank membership (including the liquidation of member indebtedness, settlement of outstanding business transactions and redemption or repurchase of capital stock) in the event of voluntary withdrawal from membership, involuntary termination of membership or merger or consolidation involving member and nonmember institutions. Part 925 also contains provisions governing the readmission of members to FHLBank membership, FHLBank access to member information and the display of official FHLBank membership insignia.

Once an FHLBank has converted to a capital structure plan under Part 933 of the Finance Board regulations, the provisions of that plan governing the required minimum investment in FHLBank stock, capital stock structure and issuance, stock transfers and termination of FHLBank membership must also be considered as these may affect the application of specific requirements of Part 925 in certain instances.

The eligibility requirements and application process for organizations seeking to be certified by FHLBanks as housing associates are set forth in Part 926 of the Finance Board regulations. FHLBanks can make advances to housing associates even though they are not FHLBank members.

Eligibility Requirements

Pursuant to Section 4(a) of the FHLBank Act and Section 925.6 of the Finance Board regulations, eligible institutions include depository institutions and insurance companies that:

(1) Are duly organized under federal or state law;

(2) Are inspected and regulated under state or federal banking or similar laws;

(3) Either originate or purchase long-term home mortgage loans (loans with an original term-to-maturity of five years or more), including holding mortgage-backed securities representing an undivided interest in long-term mortgage loans;

(4) Have at least 10 percent of their total assets in residential mortgages, if federally insured depository institutions other than "Community Financial Institutions" as defined in Section 925.1;

(5) Are of such financial condition that the FHLBank may safely make advances to them; and

(6) Possess management and a home financing policy whose character is consistent with sound and economical home financing.

An applicant for FHLBank membership satisfying the requirements of Sections 925.6 through 925.16 of the Finance Board regulations will be presumed, subject to rebuttal by the FHLBank, to comply with the eligibility requirements of Section 4(a) of the FHLBank Act and Section 925.6 of the Finance Board regulations. Section 925.17 of the Finance Board regulations sets forth regulatory rebuttable presumption rules that permit an FHLBank to "rebut" such presumption and deny membership.

Membership Application Process

FHLBank membership application requirements are described generally in Section 925.2 of the Finance Board's regulations. An applicant for membership in an FHLBank is required to submit an application satisfying the requirements of Part 925 to the FHLBank, including a written resolution or certification duly adopted by the applicant's board of directors, or by an individual with authority to act on the board's behalf, that the applicant (1) has reviewed the requirements of Part 925 and has provided, to the best of the applicant's knowledge, the most recent, accurate and complete information available and (2) will promptly supplement the application with any relevant information that comes to the applicant's attention prior to the FHLBank's decision to approve or deny the application.

Part 925 contemplates that an FHLBank with whom a membership application has been filed will obtain and review information and documents required from the applicant to

establish or rebut any rebuttable presumption of the applicant's satisfaction of eligibility requirements. In determining whether an applicant, other than an insurance company, has complied with the financial condition eligibility requirement of Section 925.11, an FHLBank must obtain from the applicant and review the following documents:

(1) Regulatory Financial Reports. Regulatory financial reports filed by the applicant with its appropriate regulator for the last six calendar quarters and three year-ends preceding the date the FHLBank receives the application.

(2) Financial Statement. The most recent independent audit of the applicant conducted in accordance with generally accepted auditing standards by a certified public accounting firm which submits a report on the applicant, or such other audit, review or compilation of financial statements permitted under Section 925.11(a)(2).

(3) Regulatory Examination Report. The applicant's most recent available regulatory examination report prepared by its appropriate regulator, a summary prepared by the FHLBank of the applicant's strengths and weaknesses as cited in the regulatory examination report, and a summary prepared by the FHLBank or applicant of actions taken by the applicant to respond to examination weaknesses.

(4) Enforcement Actions. A description prepared by the FHLBank or applicant of any outstanding enforcement actions against the applicant, reports as required by the enforcement action, and verbal and written indications, if available, from the appropriate regulator of how the applicant is complying with the terms of the enforcement action; and

(5) Other Information. Any other relevant document or information concerning the applicant that comes to the FHLBank's attention in reviewing the applicant's financial condition.

An applicant, other than an insurance company, will be deemed to be in compliance with the financial condition eligibility requirement if it satisfies the composite examination rating, capital, and minimum performance standard requirements of Section 925.11(b). An insurance company applicant will be deemed to meet the financial condition eligibility requirement if it satisfies the requirements of Section 925.16 regarding capital.

The FHLBank is required to prepare a written digest for each applicant stating whether the applicant has satisfied the requirements of the rebuttable presumption of compliance with eligibility requirements, together with the FHLBank's findings and the related reasons. The digest, together with all other documents required in Sections 925.6 through 925.18 (including all documents required to establish or rebut a presumption), and additional documents submitted by the applicant, or otherwise obtained or prepared by the FHLBank, concerning the applicant, and the decision resolution to be adopted by the FHLBank disposing of the application, are required to be maintained in a membership file for the applicant. The file shall be maintained for at least three years after the

FHLBank's decision to approve or disapprove the membership application and the resolution of any appeal to the Finance Board under Section 925.5.

An FHLBank may delegate its authority to approve membership applications only to a committee of the FHLBank's board of directors, the FHLBank president, or a senior officer who reports directly to the FHLBank president other than an officer with responsibility for business development. The FHLBank is required to act on a membership application within 60 calendar days of the date the institution deems the application to be "complete," as that term is defined in Section 925.3, and thereafter to provide the applicant and the Finance Board with a copy of the FHLBank's decision resolution within three days of the rendering of the decision. The decision resolution must be duly adopted by the FHLBank's board of directors, by a committee of the board, or by an officer having delegated authority from the board to approve membership applications, and must state the following:

(a) That the statements in the digest, described above, are accurate to the best of the FHLBank's knowledge and are based on a diligent and comprehensive review of all available review of all information identified in the digest; and

(b) Where the decision resolution is to approve the application for membership, that the applicant is authorized under the laws of the United States and of the appropriate state to become a member of, purchase stock in, do business with, and maintain deposits in, the FHLBank to which the applicant has applied, and the applicant meets all of the membership criteria of the FHLBank Act and Part 925 of the Finance Board regulation.

Where the FHLBank's decision resolution is to deny the membership application, the applicant may file a written appeal of the decision with the Finance Board within 90 days of the date of the FHLBank's decision. The appeal process is governed by Section 925.5 of the Finance Board regulations.

Regulatory Environment

The primary regulations, standards and guidance that pertain to FHLBank membership are set forth below:

1) ***Rules and Regulations of the Federal Housing Finance Board,*** which include the following parts and sections relevant to membership approval:

   Section 915.4(a) of the Finance Board regulations requires an FHLBank to file an annual capital stock report to the Finance Board that provides information on its members' capital stock.

   Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards or directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4, Bank Member Products Policy, Section 917.5,

Strategic Business Plan, and Section 917.6, Internal Control System, are pertinent.

Part 925 of the Finance Board regulations addresses FHLBank membership, including eligibility requirements, application process, reporting requirements, and other matters.

Part 944 of the Finance Board regulations addresses members' adherence to community support standards, documentation of community support activities and the periodic submission of a community support statement to the Finance Board.

Section 950.4(e) of the Finance Board regulations requires the FHLBanks to provide the Finance Board with a report of advances and commitments outstanding to each of its members in accordance with the instructions provided in the Data Reporting Manual adopted by the Finance Board.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of membership activities are:

Advisory Bulletins 02-03, dated February 13, 2002 and 03-2, dated February 10, 2003, provide guidance on specific attributes to be considered by FHLBanks in the formation of their business continuity plans and the establishment of bilateral agreements with other FHLBanks.

FHLBank Environment

Within the FHLBank System, organizational structures for membership activities may vary and require coordination with other departments and functions, such as membership services, credit services, correspondent bank services, information technology, legal, risk management, executive management, management committees, and the board of directors. In general, the membership application process consists of the following steps:

1) A potential applicant requests and submits an application for membership; several of the FHLBanks have application forms on their respective websites. Some FHLBanks also require additional information, such as member management responses to regulatory examination reports or additional financial information, at the time of application.
2) The FHLBank will review the application, determine whether it is complete and whether the applicant is otherwise eligible to become a member, and request additional information based on this review. The FHLBank must act on a complete application within 60 calendar days of receipt.
3) The FHLBank's board of directors or designee approves the applicant for membership. The new member is required to purchase FHLBank stock within 60 calendar days of membership approval. Some FHLBanks may require submission of funds for stock purchase at the time of application.

4) Within three business days of an FHLBank's decision of a membership application, the FHLBank must provide the applicant and the Finance Board with a copy of the FHLBank's decision resolution.
5) Upon approval of a membership application, the FHLBank should contact the Finance Board to institute the issuance of an identification number for data entry in the membership system.

Federal Housing Finance Board Membership System

The membership system was developed as a central repository for information collected by the Finance Board from the FHLBanks about members and housing associates. The membership database maintains general and financial information including membership status, holdings of advances, and FHLBank capital stock.

The membership system and membership database also do the following:

1) Maintain member profile information and status changes, such as information regarding mergers, voluntary withdrawals, changes in principal place of business, charter relocations, and charter conversions;
2) Provide for the assignment of identification numbers for new approvals; and
3) Maintain quarterly membership financial information reported by the FHLBanks, such as advances, commitments and capital stock outstanding for members and housing associates and financial information (total assets and residential mortgage loans) compiled from call report information the member filed with its regulator.

<u>Risks Associated with Membership Activities</u>

An FHLBank's primary risks relating to membership are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management oversight)

a) Key risks arising from and controls over membership activities are not adequately identified, assessed, and monitored.
b) Information technology used in membership activities is not aligned with the FHLBank's goals and strategies.
c) Exceptions to policies governing membership activities are not properly reviewed and reported to senior management and the board of directors.
d) The FHLBank's financial performance and compliance with established goals, policies, procedures, accounting and regulatory requirements are not properly reviewed and monitored due to inadequate, inaccurate and/or untimely reporting to the board of directors and senior management.
e) Internal control weaknesses arising from membership activities that potentially affect financial reporting have not been adequately identified, assessed and disclosed.
f) Inaccurate reporting of membership activities to the Finance Board.

g) Duties, responsibilities, and expertise of staff conducting membership activities, including segregation of operational and control functions, are not adequately defined.
h) Duties, responsibilities, and liabilities are not adequately addressed with outside service providers and vendors used in membership activities.
i) Losses due to errors and fraud arising for membership activities are not effectively mitigated through insurance or other means.
j) A business continuity plan has not been developed and tested for membership activities.
k) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical expertise in membership activities to test the control environment.

2) Credit Risk

a) Inadequate membership approval policies, procedures and internal controls exist to allow the FHLBank to manage and monitor the overall credit risk profile of the FHLBank.
b) The FHLBank extends credit to an applicant that does not satisfy the financial condition eligibility requirement for membership.

3) Operational Risk

a) Management information systems do not adequately meet the needs of the FHLBank's business lines, resulting in the use of various manual processes and workarounds which can result in errors pertaining to membership activities.
b) Lack of technical expertise and experience may imperil the continuation of membership activities in the event of key personnel turnover or absences.
c) Legal documents used in membership activities are incomplete, missing, unenforceable, not in compliance with federal and state requirements or otherwise inadequate to protect the FHLBank's interests. Review of the eligibility of potential insurance company members is particularly important, as state law generally governs insurance company membership eligibility and will likely vary within the FHLBank's district.
d) Legal documents and data used in membership activities cannot be readily recreated and/or required tasks performed in the event of a disaster.
e) SAS 70 reviews are not obtained, or alternative methods not performed, to obtain assurances on the internal control environment of outside service providers used in membership activities.
f) Member consolidations, competition, adverse legislation, judicial decisions, or other external factors result in reduced FHLBank membership.
g) Insurance coverage applicable to membership activities has not been evaluated and obtained to mitigate the FHLBank's risks and exposure.
h) Procedures that govern the destruction and retention of membership records have not been established or followed.
i) Failure to adhere to membership eligibility requirements may result in approval of

ineligible applicants or rejection of eligible applicants.

Specific Risk Controls Related to Membership Activities

An FHLBank's controls relating to its membership activities are set forth below.

1) Credit Administration

Since FHLBank membership, or FHLBank certification in the case of a housing associate, is necessary to obtain advances or participate in acquired member asset programs, credit administration activities and controls will often overlap with membership approval procedures. As a result, the development and maintenance of sound and effective credit administration procedures is important in the identification, management and monitoring of the risk exposures associated with membership activities.

2) Legal

In connection with new or revised products, services or business prospects, FHLBank legal staff reviews applicable regulatory requirements, consultant and vendor contracts, and other FHLBank documentation to protect the FHLBank's interests.

Examination Guidance

A work program for Membership accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in the work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's membership activities.

In order to minimize duplication of efforts, the examiner for this area should coordinate efforts with the evaluations that are performed by the examiner responsible for the review of the FHLBank's secured credit activities.

1) Organizational structure

a) Identify key personnel and their primary duties, responsibilities and technical expertise.
b) Evaluate the staffing and skill level, segregation of duties, and cross-training of personnel.
c) Review coordination with other departments or functions such as membership services, credit services, correspondent bank services, legal, information technology, risk management and executive management.
d) Evaluate significant changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for membership activities, which may include the following:

a) Review the risk management policy for compliance with Section 917.3(b) as it relates to membership activities.
b) Review the strategic business plan for compliance with Section 917.5(a) as it relates to membership. Determine the status of goals and objectives and how these are monitored.
c) Review relevant board of directors committee structure and delegated authorities.
d) Review relevant management committee structure and delegated authorities.

3) Key FHLBank policies and procedures, which may include those relating to the following:

a) Review membership applications and determine if they have been reviewed by the FHLBank's legal counsel and approved by the board of directors (or permitted designee) as required under Part 925.
b) Determine if FHLBank management has established policies that require consideration and evaluation of state laws that may govern: (i) membership eligibility of applicants: (ii) authority of applicants to own FHLBank stock, borrow funds, and pledge assets to secure borrowings; and (iii) treatment of claims and collateral in conservatorship or receivership. These considerations may be particularly important with respect insurance company applicants.
c) Determine if the FHLBank has established membership approval policies and procedures that require the evaluation of the financial condition of applicants.
d) Determine if the FHLBank has established membership approval polices and procedures under which the FHLBank determines that applicants meet other eligibility requirements, such as long-term residential mortgage origination and investment.
e) Review the FHLBank's marketing efforts as they relate to new membership activities.
f) Evaluate the accuracy of the FHLBank's member products policy.
g) Review departmental policies and procedures and determine if these are current, complete, and consistent with the FHLBank's policies and Finance Board regulations.
h) Determine if FHLBank management has established policies related to termination of FHLBank membership (including the liquidation of member indebtedness, settlement of outstanding business transactions and redemption or repurchase of capital stock) in the event of voluntary withdrawal from membership, involuntary termination of membership or merger or consolidation involving a member and nonmember for compliance with Part 925.
i) Review the adequacy of the FHLBank's ongoing analysis and monitoring of its membership base (much of this may occur in the FHLBank's credit function).

Assess the adequacy of reporting to the FHLBank's board of directors and management regarding the FHLBank's membership base.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment and determine if it reasonably identifies and evaluates all material risks, both quantitative and qualitative aspects, of membership activities. Investigate any action plans arising from the assessment and corrective actions.
b) Evaluate the effectiveness of the evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting relating to membership activities and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Internal audit, external audit, and outside consultants reports

a) Evaluate the adequacy of the scope, testing, and workpapers completed by internal audit and determine the status of corrective actions for findings.
b) Evaluate the adequacy of the scope and testing completed by external audit and determine the status of corrective actions for findings.
c) Evaluate the adequacy of the objectives and scopes of reviews performed by outside consultants and determine the status of management's actions regarding recommendations.
d) Review the corrective actions taken in response to internal and external audit findings.
e) Review the actions taken in response to consultant recommendations.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls for marketing membership and processing membership activities, such as applications, withdrawals, mergers and capital stock. Specific attributes to consider are as follows:

a) Authorized users;
b) Authorized functions for each user;
c) Security of confidential information;
d) Interfaces with the advance and collateral systems;
e) Information on the FHLBank's website;
f) Utilization of spreadsheets; and
g) Business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate the workflow and processes as well as controls, including the level and direction of risk and the quality of risk management.

b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile such as management, systems, key personnel, regulatory requirements and processing.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to, the following:

a) Review a sample of membership applications and approvals to ensure compliance with Part 925, as detailed above. The sample should include a variety of applications, including housing associations and insurance companies, if applicable.
b) Review a sample of member information and verify accuracy with the FHLBank's MIS and/or reporting applications.
c) Verify the accuracy of membership information reported to the Finance Board.
d) Evaluate the adequacy and accuracy of reports used by management and the board of directors.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Membership
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for membership approval, as applicable. Review board and management committee meeting minutes and agenda and their decision process.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to membership activities. Assess the adequacy of policies, procedures and practices in the context of Finance Board regulations, accounting standards, board of directors directives and risk appetite, strategic and business plans, and industry best practices.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and of the internal control assessment under SARBOX applicable to membership activities, as well as procedures implemented to periodically attest to the adequacy of the control environment, including board of directors reviews and corrective actions on identified control weaknesses.

5) Internal audit, external audit, and outside consultants reports

Assess testing of controls over its membership activities performed by the FHLBank's external auditors, internal auditors, or consultants. Review the audit plan, audit scope and frequency, the engagement letter, and audit workpapers where appropriate. Review audit exception tracking systems and management's corrective actions.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by the membership function, including authorized users, vendor technical support, utilization of user-developed applications and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to membership activities that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation

Introduction

The major securities markets in the United States include the government securities market, the corporate equities and bond market, the market for money market instruments, and the municipal bond market. The instruments traded in these markets are generally traded through organized exchanges or through the over-the-counter dealer markets. Major categories of financial instruments commonly traded include U.S. Treasury securities, government agency securities, securities issued by federal government-sponsored enterprises, corporate equities and bonds, money market instruments such as commercial paper, and municipal (state and local) government securities. Participants in these markets include securities issuers; investment companies, non-financial corporations and individuals.

The mechanisms for clearing and settling securities transactions vary by market and type of instrument, and generally involve two types of specialized financial intermediaries: clearing corporations and securities depositories. Clearing corporations provide trade confirmation and comparison services, and multilateral netting of trade obligations; while, securities depositories transfer securities ownership on a gross or net basis against payment via book entry transfers.

Depository institutions play several important roles in securities clearing and settlement. Not only do depository institutions participate in clearing and settlement arrangements for themselves, they also act as custodians, issuing and paying agents, and settling banks for their customers. In addition, depository institutions provide credit to clearing corporations, securities depositories, and clearing participants for routine and contingency purposes.

The primary participants in the securities settlement systems are as follows:

1) U.S. Government Securities Market

The U.S. government securities market encompasses all primary and secondary market transactions in securities issued by the U.S. Treasury (Treasury), certain federal government agencies, and federal government-sponsored enterprises. Trading in government securities is conducted over the counter between brokers, dealers, and investors. In over-the-counter trading, participants trade with one another on a bilateral basis rather than on an organized exchange. Nearly all U.S. government securities are issued and transferred through a book-entry system operated by the Federal Reserve Banks.

In the primary market, Treasury securities are issued through regularly scheduled auctions. The Federal Reserve Banks serve as conduits for the auctions, with the Federal Reserve Bank of New York coordinating much of the auction activity. Individual, corporations and financial institutions may participate in the auctions. Participation in Treasury auctions, however, is typically concentrated among a small number of dealer

firms known as primary dealers.

In the secondary market for government securities, trading activity takes place between primary dealers and non-primary dealers. Customers of these dealers are financial institutions, non-financial institutions and individuals. The majority of transactions between primary dealers and other large market participants are conducted through inter-dealer brokers that provide anonymity and price information to market participants. Approximately 2,000 securities brokers and dealers are registered in the U.S. government securities market.

2) Fixed Income Clearing Corporation (FICC)

The FICC started operations at the start of 2003 and was created when the Government Securities Clearing Corporation and the Mortgage-Backed Security Clearing Corporation merged. The agency is divided into two sections, the government securities division (GSD) and the mortgage-backed securities division (MBSD). GSD clears and nets U.S. government securities and agency debt securities. Securities eligible for MBSD clearing are mortgage-backed securities issued by the Government National Association (GNMA), the Federal Home Loan Mortgage Corporation (FHLMC), and the Federal National Mortgage Association (FNMA).

FICC uses real time trade matching: trade details are compared and matched as soon as trade information is submitted. Successfully compared trades result in binding and enforceable obligations for settlement. Unmatched trades may be revised to achieve a trade match.

Successfully matched trades of eligible securities, for FICC netting service participants, are netted against offsetting net-receive or net-deliver obligations of the same security. Once the government securities net positions are determined, GSD interposes itself between the original trading parties and becomes the legal counter-party to FICC members for settlement purposes. Therefore, GSD members' net settlement obligations are delivered to or received from GSD. MBSD, however, engages in multilateral position netting and does not stand in the middle of transactions. Final net settlement obligations of GSD and MBSD participants are settled through the Fedwire Securities Service via participants' settlement bank.

3) Fedwire Securities Service

As fiscal agents of the United States, the Federal Reserve Banks act as the securities depository for all marketable Treasury securities, many federal agency securities, and certain mortgage-backed securities issued by GSEs. U.S. government securities are issued in book-entry form through the Federal Reserve Bank's Fedwire® (Fedwire) Securities Service using either an auction process or dealer syndicate mechanism. The Fedwire Securities Service provides for the safekeeping and transfer of these securities. The safekeeping function involves the records of securities balances, and the transfer and

settlement function involves the transfer of securities between parties.

When book-entry securities transfers are processed using Fedwire Security Service, the institution sending the transfer receives immediate credit in its Federal Reserve Bank funds account for the payment associated with the transfer, and its securities account is correspondingly debited. The Federal Reserve Bank funds account of the institution receiving a book-entry securities transfer is debited for the payment amount, and its securities account is credited. There are more than 9,000 participants in the system and they are largely composed of depository institutions.

The Federal Reserve Bank's Fedwire Securities Service is supported by a real-time, delivery-versus-payment (DVP) gross settlement system that provides for the immediate, final, and simultaneous transfer of securities against the settlement of funds. This system, known as the National Book-Entry System (NBES), provides for the safekeeping and transfer of Treasury, government agency, and Government Sponsored Enterprise (GSE) securities as well as securities issued by certain international organizations. The safekeeping function involves the electronic storage of securities records in custody accounts, and the transfer and settlement function involves the transfer of securities between parties.

Financial institutions may access the Fedwire Securities Service via high-speed direct computer interface FedLine, or with off-line telephone connectivity with a Federal Reserve Bank. The Federal Reserve Banks have replaced DOS-based FedLine terminals with its internet product, FedLine Advantage® (FedLine Advantage). This will provide access to the Federal Reserve Banks' payment services in an on-line environment.

On-line participants using either a FedLine PC or internet connection to Fedwire Securities Service require no manual processing by the Federal Reserve Banks. Off-line participants provide funds transfer instructions to their Federal Reserve Bank by telephone, and once authenticated, the Federal Reserve Bank enters the transfer instruction into Fedwire Securities Service system for execution. The manual processing required for off-line requests makes them most costly and suitable only for institutions processing a small number of funds transfer payment orders.

4) Corporate and Municipal Securities

Corporate equities and bonds, commercial paper, and municipal bonds are traded on various established exchanges and on over-the-counter markets. The primary securities exchanges in the United States are the New York Stock Exchange, the American Stock Exchange, and the primary over-the-counter dealer market is the National Association of Securities Dealers Automated Quotations (NASDAQ).

The commercial paper market warrants special mention as it is an important source of short term funding for financial corporations and municipal governments. Commercial paper is a money market instrument issued by prime-rated non-financial and financial

companies with maturities ranging from one to 270 days. Commercial paper is issued through dealer placements or direct placements with investors. Although commercial paper is a negotiable instrument, secondary market trading is limited. Disruption in the issuance of commercial paper can cause significant liquidity and credit concerns for issuers, many of whom are depository institutions and other financial companies, and depository institutions that provide issuing and paying agent services to issuers.

5) National Securities Clearing Corporation (NSCC)

NSCC, established in 1976, provides clearing and settlement services for corporate equities, corporate debt, municipal securities, mutual funds, annuities, and unit investment trusts. NSCC is a registered clearing corporation regulated by the Securities and Exchange Commission (SEC). With roughly 250 full-service participants, NSCC handles all aspects of the clearing and settlement of trades between brokers and dealers in securities traded on the over-the-counter markets, the New York Stock Exchange, the American Stock Exchange, and other regional exchanges.

Executed trades are typically reported to NSCC on trade date. Trades are either reported to NSCC by an established exchange as matched (irrevocable) trades or by brokers and dealers as unmatched trades. Trades submitted by brokers and dealers are compared and matched within NSCC's Continuous Net Settlement (CNS) system. Following the comparison process, NSCC becomes the legal central counterparty and guarantees completion of all securities trades following through CNS. CNS functions as an automated book-entry accounting system that centralizes the settlement of compared security transactions and maintains an orderly flow of securities and money balances.

Similar to the FICC netting process, successfully matched trades of eligible securities are netted against offsetting net-receive or net-deliver obligation of the same security. Settlement of securities takes place at the Depository Trust Company (DTC) and funds settlement occur over the Fedwire Funds Service through settlement banks.

6) Depository Trust Company (DTC)

DTC is a New York limited purpose trust company, a member of the Federal Reserve System, and a clearing agency registered with the SEC. DTC, the central securities depository for corporate equity securities and bonds, municipal government securities, and money market instruments, provides safekeeping and transfer of these securities. DTC participants include securities brokers, dealers, institutional investors, and depository institutions acting on their own behalf as well as functioning as custodians, issuing and paying agents, and settling banks for their customers. Like the Fedwire Securities Service, the safekeeping function involves the electronic recordkeeping of securities balances for participants, and the transfer function involves the transfer of securities between parties. DTC transfers securities on a gross basis throughout the day, while settling funds obligations on a net basis at the end of the day.

During the transfer process, DTC will limit its credit exposure through participants' net caps. Any net debit position incurred by the participants must be fully collateralized. End-of-day funds settlements occur over the Fedwire Funds Service through participants' settlement banks.

Financial institutions rely on internal funds transfer systems and networks to send payment instructions to their correspondents for the transfer of correspondent balances or to initiate Fedwire Funds Service or Clearing House Interbank Payments System (CHIPS) payments. Large financial institutions have either developed their own funds transfer systems or relied on off-the-shelf funds transfer systems. In either case, the internal financial institution funds transfer systems interface with Fedwire Funds Service and CHIPS, supporting the interface and transaction format specifications for the transmission of payment orders. Off-the-shelf funds transfer systems typically support a variety of treasury, cash management, and straight-through-processing (STP) modules, which automate payment order processing.

The Federal Reserve Banks provide the Computer Interface Protocol Specifications (CIPS) that funds transfer and book-entry securities systems need to adopt in order to implement a CI connection successfully. The Federal Reserve Banks provides a website with a list of vendors who have completed their protocol certification process. The Federal Reserve Banks do not endorse any specific software vendor or product. The Federal Reserve Banks make no warranties or representations with respect to any of the products offered by these vendors except that communications-level software correctly executes systems network architecture (SNA) commands as specified in the CIPS.

Regulatory Environment

The primary authorities governing, or relevant to, securities safekeeping activities of the FHLBanks are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) ***Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to securities safekeeping activities:***

   Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, Section 917.4, Bank Member Products Policy, and Section 917.6, Internal Control System, are pertinent.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of securities safekeeping activities are:

Advisory Bulletin 03-2, dated February 10, 2003 and Advisory Bulletin 02-3, dated February 13, 2002, which offer guidance on specific attributes to be considered by FHLBanks in the formulation of their business continuity plans, and the establishment of bilateral agreements with other FHLBanks.

Advisory Bulletin 04-01, dated March 10, 2004, which offers guidance on the evaluation of a service organization providing services to an FHLBank whose activities could affect the FHLBank's financial condition. This includes the performance of an assessment of the service organization's internal controls, such as the procurement of a service auditor's report in accordance with Statement of Auditing Standards No. 70 (SAS 70) or the performance of alternative methods necessary to gain confidence on the service organization's internal controls.

Advisory Bulletin 05-05, dated May 18, 2005, which provides guidance on the risk management responsibilities of the board, senior management and risk management function.

3) Regulation J of the Board of Governors (Board of Governors) of the Federal Reserve System (Regulation J), Collection of Checks and Other Items by Federal Reserve Banks and Funds Transfer through FedWire, Article 4A (Funds Transfer) and Article 9 (Secured Transactions) of the Uniform Commercial Code (UCC).

Regulation J and UCC-4A promote efficient payment systems by establishing the respective responsibilities of sending and receiving banks and establish incentives to ensure appropriate controls against unauthorized transactions. In the process, they allocate liability for failure of transaction participants to comply with their assigned responsibilities under each.

Regulation J and UCC-4A require the FHLBanks to offer their customers a "commercially reasonable security procedure" for funds transfer of securities in order to avoid legal liability for fraud. A commercially reasonable security procedure is one established by agreement of the customer and the FHLBank for the purpose of:

a) Verifying that a payment order or communication amending or canceling a payment order is that of the customer; and

b) Detecting errors in the transmission or the content of the payment order or communication.

To comply with this requirement, the FHLBanks employ various security procedures to ensure the customer authorized the transaction. These include the issuance of personal identification numbers, testcodes, tokens, and the performance of callbacks.

Article 9 of the UCC applies to any transaction which is intended to create a security interest in personal property or fixtures including goods, documents, instruments, general intangibles, chattel paper or accounts, the sale of any accounts or chattel paper, and security interests created by contract including pledge, assignment, chattel mortgage, chattel trust, trust deed, factor's lien, equipment trust, conditional sale, trust receipt, other lien or title contract and lease or consignment intended as security.

Specific requirements that pertain to attachment and perfection of security interests, including the method of perfecting a security interest in specific types of collateral, the contents and filing of financing statements, changes in name and identity of debtors, rights and duties in connection with default, and enforcement, must be complied with in order to create and maintain a priority security interest in the collateral.

The UCC is a uniform nonbinding code which, to be effective in any domestic jurisdiction, must be adopted into law by that jurisdiction. As a result, there are sometimes variations in the Code's provisions in particular jurisdictions.

4) Issuances by the Federal Reserve Banks and Federal Financial Institutions Examination Council (FFIEC) that address specific controls and procedures as to Fedwire and privately operated payment systems. Specifically:

a) Federal Reserve Banks' FedLine Advantage References;
b) FFIEC Information Technology Examination Handbooks such as Information Security, Business Continuity Planning and Wholesale Payment Systems; and
c) FFIEC Guidance-Authentication in an Internet Bank Environment.

5) Federal Reserve Bank Operating Circulars and Appendices that set forth the terms for maintaining accounts with and obtaining other services from the Federal Reserve Banks. Specifically:

a) Operating Circular No. 1-Account Relationships, Agreements and Forms;
b) Operating Circular No. 4-Automated Clearing House Items;
c) Operating Circular No. 5-Electronic Access, Certification Practice Statement, and Password Practice Statement;
d) Operating Circular No. 6-Funds Transfers Through The Fedwire Funds Service;
e) Operating Circular No. 7-Book-Entry Securities Account Maintenance and Transfer Services;
f) Operating Circular No. 8-Collateral; and
g) Operating Circular No. 12-Multilateral Settlement.

6) Issuances of the Board of Governors of the Federal Reserve System that address Intraday Liquidity Management and Payment System Risk Policy

In July 2006, the Board of Governors implemented changes in its daylight overdraft

policy for government sponsored enterprises and certain international organizations. The changes will require these organizations to eliminate their daylight overdrafts at the Federal Reserve Banks relating to their interest and redemption payments and to pay a penalty fee and post collateral if daylight overdrafts occur in their accounts as a result of their general corporate payment activity.

7) ***The Bank Secrecy Act (BSA), as amended by the USA Patriot Act, and the regulations and interpretations of the U.S. Department of the Treasury and Financial Crimes Enforcement Network (FinCEN) thereunder.***

   The BSA was enacted to address money laundering and other illegal activity. Specific requirements under the BSA for securities safekeeping services include, but are not limited to, the establishment of a customer identification program that enables the financial institution to form a reasonable belief that it knows the identity of each customer, record retention requirements, and the identification and reporting of suspicious activity to FinCEN.

8) ***Statutes and Regulations administered by the Office of Foreign Asset Control (OFAC).***

   OFAC administers and enforces a series of laws that impose economic sanctions against targeted foreign countries, terrorist sponsoring organizations, and narcotics traffickers. These are described in "Foreign Assets Control Regulations For The Financial Community," a brochure issued by OFAC which is available on its website.

   Financial institutions are prohibited from conducting transactions with businesses or individuals that have been identified by OFAC. Prohibited transactions are defined broadly and include the provision of deposit, lending, letter of credit, wire transfer, securities transactions and ACH services. If a financial institution's counterparty to a banking transaction is identified by OFAC, the financial institution is required to follow specific procedures such as blocking or freezing the counterparty's assets and providing reports to OFAC and the institution's board of directors.

   Failure by an institution to comply with the BSA and OFAC requirements can result in the imposition of severe civil and criminal penalties and damage the institution's reputation in the marketplace.

9) ***State privacy laws that address providing disclosure to customers when conversations are being recorded***. Specific requirements may vary by state jurisdiction.

<u>FHLBank Environment</u>

The FHLBanks provide a secure and convenient method for clearing and safekeeping securities for the FHLBank and their members. Specific legal agreements and forms are

developed and reviewed by FHLBank's legal counsel to address the duties, responsibilities and liabilities of the FHLBank, the custodian(s), the member, the member's customer, the applicable transactions that are processed, and compliance with applicable state law and UCC requirements.

Examples of specific services include, but are not limited to the following:

1) Providing securities trade settlement, income collection, maturity and called bond payment process, monthly reporting, online access to securities information, payment inquiries processing, market valuation and bond ratings.

2) Pledging securities to a third party where the FHLBank operates as trustee and custodian for collateral held for repurchase agreements that have been sold by the member to their customer. Under these situations, the FHLBank internally codes these securities as pledged collateral for the repurchase transactions.

3) Pledging securities to a third party where the FHLBank operates as trustee and custodian for collateral held on behalf of various public entities whose deposits that are held by the member exceed the maximum standard insurance amount set by the FDIC. Usually, the secured deposits are public funds. A tri-party agreement is executed among the member, the member's customer and the FHLBank. Under these circumstances, the FHLBank internally codes these securities as pledged collateral for the deposits.

4) Operating as a custodian of securities pledged as collateral by members to protect the FHLBank in the event of default on the repayment of outstanding advances and standby letters of credit. Under these circumstances, the securities safekeeping function coordinates with the credit and collateral functions to ensure that the FHLBank has physical possession of the securities that are pledged as collateral and sufficient in value. The securities are coded internally as pledged collateral for advances and/or standby letters of credit.

In addition, the securities safekeeping function coordinates with the capital markets or treasury functions to facilitate the cash management of repurchase agreement transactions that have been executed on behalf of the FHLBank. Securities that are pledged as collateral are transferred to the counterparty's custodian.

The FHLBanks utilize the appropriate Federal Reserve Bank to process book-entry wireable securities such as Treasuries, FHLMC and FNMA and a correspondent bank custodian relationship to process securities for which DTC is serving as a custodian. Vendor software is utilized to provide current market valuation information.

Dual control that pertains to the review, verification, receipt, input, release, adjustments and reconciliation is required to process all securities safekeeping activity. Examples of specific transactions are as follows:

1) Delivery-versus-payment-a transaction in which the buyer's payment for securities is due at the time of delivery (usually to the FHLBank acting as agent for the buyer) upon receipt of the securities;

2) Receive-versus-payment-an instruction accompanying sell orders that only cash will be accepted in exchange for delivery of the securities;

3) Free delivery-securities are delivered without an offsetting receipt of funds; and

4) Free receive-securities are received without an offsetting receipt of funds.

Risks Associated with the Securities Safekeeping Function

An FHLBank's primary risks relating to the securities safekeeping function are set forth below.

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key risks and controls are not adequately identified, assessed, and monitored.
b) Information technology is not aligned with the FHLBank's goals and strategies resulting in poorly integrated systems and dependence on manual controls.
c) Duties, responsibilities, and staff expertise, including segregation of operational and control functions, are not adequately defined.
d) Internal control weaknesses potentially affecting financial reporting that have not been adequately identified, assessed and disclosed.
e) Background criminal and credit investigations are not performed on securities safekeeping personnel prior to their retention. Periodic credit investigations are not performed, and mandatory leave policies have not been established.
f) Duties, responsibilities, and liabilities are not adequately addressed with outside service providers and vendors.
g) Losses due to errors and fraud are not effectively mitigated through insurance or other means.
h) A business continuity plan has not been developed and tested.
i) Independent audit coverage and testing is limited; auditors are inexperienced or lack the technical experience to test the control environment.

2) Operational Risk

a) Unauthorized (FHLBank and/or customer) securities transactions are processed.
b) Securities transactions are not properly recorded and reconciled.
c) Securities pledged as collateral may be released without proper authorization.
d) Lack of technical expertise and experience may imperil the continuation of operations in the event of key personnel turnover and absences.
e) Data cannot be readily recreated and/or required tasks readily performed in the

event of a disaster or personnel turnover.

f) Legal documents are incomplete, missing, unenforceable, not in compliance with federal and state requirements or otherwise inadequate to protect the FHLBank's interests, resulting in the failure to provide a perfectible security interest.
g) SAS 70 reviews are not obtained, or alternative methods not performed, to obtain assurances on the outside service provider's internal control environment.
h) Daylight overdrafts are not monitored and minimized resulting in discontinuation of Federal Reserve Bank services.
i) Lack of compliance with internal controls, policies, procedures, and specific requirements of insurance policies, resulting in rejection of claims by insurers and incurrence of losses.
j) UCC-4A, OFAC and BSA requirements are not complied with due to errors and/or deficiencies affecting the vendor software. Fines and/or losses are sustained due to noncompliance with the regulatory requirements.
k) Procedures that pertain to the destruction and retention of records have not been established or followed.

3) Credit Risk

a) Daylight and customer deposit overdrafts are not monitored and minimized.
b) FHLBank advances and standby letters of credit are not adequately secured by securities.

Specific Risk Controls Relating to the Securities Safekeeping Function

An FHLBank's controls relating to the securities safekeeping function are set forth below.

1) Segregation of Duties

Critical access controls and segregation of duties that relate to system access, authorization, processing, recording and reconciliation of transactions must be in place to prevent the processing of erroneous and fraudulent transactions. A material erroneous or fraudulent transaction could have a significant impact on the financial condition of the bank and result in a poor FHLBank image in the marketplace with attendant reputational risk.

2) Recording and Reconciliation

Securities transactions are processed and recorded to applicable general ledger accounts such as the "Federal Reserve Bank" and "correspondent" and to the member's accounts such as the demand deposit account, safekeeping account and pledge account. The responsibility for the review and reconciliation of entries should be segregated from that for the processing of the daily transactions.

On the safekeeping system, the customer's securities should be identifiable where the securities are assigned a unique receipt number and linked to the member's accounts and a distinction is made to segregate securities that are pledged. A reconciliation of securities held at each custodian and pledged as collateral should be completed at least monthly.

Trade activity should be identified by a receipt and confirmation advice that is mailed the following day of the settlement, and detailed in the member's accounts. Periodic statements that pertain to demand deposit, safekeeping portfolio totals and safekeeping transactions are generated and sent to the members.

3) Credit and Collateral Administration

The development and maintenance of sound and effective credit and collateral administration are critical elements in the identification, management and monitoring of the risk exposures associated with securities that are securing advances and standby letters of credit.

4) Daylight and Customer Deposit Overdrafts

The Federal Reserve Banks provide the unsecured intraday credit needed to support clearing of the large transactional volumes. Such credit extensions occur when a Federal Reserve Bank allows institutions to initiate transactions that exceed, at a given moment, the balance in their reserve or clearing accounts, which leaves the institution in a net debit position with the Federal Reserve Bank. These intraday overdrafts of accounts are referred to as "daylight overdrafts."

The amount of credit available to any institution is usually limited by "net debit sender caps," which establish the maximum unsecured exposure that a Federal Reserve Bank is willing to accept. As the FHLBanks do not have any net debit sender caps, they must monitor their position with the Federal Reserve Bank continuously.

Although FHLBanks are not allowed to incur daylight overdrafts, repeated daylight overdrafts may result in discontinuation by the Federal Reserve Bank of services such as wires, ACH, securities, and access to capital markets, which could limit an FHLBank's ability to meet its financial obligations and provide services to its customers.

The responsibility for monitoring the FHLBank's position with a Federal Reserve Bank is usually assigned to cash management/treasury personnel. Such personnel customarily have inquiry access to the wire system, which allows them to monitor large incoming/outgoing wire activity. In addition, the automated wire system has software controls that establish internal dollar limits and mitigate daylight overdraft possibilities. Securities safekeeping personnel will coordinate with wire and cash

management/treasury personnel on the current cash position with the relevant Federal Reserve Bank and the correspondent bank relationship, and anticipated purchase and matured securities activity.

Customer deposit overdrafts represent an unsecured credit exposure, and should require the approval of credit personnel and line management.

5) Legal

In connection with securities safekeeping services, FHLBank legal staff reviews applicable regulatory requirements, vendor contracts and other FHLBank documentation to protect the FHLBank's interests. In addition, the business units coordinate a periodic review with legal staff to ensure current operating practices comply with regulatory requirements.

6) Business Continuity and Recovery

The FHLBank should have written procedures for operations at its designated hot-site. Back-up tapes should be stored off-site and be easily retrievable. If the automated wire system is not available at the hot-site, FedLine Advantage terminals, off-line trade settlement processing with the relevant Federal Reserve Bank can be accomplished by telephonic instructions through the wholesale area of the Federal Reserve Bank. Bilateral agreements with one or more FHLBanks and the correspondent bank custodian relationship may need to be used to effectuate the FHLBank's securities requests.

Documentation of business contingency testing performed by the correspondent bank relationship and the market valuation vendor is requested at least annually. Each FHLBank must have at least one back-up system and must test it periodically to ascertain its reliability.

Examination Guidance

A work program for Securities Safekeeping Operations accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to the institution's securities safekeeping activities.

1) Organizational structure

a) Functional organization and reporting structure;
b) Identification of key personnel;

c) Primary duties, responsibilities and technical expertise of personnel;
d) Segregation of duties;
e) Cross-training of personnel;
f) Coordination with other departments such as risk management, information technology, treasury and cash management, accounting, credit and human resources; and
g) Significant changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for securities safekeeping activities, which may include the following:

a) Prohibiting or limiting safekeeping services offered;
b) Requiring securities safekeeping agreement(s), addenda and forms that are utilized by the securities safekeeping function. Specific attributes may include:

(1) Member's corporate resolution;
(2) Customer authorized contacts (authorized signers acting as agents for the customers) for securities safekeeping services;
(3) Investment/securities safekeeping service agreement;
(4) Pledge agreement between the FHLBank and the member and other documents to perfect the FHLBank's security interest in pledged securities;
(5) Third-party pledge, security and safekeeping agreement (agreement among the FHLBank, the member and the member's customer); and
(6) Internal FHLBank securities safekeeping transaction form (specific details of the transaction and description of the securities).

c) Requiring agreements between the safekeeping custodian(s) such as the relevant Federal Reserve Bank and the correspondent bank relationship and the FHLBank;
d) Requiring supervisory review of operating exceptions;
e) Restricting system access and functionality;
f) Mitigating risks and liability with the purchase of specific insurance and bond coverage such as directors and officers liability, errors and omissions, computer cyber crime policies and fidelity bond coverage, and establishing compensating procedures and controls to address any exclusion in the policies;
g) Reviewing management reports used to identify, measure, monitor, and control risks within the line of business; and
h) Maintaining ability to restore safekeeping operations under various recovery scenarios.

3) Key FHLBank policies and procedures, which may include those relating to the following:

a) Securities safekeeping operations;
b) Risk management;

c) Information security;
d) Fraud prevention;
e) Whistleblower provisions of SARBOX;
f) Background and credit investigations;
g) Business conduct and ethics;
h) Business continuity and recovery;
i) Member products; and
j) Vendors' risk.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

a) Evaluate the effectiveness of the annual risk assessment under Part 917 that identifies the key risks arising from and controls established by the institution over securities safekeeping activities and includes quantitative and qualitative evaluations; and
b) Evaluate the effectiveness of evaluations conducted pursuant to SARBOX that identify the key risks and controls pertaining to financial reporting and evaluate potential fraud, and procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of the scope and testing performed by external and internal auditors; and
b) Evaluate the adequacy of the scope and testing performed by outside consultants specific to securities safekeeping activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls for processing transactions, including:

a) Authorized users;
b) Vendor technical support and access to the automated wire system;
c) Utilization of spreadsheets or other user developed applications;
d) Business continuity and recovery; and
e) Exception tracking, escalation, and reporting.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate workflow and processes as well as controls, including the level and direction of risk and the quality of risk management; and
b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile

such as management, systems, key personnel, regulatory requirements and processing.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. Specific examples include, but are not limited to, the following:

a) Observe that physical security has been established over the securities safekeeping terminals.

b) Verification procedures to ensure proper authorization of securities safekeeping requests. Assess and test the adequacy of the FHLBank's procedures and controls that pertain to authentication such as agreements, personal identification numbers, tokens and callback procedures, processing, recording and confirmation of securities safekeeping requests that are received from the members and FHLBank personnel for the following transactions (if applicable):

(1) Delivery-versus-payment;
(2) Receive-versus-payment;
(3) Free delivery;
(4) Free receive;
(5) Member pledges securities as collateral for FHLBank advances and/or standby letters of credit;
(6) Member pledges securities as collateral for third-party repurchase transactions;
(7) Member pledges securities as collateral for third-party public deposits in excess of the standard maximum deposit insurance amount set by the FDIC; and
(8) FHLBank pledges securities as collateral for its repurchase transactions (delivery transaction-securities are transferred to the counter-party's custodian).

c) Review the system controls applicable to the automated securities safekeeping system(s). Specific attributes include, but are not limited to, the following:

(1) The process for the review and establishment of employees' system capabilities such as the initial review and approval by line management and coordination with the system administrator (if not line management), who establishes access to the automated securities safekeeping system;
(2) Access and function capabilities (all transactions should require dual control);
(3) System defaults pertaining to user identifications, password composition and length, number of attempts before being locked-out, expiration and timeout;
(4) Dollar limitations for securities safekeeping transactions; and

(5) Managerial review and override capabilities.

d) Observe the processing of a securities safekeeping transaction. Assess dual control constraints where the systems prevent a single employee from performing the input and verify/release functions for transactions.

e) Review the securities safekeeping reconciliations that pertain to general ledger, demand deposit account(s), securities held by each custodian, and securities pledged as collateral as of the examination date. In addition, review the adequacy of the following attributes:

(1) Segregation of duties;
(2) Reconciliation of accounts by another employee in the event the assigned employee is absent;
(3) Timely review of applicable accounts by appropriate staff, including the reconciliation of balances and rejected items and the resolution of differences;
(4) Managerial review of reconciliations; and
(5) Periodic reporting of line management's review of the general ledger reconciliations to accounting staff.

f) Adequacy of business continuation plan for this line of business.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Securities Safekeeping Operations
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for securities safekeeping activities, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to securities safekeeping activities.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the effectiveness of the annual risk assessment under Part 917 and of the internal control assessment under SARBOX applicable to securities safekeeping activities, as well as procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over its securities safekeeping activities.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls utilized by the securities safekeeping function for processing transactions, including authorized users, vendor technical support, utilization of user developed applications and business continuity and recovery.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the workflow and processes as well as controls, including the level and direction of risk and the quality of risk management. If applicable, conduct an assessment of any significant changes to securities safekeeping activities that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

Examination of the financial condition and performance of an FHLBank is essential to: (a) assess its "risk-adjusted" return, that is, the intermediate- and near-term past performance of an FHLBank relative to its operational, market, and credit risks, (b) gauge the financial trends of an FHLBank and how they may affect future performance and risk, (c) assess the value proposition to a member holding FHLBank stock, and (d) understand the FHLBank's performance relative to both FHLBank System averages and peer FHLBanks that use similar funding, investing, and operating strategies. Key insights that can be reached with respect to examining the financial trends of an FHLBank include, among others things:

1) The relative performance given its operating strategy and its operational, market, and credit risk.

2) The relative performance of business lines such as advances, investments, and mortgages, if applicable and how they contribute to overall profitability.

3) The likelihood of an FHLBank attaining its future financial objectives.

4) Whether dividend rates paid are sustainable and whether retained earnings targets are attainable.

5) Quality of management.

Methodology of Analysis

There are three primary steps to complete the analysis of an FHLBank's financial condition and performance.

1) **Off-site data collection and analysis.** Most analysis of an FHLBank's financial condition and performance including document review, data collection and analysis, and initial discussion with the examiner-in-charge and FHLBank staff should be completed off-site. This "groundwork" should comprise the bulk of the examiner's time and is essential to formulating initial conclusions regarding the financial condition of the FHLBank.

   The examiner approaches the initial review of financial condition and performance with knowledge of the FHLBank gained through reading minutes of the board of directors and various reports and other materials issued over the previous 12 months. This analysis includes review of monthly financial reports, annual and quarterly reports, board of directors' packages, and publications of the respective FHLBank. The most recent FHLBank profile should be included as a key work paper as that document assesses the key financial and operational issues facing the FHLBank.

This financial analysis will be completed before the on-site portion of the annual examination and generally before the preparation of the financial condition and performance scope memorandum. This initial assessment will be refined and modified by the financial analysis performed in conjunction with the annual examination. As detailed later, the examiner should use sufficient judgment to distill the primary issues driving the performance of the FHLBank.

2) **Testing initial conclusions on-site.** Once the off-site financial analysis has been completed and initial conclusions reached, the examiner/FHLBank analyst should use the limited time on-site at the FHLBank to ask questions, enter into more detailed discussions, and formalize conclusions regarding FHLBank performance. This may include discussing financial trends with senior management and requesting and reviewing more detailed, non-reported financial information.

3) **Preparation of memorandum for report of examination**. Once the off-site and on-site analysis is complete, the examiner should prepare a formal memorandum outlining the financial condition and performance of the FHLBank for the report of examination. This memorandum should reflect the key issues that have driven the FHLBank's performance, provide context of the FHLBank's performance relative to its peers and FHLBank System averages, and provide some insight on the likely future performance of the FHLBank based on its historic financials.

Sources of Information for Data Collection and Analysis

This section summarizes 24 potential analyses that can be performed while assessing the financial performance and condition of an FHLBank. As detailed later, the examiner must use judgment when assessing the importance of the analyses**.**

There are three primary sources of information for data collection and analysis: (a) monthly and quarterly call reports, (b) published public and non-public information from the FHLBank including annual reports, strategic plans, and minutes, and (c) information produced by Finance Board staff including reports of examination, workpapers, and quarterly reviews. Although these are the primary sources of financial information for data collection and analysis, more specialized financial statistics can usually be generated by the FHLBank upon request.

The Finance Board's Call Report System (CRS) facilitates the analysis. Standard reports available in CRS present one FHLBank's financial data for either five quarters or five years together with the same data for the System. In addition, standard reports available in the Trend Book section of CRS provide useful information presented in a user-friendly format.

A listing of the key sources of information is included below:

Analyses	Source of Information
1. Document Analysis	• Report of examination and workpapers • Quarterly reviews and correspondence • Strategic plan • Minutes of the board of directors • Management discussion and notes to the financial statements in the 10-K, 10-Q, and 8-K reports • FHLBank profile
2. Risk Analysis	• Report of examination and workpapers
3. Peer Group Analysis	• Monthly call report: Statement of Condition • Monthly call report: Statement of Income
4. Advances Trend	• Monthly call report: Statement of Condition • Quarterly membership lists • Top 10 lists
5. Investments Trend	• Monthly call report: Statement of Condition • Monthly call report: Investments
6. Mortgages Trend	• Monthly call report: Statement of Condition • FHLBank-specific information
7. Core Mission Assets Trend	• Quarterly call report: Core Mission Assets
8. Capital Stock Trend	• Monthly call report: Statement of Condition • Quarterly call report: Excess Capital
9. Retained Earnings Trend	• Monthly call report: Statement of Condition
10. Total Capital Trend	• Monthly call report: Statement of Condition
11. Business Concentration Analysis	• Quarterly membership lists • FHLBank-specific information • Top 10 lists
12. Net Interest Income Trend and Volatility	• Monthly call report: Statement of Income
13. Net Income Trend and Volatility	• Monthly call report: Statement of Income

14. Sustainability of the Dividend	• Monthly call report: Statement of Income • Quarterly call report: Dividends and Statement of Cash Flows
15. Operating Expense Trend	• Monthly call report: Statement of Income
16. Realized Gains/Losses Trend	• Monthly call report: Statement of Income
17. Net Gains/Losses on Derivatives and Hedging Trend	• Monthly call report: Statement of Income
18. Return on Assets (ROA) Trend	• Trendbook: FHLBank System Quarterly Data
19. Return on Equity (ROE) Trend	• Trendbook: FHLBank System Quarterly Data
20. Net Interest Spread Trend	• Trendbook: FHLBank System Quarterly Data
21. Market Value of Equity (MVE) Trend	• Quarterly call report: Duration and Market Value
22. Duration Trend	• Quarterly call report: Duration and Market Value
23. Convexity	• Market value sensitivity report
24. Profitability of Business Lines	• FHLBank-specific information

Data Analysis

Once financial data is collected, it must be analyzed to determine the financial trends of an FHLBank and to provide context for its financial condition. There are four primary tools to analyze FHLBank financial data: (a) time series, (b) graphs, (c) statistics, and (d) ranking the 12 FHLBanks by a single or series of financial statistics. Note that this is not an all-inclusive list and the examiner should use judgment to determine which methodologies are most applicable to the analysis. A summary is included below:

Monthly and Quarterly Time Series. Generating a time series of data is essential to understanding an FHLBank's long-term financial trend and providing context to current FHLBank performance. The time series should be generated in the smallest increments that the data is available (generally monthly or quarterly) in Excel. The time series should include a sufficiently long period (generally five years or one interest rate cycle, whichever is longer) to provide context and adequate degrees of freedom.

The Finance Board's Information Technology environment allows the user to create and update spreadsheets by directly linking to the CRS database. Assembling the data and creating the graphs will be a formidable task the first time it is done. However, these data can be easily extended to other FHLBanks or to other time periods in subsequent analyses.

Graphs. It is often difficult to discern trends in data without visual aids. For a data time-series, a line graph with the time period on the X-axis is often appropriate. For cumulative data, for example, the cumulative net gains/losses on derivatives and hedging over time, a vertical bar chart with the time period on the X-axis is often appropriate.

Statistics. The statistic most often used in assessing the financial condition and performance of an FHLBank is a simple growth rate or compounded annual growth rate (Excel function: RATE). It is essential to calculate these statistics for key financial items in the income statement and balance sheet. Regression lines are useful for detecting and confirming short- and long-term trends in a time series and can be calculated in Excel (Excel function: ADD TRENDLINE). Note that polynomial regressions often provide a better data fit than linear regressions. The Pearson Product Moment Correlation Coefficient or R-squared is an important element in determining the fit of a regression line (Excel function: RSQ). T-tests (Excel function: TTEST) and F-tests (Excel function: FTEST) can be useful to determine the probability that the mean and variance of two time series are similar.

Ranking. Ranking a single or series of financial statistics of the 12 FHLBanks is important to provide context of an FHLBank's performance and to identify outliers. Special attention should be given to the relative rank of FHLBanks that share similar operating strategies. In particular, rankings of asset yields or costs of funds are likely to be of little use because the funding mix and the associated funding cost are likely to be dependent on the asset mix. An FHLBank with more long-term assets is likely to have more long-term and higher-costing funds.

Use of Judgment

An examiner/bank analyst must use judgment to distill the primary issues affecting an FHLBank's performance from the myriad of potential financial trends and statistics available. Ultimately, the financial trends of an FHLBank will be used in conjunction with other analyses to assess the future financial performance and risk of an FHLBank. Therefore, the analyses should focus on key issues affecting the FHLBank including, among other things, profitability, sustainability of the FHLBank's franchise, quality of management, and risk. In this process, the examiner/bank analyst should consult with the examiners responsible for the assessment of market, credit and operational risk levels, direction and management, corporate governance, and affordable housing and community investment activities in assessing the condition and performance of the FHLBank.

In judging the overall condition and performance of an FHLBank, there are no absolute

metrics. Rather, the FHLBank's performance needs to be compared with its own past performance and the performance of other FHLBanks with similar operating strategies. The examiner should give more weight in the evaluation to performance measures that are either low or declining. A sample of potential "warning signs" is listed below that could indicate problems at an FHLBank. Note that an examiner must use caution in reading too much into a particular statistic or analyses; rather, the examiner/bank analyst should use a variety of analyses to test a particular initial conclusion.

Issue	Indication of Analysis
1. Profitability	• Negative net income growth, especially in a rising interest-rate environment • Decline in ROA, ROE, and/or net interest spread • Increase in MBS and agency investments • Increase in dividend payout ratio • Decline in MVE/BVE ratio • Increase in leverage ratio • Increase in mortgages
2. Franchise	• Decline in advance balances • Low ratio of mission assets to total assets • Concentration of capital stock, advances, and/or mortgage purchases within a few large members
3. Management	• Large percentage increases in advances, investments, and/or mortgages • Increase in operating expenses/operating expense ratio • Increase in investments in COs of other FHLBanks • Dividend payout ratio of over 100 percent • Divergence in financial performance vs. strategic plan
4. Risk (Note: Risk is analyzed by other examiners who should be consulted in assessing risk factors affecting the FHLBank)	• Decline in MVE/BVE ratio • Increase in leverage ratio • Increase/decrease in duration • Decline in retained earnings • Increase in assets with embedded options

Testing Initial Conclusions On-site

Because senior management of the FHLBank will have the best understanding of the FHLBank's financial performance and the rationale underlying its performance, it is important to test initial conclusions reached in data collection and analysis through

discussions with management. In addition, FHLBank management will likely have additional, non-published information and data such as ALCO reports, which will provide better detail as to a specific aspect of the FHLBank's performance. When on-site, the examiner/FHLBank analyst should take special care to review as much on-site information as possible to test initial conclusions.

As focused as senior management is on the FHLBank's performance, the examiner/FHLBank analyst has more information regarding the other FHLBanks. Therefore, management may lack the context in which to frame its performance relative to the other FHLBanks. When on-site, the examiner/bank analyst should take special care to provide the context of the performance of other FHLBanks in discussions with senior management. The examiner/analyst needs to approach this very carefully and should focus on understanding the differences in strategy, membership composition, etc., among the FHLBanks. This frequently explains much of the differences, before having any discussion with senior FHLBank management that focuses on the FHLBank's performance relative to other FHLBanks. Generally, the examiner/analyst should speak with the president, chief financial officer, chief risk officer, controller, and other senior management while discussing initial conclusions. These discussions should take place with the examiner-in-charge being present, and the examiner-in-charge should be briefed about the general line of questioning before such meetings.

Consistency with the Strategic Plan

Any financial analysis conducted should determine whether the FHLBank's year-to-date performance is consistent with the FHLBank's strategic plan and whether the performance targets specified in the strategic plan will be attained. Therefore, the examiner/bank analyst should consult with the examiner/bank analyst responsible for assessing the quality of the FHLBank's strategic planning process as part of the assessment of the FHLBank's corporate governance. The examiner/bank analyst should highlight any areas in which performance differs substantially from the projections in the strategic plan. In short, the FHLBank's strategic plan should bear a close relationship to actual performance. Financial performance that diverges significantly from the strategic plan will render the strategic plan less than useful.

Regulatory Capital

The Gramm-Leach-Bliley Act of 1999 (GLB Act) substantially amended the provisions of the FHLBank Act relating to the FHLBanks' capital structure. Specifically, the GLB Act directed the Finance Board to develop a more modern capital structure with risk-based and leverage requirements similar to those applicable to depository institutions and other housing GSEs. The new capital structure becomes effective as each FHLBank implements its Finance Board approved "capital plan." The Finance Board's Capital Regulations are found in Subchapter E - Federal Home Loan Bank Risk Management and Capital Standards.

FHLBank Capital Requirements. The FHLBanks are required to maintain a minimum ratio of total capital to total assets, and permanent capital in an amount that is sufficient, as determined by Finance Board regulations, to cover the credit risk, market risk, and operational risk to which the FHLBank is subject. The FHLBank Act defines "permanent capital" as the amounts paid for an FHLBank's Class B stock plus the FHLBank's retained earnings as determined in accordance with GAAP. All of the FHLBanks that have implemented their capital plans issue Class B stock.

The FHLBank Act defines "total capital" to include permanent capital, the amounts paid for Class A stock, and any general allowance for losses that are not held against specific assets (as determined in accordance with GAAP and Finance Board regulations), and any other amounts available to absorb losses that the Finance Board determines by regulation to be appropriate to be included in capital. Of the FHLBanks that have converted, only the FHLBanks of Topeka and Seattle issue Class A stock as well as Class B stock. The FHLBank Act lists the specific items to be included in "total capital" and does not include Accumulated Other Comprehensive Income, a GAAP capital item. As a result, an FHLBank's total capital calculated for purposes of compliance with regulatory capital requirements is different than total capital calculated for GAAP purposes.

Finance Board regulations require that "general allowance for loan losses" be consistent with GAAP and not include any amounts held against specific assets or class of assets, such as AMA, of the FHLBank. To date, the Finance Board has not determined "any other amounts available to absorb losses" to be appropriate to be included in capital.

Total Capital Requirement. Each FHLBank is required to maintain a ratio of total regulatory capital to total assets of no less than 4 percent. Each FHLBank is also required to maintain a leverage ratio of total regulatory capital to total assets of 5 percent. In calculating this ratio, the amounts paid in for Class B stock and the amounts of retained earnings are multiplied by 1.5 percent and all other items of total regulatory capital are included at face value.

Risk-Based Capital Requirement. Each FHLBank is required to maintain permanent capital in an amount that is sufficient, as determined in accordance with Finance Board regulations, to cover the credit risk, market and operational risk to which the FHLBank is subject as set forth below.

Credit risk capital requirement. Equal to the sum of the FHLBank's credit risk capital charges for all on-balance sheet assets, off-balance items, and derivatives contracts. Section 932.4 sets forth the specific requirements for calculating the credit risk capital requirement.

Market risk capital requirement. Equal to the sum of (1) the market value of the FHLBank's portfolio at risk, estimated by the FHLBank's approved internal risk model and, 2) the amount by which the FHLBank's current market value of total capital is less

than 85 percent of the FHLBank's book value of total capital. Section 932.5 sets forth the specific requirements for calculating the market risk capital requirement.

Operational risk capital requirement. Equal to 30 percent of the sum of the FHLBank's credit and market risk capital requirements. Section 932.6 sets forth this requirement and also allows an FHLBank to substitute an alternative methodology for calculating operational risk if such methodology is approved by the Finance Board.

Target Operating Ratios. Section 917.3(b)(1) of Finance Board regulations requires the FHLBanks to set target ratios of total regulatory capital/total assets and permanent capital/total assets at which the FHLBank intends to operate. These target ratios should be in excess of the minimum leverage and risk-based capital ratios. The target ratios are to be included in the FHLBank's risk management policy.

Excess Stock Threshold. Section 925.3(b) of the Finance Board regulations prohibits any FHLBank with outstanding excess stock greater than 1 percent of its total assets from declaring or paying any stock dividends or otherwise issuing any excess stock. Section 925.3(b) also prohibits any FHLBank from issuing excess stock, if after issuance, its outstanding excess stock would be greater than 1 percent of its total assets.

Preparation of Memorandum for Report of Examination

The memorandum should include the following: (a) a succinct summary of the issues regarding FHLBank performance and condition, well supported with data and analysis; (b) context of the FHLBank's financial performance with the trends of other FHLBanks, especially FHLBanks with similar operating strategies; and (c) a forward-looking summary of the key issues and trends that may affect the future performance of the FHLBank. Charts and graphs should be used extensively.

Regulatory Environment

The primary authorities governing, or relevant to, financial condition and performance of the FHLBanks are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank has been considered by the FHLBank and its legal counsel.

1) Federal Home Loan Bank Act (FHLBank Act)

Section 6 of the FHLBank Act sets forth the capital structure of the FHLBanks. Specifically, Section 6 establishes the framework for leverage requirements, risk-based capital standards, requirements for FHLBank capital plans and other related matters. Section 6 also provides definitions for "permanent capital" and "total capital."

2) Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to financial condition and performance:

Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management, and Section 917.6, Internal Control System, are pertinent.

Section 917.3(b)(1) requires each FHLBank's risk management policy to include the specific steps that the FHLBank will take to comply with its capital plan. This section also requires each FHLBank to include target ratios of total capital/total assets and permanent capital/total assets at which the FHLBank intends to operate, where such ratios are in excess of the minimum leverage and risk-based capital ratios and may be expressed as a range of ratios or a single ratio.

Section 917.5 requires an FHLBank's board of directors to adopt a strategic business plan that describes how the business activities of the FHLBank will assist the institution achieve its mission, consistent with Part 940 (Core Mission Activities).

Section 917.8, requires an FHLBank's board of directors to adopt an annual operating expense budget that takes into account the institution's responsibility to protect both its members and the public interest by keeping its costs to an efficient and effective minimum.

Section 917.9 requires that an FHLBank's board of directors declare and pay a dividend only from previously retained earnings or current net earnings and only if such payment will not result in a projected impairment of the par value of the institution's capital stock. Section 917.9 also prohibits an FHLBank's board of directors from declaring or paying a dividend based on projected or anticipated earnings or if the par value of the FHLBank's stock is impaired or is projected to become impaired after paying such dividend.

Section 925.3(b) prohibits any FHLBank with outstanding excess stock greater than 1 percent of its total assets from declaring or paying any stock dividends or otherwise issuing any excess stock. Section 925.3(b) also prohibits any FHLBank from issuing excess stock, if after issuance, its outstanding excess stock would be greater than 1 percent of its total assets.

Part 933 requires the board of directors of each FHLBank to submit, not later than October 29, 2001, to the Finance Board a plan to implement a new capital structure for the FHLBank, which complies with Part 931 – FHLBank Capital Stock – and which has sufficient total and permanent capital to comply with the regulatory capital requirements of Part 932 - FHLBank Capital Requirements. (All FHLBanks submitted capital plans by October 29, 2001 and the Finance Board approved all capital plans in 2002. As of December 1, 2006 all FHLBanks except the FHLBank of Chicago had implemented their approved capital plans.)

Section 966.9(b)(1) requires that before the end of each calendar quarter, and before declaring or paying any dividend for that quarter, each FHLBank President must certify in writing to the Finance Board that, based on known and current facts and financial information, the FHLBank will remain in compliance with the liquidity requirements set forth in Section 11(g) of the FHLBank Act and the Finance Board's Financial Management Policy (FMP) or any regulation (Section 932.8 Minimum liquidity requirements), and will remain capable of making full and timely payment of all current obligations, including direct obligations, coming due in the next quarter.

Part 980 requires the FHLBanks not to undertake any new business activities, as defined in the regulation, except in accordance with the procedures set forth in this part of the Finance Board's regulations.

Part 989 requires the FHLBanks to obtain annually an independent, external audit of each FHLBank's individual financial statements, and also requires the external auditor to meet at least twice a year with the audit committee of each FHLBank. Section 989.3 addresses the preparation and completion of an FHLBank's financial statements and the distribution of financial information and other information to the Finance Board and the Office of Finance.

Part 998 requires each FHLBank to register a class of its equity securities pursuant to the provisions of section 12(g)(1) of the Securities Exchange Act of 1934 (1934 Act), to comply with the periodic disclosure requirements of the 1934 Act, and to provide to the Finance Board on a concurrent basis copies of all disclosure documents filed with the Securities Exchange Commission (SEC).

3) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to the topic of financial condition and performance are the following:

Advisory Bulletin 01-08, dated October 4, 2001, which provides guidance regarding asset review and classification. FHLBank policies and procedures for the review and classification of assets should outline the standards for and frequency of reviews for various types of assets, identifying the individuals and or committees responsible for the reviews, and establish the minimum reporting standards to the board of directors.

Advisory Bulletin 02-02, dated February 13, 2002, which provides guidance on the annual submission of the FHLBank's strategic plan to the Finance Board.

Advisory Bulletin 02-6, dated April 9, 2002, which provides guidance on the quarterly liquidity certification under Section 966.9(b)(1). The president of each FHLBank must certify that the FHLBank is in compliance with the liquidity requirements of Section 11(g) of the FHLBank Act and Section 966.9(b)(1).

Advisory Bulletin 02-07, dated August 27, 2002, which provides guidance on

unsecured credit reporting requirements. The Advisory Bulletin outlines changes to the unsecured credit reporting system of the Office of Finance and to the Call Report System that eliminate separate reporting of similar information to the Office of Supervision.

Advisory Bulletin 03-01 dated January 3, 2003, which provides guidance on the acceleration of filing dates for the combined financial reports and call reports. Consistent with the acceleration of the SEC disclosure regime, at some point in the future, the Finance Board will move forward the due date for the Call Reports.

Advisory Bulletin 03-03, dated March 6, 2003, which provides guidance as to the permissibility of voluntary expanded disclosure in an FHLBank's financial statements.

Advisory Bulletin 03-04, dated March 18, 2003, which provides guidance on what FHLBanks should include in capital plan amendment submissions for Finance Board approval. The AB also explains the amount of time that will likely be necessary to complete the Office of Supervision's review of the FHLBank's submission.

Advisory Bulletin 03-08, dated August 18, 2003, which requires the board of directors to adopt a retained earnings policy and to review the FHLBank's analysis of the adequacy of its retained earnings.

Advisory Bulletin 03-13, dated December 1, 2003, which provides guidance as to the form, content, and timeliness of the financial reports that are completed by the FHLBanks pursuant to Finance Board regulations.

Advisory Bulletin 04-01, dated March 10, 2004, which provides guidance on the evaluation of a service organization providing services to an FHLBank whose activities could affect the FHLBank's financial condition. This includes the performance of an assessment of the service organization's internal controls, such as the procurement of a service auditor's report in accordance with Statement of Auditing Standards (SAS) 70 or the performance of alternative methods necessary to gain confidence on the service organization's internal controls.

Advisory Bulletin 05-04, dated April 21, 2005, which provides regulatory reporting and calculation guidance in connection with the adoption of SFAS 150 (Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity).
Advisory Bulletin 05-05, dated May 18, 2005, which provides guidance on the risk management responsibilities of an FHLBank's board of directors, senior management and risk management.

Advisory Bulletin 05-07, dated August 23, 2005, which provides guidance to FHLBanks that have not completed their registration with the SEC. Such FHLBanks must continue to report weekly to the examiner-in-charge their progress and

communications with their external auditor and the SEC. Additionally, until the FHLBank's registration with the SEC is complete, it should declare a dividend only after consultation with and approval by the Office of Supervision.

4) ***Statements of Financial Accounting Standards (collectively, Statements of Financial Accounting Standards or individually, SFAS*) *adopted by the Financial Accounting Standards Board (FASB)*** establish standards of financial accounting and reporting, commonly referred to as "Generally Accepted Accounting Principles" (GAAP), governing the preparation of financial reports and are officially recognized as authoritative by the SEC and American Institute of Certified Public Accountants (AICPA).

5) ***Rules, Regulations and Interpretations of the Securities and Exchange Commission under the Securities Act of 1933, as amended (Securities Act), the Securities Exchange Act of 1934, as amended (Securities Exchange Act), and the Sarbanes-Oxley Act of 2002 (Sarbanes-Oxley Act*)**. The SEC is the primary regulator of the United States securities markets and requires public companies to disclose meaningful financial information to the public, as well as enforcing the federal securities laws.

   The Securities Act requires that investors receive financial and other significant information concerning securities being offered for public sale and prohibits deceit, misrepresentations, and other fraud in the sale of securities. A primary means of accomplishing these goals is the disclosure of material financial information through the registration of securities with the SEC.

   The Securities Exchange Act created the SEC and empowered it, among other matters, to require the periodic reporting of information by companies with publicly-traded securities and the registration, regulation, and oversight of securities brokerage firms, transfer agents, clearing agencies and securities self-regulatory organizations. The Securities Exchange Act also identifies and prohibits certain types of conduct in the securities markets and provides the SEC with disciplinary powers over regulated entities and persons associated with them.

   The Sarbanes-Oxley Act was enacted in response to various corporate scandals and addresses various corporate governance requirements that relate to the responsibilities of corporate boards of directors, the external and internal audit function, and the quality of management's attestation of internal controls pertaining to the accuracy of financial reporting. The Sarbanes-Oxley Act also created the Public Company Accounting Oversight Board (PCOAB).

6) ***American Institute of Certified Public Accountants Professional Standards*** is the national, professional organization for certified public accountants. Its mission is to provide members with the resources, information and leadership that will enable them to provide professional services to benefit the public as well as employers and clients.

In fulfilling its mission, the AICPA works with state accountants' organizations and gives priority to those areas where public reliance on accounting skills is most significant. The AICPA Auditing Standards Board issues Statements of Auditing Standards (SAS), commonly referred to as "Generally Accepted Auditing Standards," utilized by the auditing profession.

7) ***Rules, Regulations and Interpretations of the Public Company Accounting Oversight Board under the Sarbanes-Oxley Act.*** The PCAOB is a private-sector, non-profit corporation, created by the Sarbanes-Oxley Act, to oversee the auditors of public companies in order to protect the interests of investors and further the public interest in the preparation of informative, fair, and independent audit reports.

10) ***Report(s) of Independent Auditors,*** which include opinions of external auditors as to the accuracy and integrity of financial statements, compliance, the strength of internal control over financial reporting and the degree of reliance to be placed on the work of the internal audit function.

    To comply with SAS 61 and 91 (Audit Committee Communication), external auditors are required to meet with an FHLBank's audit committee to discuss their evaluation of the quality of FHLBank's accounting practices and essential estimates in its financial statements, as well as other audit-related issues.

Examination Guidance

A work program for Financial Condition and Performance accompanies this narrative. What follows below are illustrative examples of attributes that should be considered by the examiner in completing the analyses required in that work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the portfolio of the FHLBank and its appetite for risk along with the quality and effectiveness of corporate governance, and risk management as they pertain to financial condition and performance.

Preface

The purpose of the financial condition and performance work program is to identify before the start of the on-site portion of the examination those aspects of financial condition and performance that need specific attention during the on-site portion of the examination. The financial condition and performance work program differs from most other work programs in that it is data-intensive and largely can be completed off-site before the commencement of the on-site portion of the examination.

Financial condition and performance is not something that gets attention once each year; the analysis and evaluation of financial condition and performance by the analyst occurs regularly throughout the year. This analysis includes review of monthly financial reports, annual and quarterly reports, board of directors' packages, and publications of the

respective FHLBank. The most recent FHLBank profile should be included as a key work paper as that document represents in the analyst's cumulative assessment, completed no more than six months earlier, of the key financial and operational issues facing the FHLBank.

The principal work paper for this work program will be an Excel spreadsheet. This spreadsheet will have multiple tabs. In general, one tab will have the raw data that pertains to the particular element in this guidance, and the following tab will have that data graphed. Each tab will (1) be dated, (2) include the reference to the particular item in the work program, (3) include the analyst's name, and (4) include the name of the particular FHLBank. Each graph generally will have a text box that indicates the particular conclusion to be drawn from the graph. This Excel spreadsheet will normally need some form of narrative supplementation for the work papers to be considered complete. The examiner may use his or her discretion in determining which portions of this guidance are necessary and which portions are not necessary.

Preliminary Steps

1) ***Document Analysis*** **[Note: If the analyst completing this work program was the author of the most recent FHLBank profile report, it is assumed that all steps in "Document Analysis" were completed in the preparation of the profile report and no further documentation is needed.]**

   Objective: Identify issues that were previously noted and require follow-up during the current examination.

   a) Review the prior report of examination with respect to: (1) financial condition and performance, (2) operating strategy, and (3) strategic planning. Identify issues or concerns that require follow-up or closer review.

   b) Review strategic plan of the FHLBank.

   c) Review the minutes of meetings of the FHLBank's board of directors and of relevant board and management committees.

   d) Review the most recent 10-K and 10-Q reports along with any relevant 8-K reports. Pay particular attention to the management discussion and analysis and notes to the financial reports published by the FHLBank.

2) ***Risk Analysis***

   Objective: Identify issues that were previously noted and require follow-up during the current examination with respect to the operations, market and credit risk of the FHLBank. [Note: If the analyst completing this work program was the author of the most recent FHLBank profile report, it is

assumed that all steps in "Risk Analysis" were completed in the preparation of the profile report and no further documentation is needed.]

Review prior report of examination with respect to operational, market, and credit risk.

Analysis

Based upon the examiner's/bank analyst's document and risk analyses conducted above, determine additional analyses to be conducted below.
[Note: Many of the following steps require the analysis of data from the Call Report System. To generate time series, use the following Excel Steps:

Open a new spreadsheet file
Click data
Pivot table and pivot report
Click the external data source button
Click "Next'
Click "Get Stored Data"
In the query dialogue box, click "CRS Production," and then "OK"
Then, for example, click on "Call Report Monthly"
Double click on sPeriodm to get the monthly Call Report data
Double click on each line item needed, making sure to include district
After selecting all needed line items, click "Next"
You are then presented with a dialogue box to filter the data
After selecting the filters, click "Next"
Click the button "Return Data to Microsoft Excel" and then click "Finish"
In the next dialogue box click "Finish"
Using drag and drop, format the data table
In the quantitative analysis, there will be a data table and usually an accompanying graph. In general, it is not necessary to comment on a data table that is the data source for the accompanying graph.]

3) Peer Group Analysis

Objective: Assess the operating strategy of the FHLBank and determine other FHLBanks that have similar operating strategies. The peer group of the FHLBank will help determine the relative financial performance of the FHLBank.

a) For all FHLBanks in the System, determine the percentage of assets in advances, investments, and mortgages for the latest available quarter. Rank the FHLBanks according to advances percentage in Excel. Based upon these rankings, segment the FHLBanks into operating strategy groupings such as advance-oriented, mortgage-oriented, and mixed.

b) Create a monthly time series of the FHLBank's percentage of assets in advances, investments, and mortgages for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Determine whether the FHLBank has changed its operating strategy over time. Adjust the strategic grouping of the FHLBank, if necessary, based upon the historical trend.

c) Review the latest strategic plan and the minutes of the board of directors of the FHLBank. Determine whether the FHLBank plans to change its operating strategy. Adjust the strategic grouping of the FHLBank, if necessary, based upon the projected trend.

4) Advances Trend

Objective: Assess the long-term and recent trend of the level of advances.

a) Create a monthly time series (end of month) of advances for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Create the following statistic: advances/total assets, for all months in the time series Note the long-and short-term trend.

b) Rank all FHLBanks by their most recent advances/total assets.

c) Review the share of advances to the top 10 borrowers. This information is contained in Q:\OS\OS Data\Membership\Top 10 List\TOP10 Borrowers. Note the long- and short-term trends of the top-10 holders of advances, specifically: (1) the type of member (commercial banks, insurance companies, etc.), (2) whether the member is part of a multi-district holding company, (3) whether the top-10 list has remained stable or volatile over time, and (4) whether members within the list have significantly increased or decreased their advances over time. Note particularly any trends for members where an officer also serves as a director of the FHLBank. (The data on top-10 concentration is available in the Top 10 files in the membership area of the local area network.)

d) From either the materials provided by the FHLBank or from the advances report of the CRS, determine whether the FHLBank's advances are predominantly very short term and subsequently subject to refinancing risk or whether the advances are longer term.

e) From the materials provided by the FHLBank, determine the target spread on new advances. Spreads of 10 basis points or less may need some additional scrutiny as similar spreads are available on short-term investments. Assess whether advances balances are particularly dependent on very thin pricing margins.

5) Investments Trend

Objective: Assess the long-term and recent trend of investments.

a) Create a monthly time series (end of month) of non-mortgage backed securities investments including: (1) cash and due from banks, (2) interest bearing deposits in banks, (3) deposits for mortgage loan programs with other FHLBanks, (4) securities purchased under resale agreements, (5) Fed funds sold, (6) U.S. treasury obligations, bankers acceptances, (7) commercial paper, (8) U.S. agency obligations, (9) investments in consolidated obligations of other FHLBanks, and (10) state agency obligations (Section 956.3(a)(4)(iii)) for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Should there be large intra-month volatility, consider comparing end of month to daily average non-mortgage backed securities investments to check for market timing.

b) Note whether the FHLBank has any significant investments in the consolidated obligations of other FHLBanks and if so, the trend of these investments.

c) Use information from the monthly unsecured credit report (prepared by the Office of Finance and located on the local area network at Q:\OS\OS Data\Unsecured Credit Reports) to determine that the FHLBank's investment in the debt obligations of Fannie Mae and Freddie Mac individually are less than the FHLBank's total regulatory capital.

d) Create the following time series: liquidity investments (generally, cash and due from banks, interest bearing deposits in banks, deposits for mortgage loan programs with other FHLBanks, securities purchased under resale agreements, commercial paper, and Fed funds sold)/total assets. Note the long-and short-term trend.

e) Using the unsecured credit report prepared by the Office of Finance, determine whether the short-term investments are principally foreign or domestic issues.

f) Create a monthly time series (end of month) of MBS investments including MBS, CMOs, REMICs, and eligible asset-backed securities for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Note the long- and short-term trends of all categories of MBS investments. Should there be large intra-month volatility, consider comparing end of month to daily average MBS investments to check for market timing.

g) Create the following time series: MBS/total regulatory capital. Note the long-and short-term trend. Note if this metric is greater than 3 for any period.

h) Create the following time series: sum of all investments/total assets. Note the

long-and short-term trend.

i) Rank all FHLBanks by their most recent all investments/total assets.

6) Mortgages Trend

Objective: Assess the long-term and recent trend of mortgages.

a) Create a monthly time series (end of month) of mortgages for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Note the long- and short-term trends of mortgages. Should there be large intra-month volatility, consider comparing end of month to daily average mortgages to check for market timing.

b) Create the following time series: mortgages/total assets. Note the long- and short-term trend of this metric.

c) Rank all FHLBanks by their most recent mortgages/total assets.

d) If mortgages are a significant portion of total assets of the FHLBank (generally 10 percent or greater of total assets), analyze the total amount of loans sold by the largest providers of loans. The FHLBank may have this information readily available. Also, the Risk Modeling Division of the Office of Division has this information readily available. Note if there are large purchases from a member where a member also serves as a director of the FHLBank.

7) Mission Activities Trend

Objective: Assess the long-term and recent trend of core business activities.

a) Create a monthly time series of advances plus mortgage loans to consolidated obligations for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Note the long- and short-term trend of this metric.

b) Rank all FHLBanks by this measure.

c) Generate "Core Mission Activities" report for the latest period from the CRS. Note any large differences between the FHLBank and the FHLBank System.

8) Capital Stock Trend

Objective: Assess the long-term and recent trend of capital stock.

a) Review the FHLBank's current capital plan. Be aware that the date of the FHLBank's conversion to its new capital plan may affect any time series of capital stock, total GAAP Capital, or total regulatory capital as determined in accordance with the FHLBank Act and the regulations and interpretations of the Finance Board (Regulatory Capital).

b) Determine the effects, if any, of SFAS 150 on the FHLBank's capital stock. Based on the definition of total regulatory capital, the effects of SFAS 150 are excluded from the analysis of any components of total regulatory capital. Note any members that have outstanding redemption/withdrawal requests, particularly large members.

   SFAS 150 requires that capital stock subject to a redemption request be categorized as a liability on the balance sheet and that dividends on such capital be categorized as interest expense. Memoranda items on the statement of condition in the CRS detail both the amount of capital stock subject to a redemption request and the dividends paid on that stock. The FHLBanks adopted SFAS 150 on January 1, 2005.

c) Create a monthly time series of capital stock for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Note the long- and short-term trends of capital stock volatility. Be aware that dividends (and changes in dividend policy) by an FHLBank may affect the volatility of the time series.

d) From the System combined financial report or the FHLBank's most recent SEC Form 10-K, observe the top holders of capital stock and compare this list with a similar list at several points in the previous five years. Note the top holders of capital stock, specifically: (1) the type of member such as commercial banks, insurance companies, etc.; (2) whether the member is part of a multi-district holding company; (3) whether the list has remained stable or volatile over time; (4) whether members within the list have significantly increased or decreased their capital stock holdings over time; and (5) whether an officer of a large capital stock holding member also serves on the FHLBank's board of directors.

e) Using the excess capital report in the Call Report System, create a quarterly time series of: (1) the amount of excess capital stock held by all members; and (2) the top-five holders of excess capital stock for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater. The information in the excess capital report should be regulatory capital stock. Create the following time series: total excess capital stock/total regulatory capital stock. Note the long- and short-term trend of this metric.

f) Note the long- and short-term trends of the top-five holders of excess stock, specifically: (1) the type of member such as commercial banks, insurance

companies, etc.; (2) whether the member is part of a multi-district holding company; (3) whether the top-five list has remain stable or volatile over time; (4) whether members within the list have significantly increased or decreased their excess capital stock holdings over time; (5) whether the member is subject to speculation about a merger or acquisition; and (6) whether an officer of a large excess stock holding member also serves on the FHLBank's board of directors.

g) Determine the amount of excess stock that the FHLBank has outstanding. If the amount of excess stock outstanding exceeds 1 percent of the FHLBank's total assets, discuss with FHLBank management any plans to reduce the amount of outstanding excess stock to below that level and inform the examiner-in-charge of management's plans. In addition, determine whether, since January 29, 2007, the FHLBank has declared or paid any additional excess stock dividend or otherwise issued any additional excess stock. Where an excess stock dividend has been declared or paid or excess stock has otherwise been issued, notify the examiner-in-charge.

h) Assess the level of the FHLBank's stock, excluding any effects of SFAS 150, relative to its peers, the financial condition of the FHLBank, and its operational, credit, and market risk levels, direction and management. Confer with examiners responsible for assessing the level, direction and management of the FHLBank's market, credit, and operational risks in making this determination.

9) Retained Earnings Trend

Objective: Assess the long-term and recent trend of retained earnings.

a) Examine the retained earnings policy of the FHLBank. Determine whether the FHLBank has achieved its retained earnings benchmarks.

b) Create a quarterly time series of retained earnings for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater. In creating this quarterly time series, the quarterly data point is the minimum retained earnings during the quarter. Using the minimum removes from retained earnings that portion that was paid out in the quarterly dividend. Note the long- and short-term trends of retained earnings volatility.

c) Create the following time series: retained earnings/total assets. Note the long- and short-term trend.

d) Assess the level of retained earnings of the FHLBank relative to its peers, the financial condition of the FHLBank, and its operational, credit, and market risk levels, direction and management. Confer with examiners responsible for assessing the level, direction and management of the FHLBank's market, credit, and operational risks in making this determination.

10) Total GAAP and Regulatory Capital Trends **[If the FHLBank has little or no stock subject to a pending redemption request, the difference between regulatory and GAAP capital will not be material.]**

Objective: Assess the long-term and recent trend of total GAAP Capital and total Regulatory Capital.

[Note that the effect of SFAS 150 is included in total GAAP Capital and excluded from total Regulatory Capital.]

a) Create a monthly time series of total GAAP Capital for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Note the long- and short-term trends of total GAAP capital volatility.

b) If appropriate, create a monthly time series of total regulatory capital for the period that the FHLBank has been operating under its capital structure plan. Note the long- and short-term trends of Total Regulatory Capital volatility.

c) Create the following time series: total Regulatory Capital/total assets. Note the long-and short-term trend. Note if this measure is less than 4 percent for any period.

d) Rank all FHLBanks by their most recent total GAAP Capital/total assets and total Regulatory Capital/total assets.

e) Assess the levels of total GAAP Capital and total Regulatory Capital of the FHLBank relative to its peers, the financial condition of the FHLBank, and its operational, credit, and market risk levels, direction and management.

11) Business Concentration Analysis

Objective: Assess the long-term and recent trend of the concentration of FHLBank business within large members.

a) Determine whether one member or a group of members potentially dominates the business activities of the FHLBank, including the advances and mortgage product lines. Determine whether the FHLBank is exposed to any particular image risk because of business concentration with any particular member. Information on member concentration is available in the membership listing at Q:\OS\OS Data\Membership\Quarterly Listing and the top 10 lists available at Q:\OS\OS Data\Membership\Top 10 List\TOP10 Borrowers.

b) Determine whether any potentially dominant member is currently a member of the FHLBank's board of directors.

c) Determine whether the FHLBank has any contingency plan should a potential dominant member withdraw its membership from the FHLBank.

d) Discuss with the FHLBank whether any large member is currently "in play" for a merger or acquisition.

e) Discuss with the FHLBank whether any member with an affiliate in another district has announced any changes in its strategic plans that might affect its borrowing relationship or membership at the FHLBank.

12) Net Interest Income Trend and Volatility

Objective: Assess the long-term and recent trend and volatility of net interest income.

a) Create monthly time series of net interest income in Excel for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater.

b) Create a line chart of the time series in Excel. Note the long-term and short-term trend of the time series and any atypical volatility within the time series.

c) Consider adding an additional line on the chart illustrating a short-term interest rate such as Fed funds and 3-month LIBOR. Such series can be downloaded from the Federal Reserve Bank of St. Louis web site.

   Note the correlation between short-term interest rate movements and net interest income. (Because so much of an FHLBank's net earnings are derived from the earnings on its invested capital, both net income and net interest income should correlate with interest rates.)

d) Create a regression line for the line chart of the time series. In Excel, left click on the line on a line graph, and then left click on "Add Treadline." Then select the type of trendline that best fits the data.

   Choose a regression line that creates the best fit for the data such as linear, polynomial, etc. Determine whether the trend lines suggest that net interest income is trending upward or downward. Consider whether the R-squared statistic suggests that the trend line adequately fits the data.

e) Create the following statistic for all time series considered: $\text{mean}_{(\text{time series})}/\sigma_{(\text{time series})}$. This metric is the inverse of the coefficient of variation and determines the number of standard deviations to net interest income loss. Assuming a normal distribution, the lower the figure, the greater the likelihood of a net interest income loss. For example, a figure of 3 suggests a 5 percent probability that the FHLBank will suffer a net interest income loss.

13) Net Income Trend and Volatility

Objective: Assess the long-term and recent trend and volatility of net income.

a) Determine the effect, if any, of SFAS 150 on the accounting of net income for the FHLBank. If SFAS 150 has a significant effect, consider reversing its effect when analyzing net income.

b) Create a monthly time series of net income in Excel for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater.

c) Consider adding an additional line on the chart illustrating a short-term interest rate such as Fed funds and 3-month LIBOR. Note the correlation between short-term interest rate movements and net income.

d) Create a line chart of the time series in Excel. Note the long-term and short-term trend of the time series and any atypical volatility within the time series. Note that volatility in net gains/losses on derivatives and hedging could affect volatility of net income.

e) Create a regression line for the line chart of the time series. Choose a regression line that creates the best fit for the data such as linear, polynomial, etc. Determine whether the trend lines suggest that net interest income is trending upward or downward.

f) Create the following statistic for all time series considered: $\text{mean}_{(\text{time series})}/\sigma_{(\text{time series})}$. This metric is the inverse of the coefficient of variation and determines the number of standard deviations to net income loss. Assuming a normal distribution, the lower the figure, the greater the likelihood of a net income loss. For example, a figure of 3 suggests a 5 percent probability that the FHLBank will suffer a net income loss.

14) Sustainability of the Dividend

Objective: Determine the sustainability of the FHLBank's quarterly dividend. (Note: some FHLBanks have changed both their dividend declaration dates and dividend payment dates. When they implement these changes, it may appear that no dividend is being paid in a given quarter. The dividend report in the Call Report System details both the declaration month and the payment month. The dividend report also includes SFAS 150 stock and cash dividend adjustments.)

a) Review the FHLBank's current dividend policy from minutes of the board of directors meetings or other source. Note how the quarterly dividend is determined such as LIBOR plus a margin. Note when the quarterly dividend is

declared and when it is paid.

b) Review the FHLBank's strategic plan to determine if any increase in the FHLBank's dividend is expected.

c) If the FHLBank's dividend is based on an interest rate statistic such as LIBOR, determine the expected trend of the interest rate statistic.

d) Create a quarterly time series of: (1) total amount of dividend paid, (2) annualized quarterly dividend yield, and (3) quarterly net income for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater. If SFAS 150 has a significant effect on dividends or net income, consider reversing the effect for this analysis.

e) Create the following time series: dividend/net income. This metric is the dividend payout ratio and determines whether the net income of the FHLBank can support the dividend. Note if the dividend payout ratio is greater than 1 for any period. Note if the trend of the dividend payout ratio is increasing or decreasing.

f) Create a line chart of the time series in Excel. Note the long-term and short-term trend of the time series and any atypical volatility within the time series.

g) Rank all FHLBanks by their most recent: (1) annualized quarterly dividend/total regulatory capital stock and (2) dividend/net income.

15) Operating Expense Trend

Objective: Assess the long-term and recent trend of operating expenses (salaries and benefits, cost of quarters, other).

a) Create a monthly time series of operating expenses in Excel for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater.

b) Create a line chart of the time series in Excel. Note the long-term and short-term trend. Note any atypical volatility within the time series.

c) Create the following time series: operating expenses/net interest income. This metric determines the amount of overhead expenses required to produce one dollar of net interest income. Note the long-term and short-term trend of the time series. Note any atypical volatility within the time series. Consider creating a line chart of the time series in Excel.

d) Rank all FHLBanks by their most recent operating expenses/net interest income.

e) Create the following time series: annualized operating expenses/total assets. This

metric determines the amount of overhead expenses required to manage the total assets of the FHLBank. Note the long-term and short-term trend. Note any atypical volatility within the time series. Consider creating a line chart of the time series in Excel.

f) Rank all FHLBanks by their most recent trailing 12 months operating expenses/average assets over the same time period.

16) Realized Gains/Losses Trend

Objective: Assess whether realized gains/losses from the sale of held-to-maturity (HTM) securities, available-for-sale (AFS) securities, and sale of securities held at fair value (HFV) are: (a) recurring or non-recurring or (b) timed to manage earnings.

a) Create a monthly time series of realized gains/losses from the sale of HTM securities, AFS securities, and the sale of securities held at fair value in Excel for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater.

b) Visually inspect the time series. Note whether the sales happen frequently or infrequently and whether the sales generated a gain or a loss. Note whether any sales for a gain or loss occurred in March, June, September, or December. This could be indicative of timing sale of securities for earnings management.

c) Should the analysis suggest the potential of earnings management, calculate monthly net income before the gain/loss on the sale of securities. Note if any month or quarter would have produced a net income loss before the gain on the sale of securities.

d) If the FHLBank recorded gains or losses on the sale of HTM securities, inquire whether all accounting conditions were met to prevent the "tainting" of the HTM portfolio.

17) Net Gains/Losses on Derivatives and Hedging Trend

Objective: Assess the long-term and recent trend of net gains/losses on derivatives and hedging trend. [Note that the net gains/losses on derivatives will be offset to a substantial degree by net losses/gains on securities held at fair value.]

a) Create a monthly time series of net gains/losses on derivatives and hedging in Excel for at least five years (60 observations) or the length of one interest rate cycle, whichever is greater. Calculate the cumulative net gain/loss on derivatives and hedging over the time period.

b) Note whether the net gains/losses on derivatives and hedging have grown larger or smaller over time and if any long or short-term trends are evident. Note whether the cumulative net gain/loss on derivatives and hedging is currently positive or negative.

c) Create a bar chart of the cumulative time series in Excel. Note the long-term and short-term trend of the time series and any atypical volatility within the time series.

18) Return on Assets (ROA) Trend

Objective: Assess the long-term and recent trend of ROA.

a) Determine the effect, if any, of SFAS 150 on the accounting of net income for the FHLBank. If SFAS 150 has a significant effect on accounting for net income, consider reversing its effect when analyzing ROA.

b) Create a quarterly time series of ROA in Excel for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater.

c) Create a line chart of the time series in Excel. Note the long-term and short-term trend of the time series. Note any atypical volatility within the time series.

d) Create a regression line for the line chart of the time series to assess the ROA trend. Choose a regression line that creates the best fit for the data such as linear, polynomial, etc.

e) Rank all FHLBanks by their most recent ROA.

19) Return on Equity (ROE) Trend

Objective: Assess the long-term and recent trend of ROE.

a) Determine the effect, if any, of SFAS 150 on the accounting of net income for the FHLBank. If SFAS 150 has a significant effect on accounting for net income, consider reversing its effect when analyzing ROE.

b) Create a quarterly time series of ROE in Excel for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater.

c) Create a line chart of the time series in Excel. Note the long-term and short-term trend of the time series. Note any atypical volatility within the time series.

d) Create a regression line for the line chart of the time series. Choose a regression line that creates the best fit for the data such as linear, polynomial, etc.

e) Rank all FHLBanks by their most recent ROE.

20) Net Interest Spread Trend

Objective: Assess the long-term and recent trend of Net Interest Spread. [Note: It is generally not proper to compare asset yields or liability costs across the FHLBanks. FHLBanks with longer-duration assets matched with longer-duration liabilities will generally have higher yields and costs that simply reflect the normal upward slope of the yield curve.]

a) Create a quarterly time series of net interest spread and its components yield on earning assets and cost of interest-bearing liabilities in Excel for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater.

b) Create a line chart of the net interest spread time series in Excel. Note the long-term and short-term trend of the time series. Note any atypical volatility within the time series.

c) Create a regression line for the line chart of the time series to assess the trend. Choose a regression line that creates the best fit for the data such as linear, polynomial, etc.

21) Market Value of Equity (MVE) Trend

Objective: Assess the long-term and recent trend of MVE.

Note: The Duration and Market Value Report in the Call Report System uses Regulatory Capital. That is, the capital subject to a redemption request is added to GAAP Capital to create regulatory capital. In the MVE/BVE analysis, use Regulatory Capital rather than GAAP Capital.

a) Create a quarterly time series of market value of equity and book value of equity for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater.

b) Create the following time series: market value of equity/book value of equity. This metric is the MVE/BVE ratio. Note if the MVE/BVE ratio is greater or less than one for any period. Note if the trend of the MVE/BVE ratio is increasing or decreasing.

c) Rank all FHLBanks by their most recent MVE/BVE ratio.

d) Should the MVE/BVE ratio of the FHLBank be significantly less than 1 and/or the trend of the MVE/BVE ratio is decreasing, make inquiries as to potential rationale.

22) Duration Trend

Objective: Assess the long-term and recent trend of duration.

a) Create a quarterly time series of base duration and up- and down-shocked duration for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater.

b) Note the significance of the duration statistics relative to the current and projected future interest-rate environment. Assess the volatility of duration over time.

c) Calculate the distance between the up- and down-duration shocks as well as the distance between the up- and down-duration shocks to base duration for all quarterly periods Assess the volatility of this statistic.

d) Rank all FHLBanks by their most recent base duration, distance between the up- and down-duration shocks, and the distance between the up- and down-duration shocks to base duration.

e) Obtain the most-recent report prepared by the Risk Modeling Division on market-value sensitivity. Plot the FHLBank's convexity profile and compare it with the convexity profile of other FHLBanks.

23) Profitability of Business Lines

Objective: Assess the contribution of an FHLBank's main business lines (generally advances, investments, and mortgages) to profitability of the FHLBank.

a) Determine whether the FHLBank calculates net interest spread of its various business lines. If so, create a quarterly time series of the net interest spreads for as far back as the information is available or for at least five years (20 observations) or the length of one interest rate cycle, whichever is greater. Ensure that the weighted average net interest spread of the FHLBank's main business lines equates to the total net interest spread for the FHLBank. If not, the data are corrupted and should not be used.

b) If the FHLBank does not calculate the net interest spread of its various business lines, the most recent quarterly net interest spread of the business lines can be estimated in Excel using the following technique: (1) segment the daily average quarterly balance sheet of the FHLBank into its business line components, noting several assets are not income generating, (2) determine the total net interest spread of the FHLBank, (3) make an assumption (or ask the examiner-in-charge) of what the likely net interest spread of a FHLBank is for all but one of the main business lines, (4) solve for the net interest spread of the remaining business line.

Note if the net interest spread for any business line is less than zero.

24) Examiner Consultation

Objective: To discuss analysis of the FHLBank's condition and performance with the examiner assigned to review Financial Reporting Operations.

Consult with the examiner responsible for Financial Reporting Operations to discuss the quality of the FHLBank's financial reporting operations and the implications of any financial reporting issues for the financial condition and performance analysis.

25) Assessment of Financial Condition and Performance

Objective: To summarize the results of the review and complete a Memorandum.

Summarize the results of the activity or function examined in a separate memorandum. The memorandum should analyze and discuss the financial condition and performance of the FHLBank (strong, satisfactory, supervisory concern, unacceptable), including the institution's earnings and profitability, operating efficiency, capital, retained earnings, excess stock, balance sheet composition, liquidity, and other relevant factors.

In presenting such analysis, the memorandum should take account of the following considerations: (a) the operating strategy and risk profile of the FHLBank; (b) the FHLBank's financial condition and performance relative to its historic condition and performance and that of other FHLBanks; and (c) the cooperative ownership structure of the FHLBanks and the interplay in a cooperative between product pricing and dividends. A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

26) Items requiring follow-up at the next on-site visitation

Objective: To identify key issues that require follow-up at the next on-site visitation.

Identify key issues that have been communicated to management or the board of directors (written or oral) that require follow-up during the next on-site visitation.

An FHLBank's condition and performance rating is based upon an assessment of key financial condition and performance factors that are not directly addressed under the market, credit, and operational risk components of the FHLBank Rating System. However, because an institution's financial condition and performance is inextricably linked to the market, credit, and operational risks that it has undertaken and to its management of those risks, there is necessarily some overlap between an FHLBank's condition and performance rating and its ratings for market, credit, and operational risk.

Because the FHLBanks differ in portfolio composition, business strategy, and risk appetite, the interpretation of any particular performance measure must consider the particular FHLBank's operating strategy and risk profile. For example, both capital and profitability should be greater at FHLBanks with higher risk profiles than at FHLBanks with lower risk profiles. In other words, risk-adjusted returns are much more important than non-risk-adjusted returns. It is also useful to make two different relative comparisons. First, the current performance of a FHLBank can be compared with its recent past performance – is performance improving or deteriorating, how is the portfolio composition shifting, are the changes in performance metrics in a positive or negative direction. Second, an FHLBank can be compared with other FHLBanks that have similar business strategies.

In addition to the foregoing factors, an assessment of an FHLBank's financial condition and performance also takes into account the cooperative structure of the FHLBanks and the interplay between product pricing and dividends.

Under the FHLBank Rating System, in evaluating an FHLBank's financial condition and performance, consideration should be given to:

1) Earnings and Profitability

What are the level, trend, and stability of earnings relative operational, credit, and market risk exposure of the FHLBank? What are the risk-adjusted returns on assets and equity? What is the net interest spread? Is this stable, increasing, or declining? Are earnings particularly affected by a single factor? What is the quality of earnings, that is (a) the level of earnings generated by key business lines including advances, investments, and mortgages, and (b) the sustainability of the earnings? What are the net spreads by business line? Are these spreads sustainable or reasonable?

2) Operating Efficiency

What is the level of operating expenses in relation to earnings and total assets? Is the FHLBank making sufficient infrastructure investments? Is the FHLBank taking advantage of technological advances?

3) Capital, Retained Earnings, and Excess Stock

Are the capital and leverage ratios adequate relative to operational, credit, and market risk exposure? Are the rate of internal capital generation and the level of retained earnings adequate in relation to the FHLBank's risk profile, earnings stability, and future prospects? Is the amount of outstanding excess stock of the FHLBank greater than I percent of the institution's total assets? If so, since January 29, 2007, has the FHLBank declared or paid any excess stock dividend or otherwise issued any excess stock?

4) Balance Sheet and Liquidity

What are the level and trend of major balance sheet items? Does the balance sheet expose the FHLBank to significant operational, credit, and market risks? What are the level, trend, and stability of key business lines of the FHLBank, such as advances, investments, and mortgages? Does the FHLBank have sufficient liquidity relative to its risk exposures? Does the FHLBank have excess liquidity? Is the FHLBank likely to remain in compliance with liquidity requirements? Does the FHLBank's portfolio selection, funding mix, or hedging strategy expose the FHLBank to unusual risk?

5) Other

Are there any known external factors that may affect future performance such as mergers and acquisitions among members?

6) Assessment of Financial Condition and Performance

Summarize the results of the activity or function examined in a separate memorandum. The memorandum should analyze and discuss the financial condition and performance of the FHLBank (strong, satisfactory, supervisory concern, unacceptable), including the institution's earnings and profitability, operating efficiency, capital, retained earnings, excess stock, balance sheet composition, liquidity, and other relevant factors.

In presenting such analysis, the memorandum should take account of the following considerations: (a) the operating strategy and risk profile of the FHLBank; (b) the FHLBank's financial condition and performance relative to its historic condition and performance and that of other FHLBanks; and (c) the cooperative ownership structure of the FHLBanks and the interplay in a cooperative between product pricing and dividends. A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

7) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management or the board of directors (written or oral) that require follow-up during the next on-site visitation.

Introduction

Financial statements such as the balance sheet, income statement and cash flow statement provide information about an entity's financial position, performance, and changes in financial position. Financial statements contain information used to evaluate and monitor the FHLBank's performance, goals, and compliance with established policies, procedures, accounting standards and regulatory requirements.

The Office of Finance relies on financial information provided by each of the FHLBanks to prepare the quarterly and annual combined financial reports of the twelve FHLBanks. Finance Board regulations require FHLBanks to provide to the Office of Finance all the necessary information to prepare the combined financial reports.

Financial statement users need reliable information to evaluate the FHLBank's financial condition and performance and in making economic decisions. Of key importance is the proper presentation of assets, liabilities and equity and the proper recognition of income and expenses. Also important is the information presented regarding the FHLBank's risk profile, including on-and off-balance-sheet items, capital adequacy, the capacity to withstand short-term problems, and the ability to generate additional capital. Users may also need information to understand the special characteristics of the FHLBank's operations such as liquidity and the relative degree of risk involved in various aspects of the FHLBank's business.

An FHLBank's board of directors and senior management have the ultimate responsibility for the design, implementation, and monitoring of the FHLBank's risk management and internal controls over financial reporting. Specific controls should be established to:

1) Provide reasonable assurance that assets are safeguarded and financial and operational information is timely and reliable;
2) Detect and correct errors and irregularities in a timely manner;
3) Ensure compliance with Generally Accepted Accounting Principles (GAAP), FHLBank's policies and procedures, and applicable laws and regulations; and
4) Promote the economical and efficient use of resources.

An FHLBank's financial reporting operations function is responsible for compiling and distributing financial information to executive/line management, and the board of directors. This function is also responsible for generating required quarterly and annual financial reports to be publicly issued, reporting to the Office of Finance for System combined reporting purposes, and for reporting financial and risk information to regulators. The institution's internal controls governing financial reporting should ensure that its financial information possesses the following characteristics:

1) ***Relevance –*** To be relevant, information should be presented timely in order to be of use in decision-making, and should be helpful to decision-makers in evaluating past, present and future events or in confirming or correcting past assessments.

2) ***Reliability -*** Information should be free from material errors and bias. The key aspects of reliability are accurate representation, priority of substance over form, neutrality and completeness.

3) ***Comparability*** - Information should be presented consistently over time in accordance with applicable accounting principles and standards so that it may be readily compared with that of other entities. In accounting, "comparability" exists when different companies apply the same accounting standards and principles in their reporting of information

4) ***Understandability*** - Information should be easily comprehensible for users with reasonable knowledge of business, economics and accounting.

Both the internal and external (independent) audit functions of an FHLBank play key roles in the maintenance of strong financial reporting controls. External auditors are primarily concerned with the financial institution's ability to record, process, summarize and report financial data consistent with assertions in the financial statements. Internal auditors are also concerned with controls over the effectiveness, economy, and efficiency of management decision-making processes that may not relate to a financial statement audit but which nevertheless affect an FHLBank's financial reporting. In this sense, the responsibility of the internal audit function extends beyond that of the external audit function with respect to the reliability and integrity of an FHLBank's financial information.

Regulatory Environment

The primary rules, regulations and references of the Federal Housing Finance Board that pertain to financial reporting operations are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the FHLBanks. The examiner should ensure that the application of such authorities to an FHLBank

1) ***Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to financial reporting operations:***

   Part 917 of the Finance Board regulations addresses powers and responsibilities of FHLBank boards of directors and senior management. In particular, Section 917.3, Risk Management and Section 917.6, Internal Control System, are pertinent.

   Section 917.9, requires that an FHLBank's board of directors declare and pay a

dividend only from previously retained earnings or current net earnings and only if such payment will not result in a projected impairment of the par value of the institution's capital stock.

Section 989.3, addresses the preparation and completion of an FHLBank's financial statements and the distribution of financial information and other information to the Finance Board and the Office of Finance.

2) ***Advisory Bulletins of the Federal Housing Finance Board*** that provide supervisory guidance relating to financial reporting operations are the following:

Advisory Bulletin 03-02, dated February 10, 2003, and Advisory Bulletin 02-3, dated February 13, 2002, which offer guidance on specific attributes to be considered by FHLBanks in the formulation of their business continuity plans and the establishment of bilateral agreements with other FHLBanks.

Advisory Bulletin 05-05, dated May 18, 2005, which provides guidance on the risk management responsibilities of an FHLBank's board of directors, senior management and risk management.

Advisory Bulletin 06-03, dated July 18, 2006, which provides guidance on disclosure in SEC filings of unpublished information as defined in Part 911 of the Finance Board Rules and Regulations.

3) ***Resolutions of the Federal Housing Finance Board,*** which include the following:

Resolution 2005-14, dated July 13, 2005, Data Reporting Requirements: Call Report System, underscores the importance of filing accurate and timely Call Reports. The resolution references Call Report instructions which require an FHLBank to promptly amend previously filed Call Reports, within three business days, of any adjustments the FHLBank makes to its monthly or quarterly financial statements.

4) ***Statements of Financial Accounting Standards (SFAS) promulgated by the Financial Accounting Standards Board (FASB),*** which include the following:

a) SFAS 5, Accounting for Contingencies, establishes standards of financial accounting for loss contingencies. It requires accrual by a charge to income (and disclosure) for an estimated loss from a loss contingency if two conditions are met (1) information available prior to issuance of the financial statements indicates that it is probable that an asset had been impaired or a liability had been incurred at the date of the financial statements, and (2) the amount of loss can be reasonably estimated.

b) SFAS 91, Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Direct Costs of Leases, establishes the requirement to recognize a loan's origination fees and origination costs over its life as an adjustment to yield. The level-yield interest income/cost recognition requirement for all loan fees, inclusive of origination costs and purchase premiums/discounts, is applicable to AMA, Investment Securities, and Advances. Discounts, premiums, and costs of issuing debt (COs for FHLBanks) are accounted for under Accounting Principles Board Opinion 21, which requires that these items be treated as adjustments to yield, similar to comparable items under SFAS 91.

c) SFAS 107, Disclosures about Fair Value of Financial Instruments, requires certain fair value disclosures for all financial instruments, both assets and liabilities.

d) SFAS 114, as amended by SFAS 118, Accounting by Creditors for Impairment of a Loan, requires a creditor to recognize loan impairment through the creation of a credit loss reserve and a charge to bad debt expense. Loan impairment is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate or, as a practical expedient, at the loan's observable market price or the fair value of the collateral if the loan is collateral dependent. This statement is applicable to Advances and to AMA.

e) SFAS 115, Accounting for Certain Investments in Debt and Equity Securities, addresses the accounting and reporting for investments in equity securities that have readily determinable fair values and for all investments in debt securities. Those investments are to be classified and accounted for as follows:

(1) Debt securities that the institution has the positive intent and ability to hold to maturity are classified as *held-to-maturity* securities and recorded at amortized cost.

(2) Debt and equity securities that are bought and held principally for the purpose of selling in the near term are classified as *trading securities* and reported at fair value, with unrealized gains and losses included in earnings.

(3) Debt and equity securities not classified as either held-to-maturity securities or trading securities are classified as available-for-sale securities and recorded at fair value, with unrealized gains and losses excluded from earnings and recorded in a separate component of shareholders' equity.

f) SFAS 133, Accounting for Derivatives and Hedging Activities, as amended by SFAS 138, 149 and 155, requires derivatives to be recorded at fair value on the balance sheet and periodically marked-to-market. Where derivatives are acquired

to hedge specific assets or liabilities, and the hedge relationships qualifies for hedge accounting, the earnings volatility from recognizing the derivative's gain/loss can be offset by changes, due to the hedged risk, in the fair value of the hedged item which is also recognized in earnings.

Specifically, for a "fair value" hedge, the derivative's gain/loss from a change in fair value that is recorded in earning would be offset by a similar fair value mark to the hedged item, which would also be recorded in earnings. For a "cash flow" hedge, the derivative's gain/loss is not recorded directly into earnings, but instead is recognized in equity as a component of other comprehensive income. To qualify for hedge accounting, entities must meet stringent documentation and effectiveness testing requirements. SFAS 149 clarifies that certain loan commitments should be accounted as derivatives. SFAS 155 permits institutions to elect fair value accounting for certain hybrid instruments, for which embedded derivatives are otherwise required to be bifurcated from the host instruments under SFAS 133, and establishes a requirement to analyze securitized financial instruments for the existence of free-standing or embedded derivatives..

g) SFAS 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity, establishes standards for how an issuer classifies and measures certain financial instruments with characteristics of both liabilities and equity. For example, SFAS 150 requires that under most circumstances mandatorily redeemable capital stock must be classified as a liability and requires classification of dividends on mandatorily redeemable stock as interest expense, which reduces GAAP net earnings.

h) SFAS 157, Fair Value Measurements, establishes a framework for measuring fair value according to GAAP. This statement further expands disclosures on fair value measurements. The successful application of this statement requires an entity to use exit prices based on observable market information, when available. This statement becomes effective for fiscal years beginning November 15, 2007, but may be adopted early.

5) Sarbanes-Oxley Act and Registration with the Securities and Exchange Commission

The Sarbanes-Oxley Act (SARBOX) was enacted in 2002 will be applicable to each FHLBank as a registrant of a class of equity securities with the Securities and Exchange Commission (SEC) pursuant to Section 12(g)(1) of the Securities Exchange Act of 1934 (1934 Act). In June 2004, in Part 998 of its regulations, the Finance Board directed each FHLBank to file a registration statement covering a class of equity securities with the SEC by June 30 2005 and thereafter ensure that the registration statement became effective under Section 12 of the 1934 Act by August 29, 2005. As of August 2006, all 12 FHLBanks are effective SEC registrants.

Major SARBOX provisions include the following:

a) Creation of the Public Company Accounting Oversight Board (PCAOB);
b) A requirement that public companies evaluate and disclose the effectiveness of their internal controls over financial reporting, and that independent auditors attest to such disclosure (As non-accelerated filers, the management disclosure is currently required beginning in 2007, with the auditor's attestation scheduled to be effective for FHLBanks beginning in 2008);
c) Certification of quarterly and annual financial reports by chief executive and chief financial officers;
d) Auditor independence, including bans on certain types of work for audit clients and pre-certification by the company's Audit Committee of all other non-audit work;
e) A ban on most personal loans to executive officers or directors;
f) Accelerated reporting of insider trading;
g) Additional disclosures;
h) Enhanced criminal and civil penalties for violations of securities law;
i) Longer maximum jail sentences and larger fines for executives who knowingly and willfully misstate financial statements; and
j) Whistleblower protection.

As a registrant of a class of equity securities with the SEC pursuant to Section 12(g)(1) of the 1934 Act, each FHLBank is subject to the reporting requirements of the SEC, including periodic preparation and filing of public disclosures relating to an institution's financial condition, results of operations, trends, or uncertainties affecting its business, and management's assessment of its business and financial condition, including supporting financial information and certifications. Moreover, each FHLBank is subject to the enforcement authority of the SEC.

FHLBank Environment

An FHLBank's financial reporting operations function is responsible for ensuring that the institution's activities are accurately recorded in its financial statements and disclosed in its financial reports. Financial statements are published quarterly and annually. The Office of Finance issues quarterly and annual combined financial statements on behalf of the FHLBank System.

In addition, an FHLBank's financial reporting operations function is responsible for timely and accurately filing monthly and quarterly call reports with the Federal Housing Finance Board. To the extent that an FHLBank makes adjustments to previously issued financial statements, it is required to file appropriate Call Report amendments within three business days.

The financial reporting operations function is charged with implementing increasingly complex accounting standards and financial disclosure requirements including determining accounting treatments applicable to new products and services. Other responsibilities include providing financial information to various users including the FHLBank's board of directors and senior/line management, the Office of Finance, the Finance Board and other governmental authorities. Finally, at some FHLBanks, accounting department staff are involved in the yearly budget process, and in processing and paying invoices received by the FHLBank.

Risks Associated with Financial Reporting Operations

1) Lack of Sound Corporate Governance (Board of Directors and Senior Management Oversight)

a) Key accounting risks and controls are not adequately identified, assessed, and monitored.
b) Accounting and valuation systems are incapable of properly capturing the FHLBank's complex transactions, and are poorly integrated with each other or other data systems, and may represent information technology that is not aligned with the FHLBank's goals and strategies.
c) Duties and responsibilities, including segregation of operational and control functions, are not adequately defined.
d) Financial reporting operations personnel lacks either the staffing size or expertise to properly implement what are increasingly complex accounting standards, resulting in misstatements of the FHLBank's financial position or results of operations.
e) The FHLBank's financial performance and compliance with established goals, policies, procedures, accounting and regulatory requirements are not properly reviewed and monitored due to inadequate, inaccurate and/or untimely reporting to the board of directors and senior/line management.
f) Financial statement errors and misstatements are not detected and corrected in a timely manner.
g) A business continuity plan for financial reporting operations is not in place and regularly tested.
h) Independent audit coverage and testing is limited. For example; auditors may be inexperienced or lack the technical experience to adequately test the control environment.

2) Operational Risk

a) Accounting, valuation and other key information systems do not meet financial reporting needs, resulting in the introduction of various manual processes such as, user-developed applications and workarounds which can result in errors and misstated financial results.

b) Implementation of new products and services may be delayed due to the lack of expertise of accounting personnel.
c) Errors, misstatements and losses may not be detected in a timely manner.
d) Inaccurate or untimely financial statements and other information may be filed with the Office of Finance, Finance Board and other governmental authorities.
e) Where outside vendors' services have material effects on financial statement, SAS 70 reviews are not obtained, or alternative assessments not performed, to assure that the outside service provider's internal control environment is sound.
f) Data cannot be readily recreated and/or required tasks readily performed in the event of a disaster or personnel turnover.
g) Procedures that pertain to the destruction and retention of records have not been established or followed.

Specific Risk Controls Relating to Financial Reporting Operations

An FHLBank's controls relating to financial reporting operations are set forth below.

1) Corporate Governance

The board of directors and senior management have the ultimate responsibility for the design, implementation, and monitoring of the FHLBank's internal control environment. Specific elements of the internal control environment include identification of key risks, implementation of controls, organizational structure, departmental policies and procedures, managerial review and exception reporting, rigorous hiring and screening practices designed to protect the integrity of the institution's financial reporting processes, business contingency planning, and training and retention of staff possessing the necessary technical expertise. FHLBank management will be required to evaluate and disclose the effectiveness of their internal controls over financial reporting along with their financial statements beginning in 2007, and the FHLBanks' independent auditors will be required to make an internal control attestation beginning in 2008.

2) Federal Home Loan Bank System

a) The controllers of the FHLBanks meet periodically to discuss new regulations and accounting pronouncements, implementation issues and methodologies.
b) The internal audit directors of the FHLBanks meet periodically to discuss new and proposed accounting pronouncements and their potential effects on the System.
c) The Office of Finance and FHLBank presidents (or their designee) participate in an accounting and disclosure committee to discuss system accounting, reporting and disclosure issues arising in connection with the issuance of combined financial reports for the System.

3) External (Independent) Audit

An FHLBank should have ongoing communication and coordination with its external auditors on emerging accounting issues. When a proposed accounting treatment is particularly complex, or if there exist a range of potential interpretations, the proposed treatment should be reviewed with the institution's external auditors.

4) Internal Audit and/or Outsourced Independent Testing

Internal Audit is an independent appraisal function that contributes to the improvement of risk management, control, and governance systems. The primary objective of internal auditing is to provide evaluations of the adequacy and effectiveness of the internal control structure.

Internal auditors evaluate financial reporting risks and related controls, including the risk of non-compliance with accounting standards. The frequency and scope of internal audit reviews should reflect the internal auditor's independent risk assessment, should be incorporated into an annual audit plan, and should be regularly reviewed with the FHLBank's audit committee. If the internal audit function does not have adequate technical expertise to address certain issues, audit work on those issues may be outsourced to external auditing firms (generally not the auditor of the FHLBank's financial statements) or to other consultants.

5) Financial Reporting Operations

An FHLBank should have in place the following controls pertaining to the accuracy and integrity of its financial information:

a) The general ledger is the "official set of accounting records" and primary source of data for financial reporting. The integrity of the general ledger data is verified by the different users of the system and controlled by accounting operations personnel through periodic verifications, reconciliations, and validations.
b) Accounting procedures are in place for the FHLBank's various transactions. Procedures should cover the preparation and input of general ledger entries, and the preparation of financial statements and reports.
c) Processes are in place for reviewing upcoming or new accounting pronouncements; to determine their effects on existing activities; and to create new or revise existing accounting policies and procedures as needed.
d) Processes also are in place to review new products and activities and determine the appropriate accounting requirements.
e) Internal and external financial reports are reviewed by management and the Audit Committee, and required certifications are made by authorized FHLBank personnel before they are released.

f) Procedures are in place to address manual processes and/or workarounds such as restricting access to user-developed applications and the back-up of data.

6) Business Continuity and Recovery

The FHLBank should have written procedures for operations at its designated hot-site. Back-up tapes should be stored off-site and be easily retrievable. Bilateral agreements with one of more FHLBanks must be in place to ensure the continuity of the FHLBank's operations, including financial reporting operations. Each FHLBank should test its business continuity plans and systems regularly to verity their reliability.

7) Risk Self-Assessments

An FHLBank's *Annual Risk Assessment* should include a risk self-assessment by Financial Reporting Operations in which it rates all key inherent risks in its processes before internal controls are considered and residual risk remaining after considering internal controls. Residual risks, if deemed unacceptable, would require Financial Reporting Operations to mitigate the risk exposures by implementing more effective controls or developing new processes.

Examination Guidance

A work program for Financial Reporting Operations accompanies this narrative. What follows below are examples of attributes that examiners should consider in completing the analyses required in the work program. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account his or her assessment of the quality and effectiveness of corporate governance, risk management, internal controls and audit coverage relating to Financial Reporting Operations.

However, the evaluation and testing of the FHLBank's operating procedures to ensure the accuracy and timeliness of Call Report System (CRS) filings must be performed on every examination.

1) Organizational Structure

a) Review the functional organization and reporting structure of Financial Reporting Operations.

b) Identify key personnel and their primary duties, job responsibilities and technical expertise. Assess whether duties are properly segregated and personnel are cross-trained.

c) Assess the information flow to and from other areas such as Treasury Operations, Advance Operations, Acquired Member Asset (AMA) Operations, Market Risk Valuations and Modeling to determine what affects financial reporting results and how those results affect decision making.

d) Review any significant changes since the last examination.

2) Development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function for financial reporting.

The FHLBank's financial reporting requirements are complex given their extensive hedging activities and reliance on hedge accounting. In addition, the FHLBank's financial reporting environment is increasingly more challenging as the SEC continually strives for more transparent and market-based financial statement presentations, and the FASB responds with more frequent and complex accounting standards pronouncements.

a) Review the FHLBank's accounting policies to determine if they represent a comprehensive set of accounting guidelines and procedures covering all the FHLBank's financial activities.

b) Determine if the FHLBank has a process in place to assess upcoming or new Financial Accounting Standards, and to ensure that its accounting practices stay current and relevant.

c) Review the FHLBank's process for establishing accounting treatments for new business activities. Does the FHLBank consider accounting risk before deciding to offer new business activities? For example, an FHLBank that considers offering modifications of fixed-rate convertible/putable advances should consider whether such transactions should be recorded as new advances or continuations of existing advances, and how to treat swaps or options hedging the original advances.

d) Assess the FHLBank's process for generating and reviewing its SEC filings. Most of the FHLBanks have formed Disclosure Committees, consisting of senior managers that meet periodically to review and oversee financial reporting and SEC filing requirements. Review the structure, member composition, and minutes of these committees.

3) Key FHLBank Policies and Procedures

a) Accounting policies and procedures should cover the application of SFAS 133, SFAS 91, and other relevant accounting standards. These policies and procedures should include detailed descriptions of the Bank's methodologies. For example, as part of its SFAS 133 procedures, the FHLBank should have detailed descriptions of its hedging strategies, its methodologies for documenting a hedging relationship and assessing hedge effectiveness, and its methods for measuring hedge ineffectiveness.

b) Risk Management Policy and procedures for assessing inherent and residual risks in Financial Reporting Operations;

c) Call reporting procedures; and

d) General Ledger to subsidiary ledger reconciliation procedures.

4) Risk Assessment under Part 917 and internal control evaluation under SARBOX

a) Review Financial Reporting Operations' annual self-risk assessment to determine whether the inventory of accounting and reporting processes is comprehensive, whether inherent risks and internal controls are sufficiently identified and evaluated, and whether residual risks are reasonably quantified. To the extent that residual risks are unacceptably high, has management committed to timely remediation that will reasonably mitigate and reduce the risk exposure? What is the current status of those mitigation efforts?

b) SARBOX requires effective internal controls to support financial statement reporting processes. Where is the FHLBank in its implementation process, and is it on track to be fully compliant with SARBOX by the implementation deadline, currently year-end 2007 for management's internal control disclosure certification, and 2008 for the auditor's attestation on internal controls over financial reporting.

5) Testing performed by external and internal auditors and outside consultants

a) Evaluate the adequacy of audit scope and testing performed by internal auditors.

(1) Coordinate with the examiner reviewing Internal Audit. Assess whether audit plans provide adequate coverage of accounting operations. Review relevant completed internal audit work to determine if the testing performed fairly captures the accounting risks posed by more complex activities, including complex hedging strategies. Strategies for hedging pooled whole mortgage loans (for which the borrower holds a prepayment option) are more complex,

and measuring hedge ineffectiveness is more difficult, than for simpler hedging strategies, such as those for consolidated obligations or advances wherein options in hedged items can be offset with matched critical terms in hedging instruments.

(2) Determine whether the Internal Auditor and staff have the knowledge and expertise to audit areas that pose high financial reporting risks. If not, do they out-source or co-source such auditing work and is such work adequately reviewed?

b) Evaluate the adequacy of the scope and testing performed by external auditors.

(1) External auditors determine its scope and testing based on the materiality of current activities to the FHLBank's financial reporting. Consequently, the external auditor may not review certain activities that are presently infrequent or immaterial, but that are emerging as significant.

(2) Review external auditor's most recent management letter to determine the nature and severity of findings and recommendations therein.

(3) Consult with the Accounting Department to identify if any issues arose from their review of the external auditors' workpapers that may require follow-up.

(4) Meet with the external auditors to discuss their audits and gain insight into the focus of their reviews.

c) Evaluate the adequacy of the scope and testing performed by outside consultants.

FHLBanks frequently engage outside consultants to test key processes that are complex and for which internal staffing lack the needed expertise. Examiners should review the work performed, to ensure that key risks, processes and controls are sufficiently tested. In addition, the examiner should review the FHLBank's process of reviewing and accepting the consultants' work.

6) Information technology and controls

a) Review the flow of financial information and how activities are captured and recorded in the accounting system. Review controls implemented by Financial Reporting Operations to verify that the terms of financial instruments are accurately recorded in accounting systems.

b) Assess the capabilities of the main (General Ledger) accounting system and its reliance on other supplemental systems for accruals, valuation, and other accounting input for different financial instruments.

(1) Determine whether these systems capture sufficient data and can perform calculations needed to comply with current financial accounting standards, such as the level-yield amortization requirements of SFAS 91.

(2) Assess how well the systems interface with each other and to what extent manual intervention is required. If manual processes are needed, review the controls over those processes to determine their effectiveness in detecting and correcting errors.
(3) Assess the extent to which the FHLBank relies on user-developed applications. Assess the process implemented to inventory and control these applications.

c) Assess the FHLBank's plans for financial reporting continuity and financial data recovery. What type of accounting systems will be relied upon during disaster recovery? Evaluate the adequacy of periodic testing of these systems.

7) Identification and evaluation of controls and significant changes to the activity or function

a) Evaluate the process that captures, account and report financial transactions, focusing on controls, the level and direction of risk and the quality of risk management; and

b) Evaluate any significant changes that have been implemented since the last examination or are being considered that may affect the FHLBank's risk profile such as management, systems, key personnel, new products, new regulatory requirements, and changes in transaction processing.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

a) Compliance with Accounting Standards

Select samples of certain transactions and test for compliance with relevant accounting standards. Consider testing compliance with the following key standards:

(1) SFAS 5, Accounting for Contingencies;
(2) SFAS 91, Accounting for Nonrefundable Fees and Costs Associated with Originating or Acquiring Loans and Initial Costs of Leases;
(3) SFAS 107, Disclosures about Fair Value of Financial Instruments;
(4) SFAS 114, as amended by SFAS 118, Accounting by Creditors of Impairment of a Loan;
(5) SFAS 115, Accounting for Certain Investments in Debt and Equity Securities;

(6) SFAS 133, as amended by SFAS 138, 149 and 155, Accounting for Derivatives and Hedging Activities;
(7) SFAS 150, Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity; and
(8) SFAS 157, Fair Value Measurements.

b) Compliance with Call Reporting Requirements

Each FHLBank must file a Call Report as of the end of each month and each calendar quarter. Under the new CRS.net, monthly Call Reports are due on the 15th calendar day of the month. Quarterly call reports are due on the 20th calendar day of the month except the fourth quarter of 2006 is not due until February 15, 2007. By regulation, Capital Compliance report deadline remains 15 business days after the end of the month.

Each Call Report, including any amended Call Report, is required to be submitted by a senior officer, or by an FHLBank employee to whom authority has been delegated by a senior officer. Monthly and quarterly Call Reports and schedules are included on the Intranet under CRS Reporting. Call Reports include a cover page that shows the date/time the report was submitted. The financial information provided by each of the FHLBanks is critical to the Finance Board for its analysis of the FHLBanks financial and operating performance.

Users of CRS must follow Finance Board procedures. Finance Board CRS administrators may grant access privileges ranging from read-only to data entry, validate, submit, and revoke. FHLBank CRS administrators cannot grant any privileges under CRS.net. Their only role is to be the central contact point and process requests to add or deactivate FHLBank users or request to have passwords reset. Each FHLBank is permitted to have a maximum of two CRS Administrators and up to five CRS users who may submit Call Report data to the Finance Board. Submit rights are normally limited to the CFO, Controller and other Vice President or higher officers.

In assessing the adequacy of the call reporting process, the examiner should consider performing the following:

(1) Determine if there were any revocations or rejections since the last examination by accessing the CRS system and reviewing a history of CRS filings.
(2) Select a sample of month-ends, including a month near the examination as-of date, since the last examination. Obtain the Bank's general ledger trial balances for the months selected. Select a sample of account balances included on the trial balance and agree the account balances to CRS schedules for the months selected.

(3) Obtain and review source documents for account balances selected. The source documents should include the source from which the account balances are derived. Source information usually comes from various sub-ledger systems of the FHLBanks.
(4) Review and analyze the controls surrounding reconciliations between the sub-ledger systems and the general ledger. Assess the adequacy of segregation of duties and the establishment of a review/approval/reporting process for general ledger balances.
(5) Coordinate the review of sub-ledger balances with examiners reviewing other areas of the FHLBank.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Examination Work Program
Financial Reporting Operations
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional structure of Financial Reporting Operations. Consider reporting lines, staffing, primary duties, responsibilities and technical expertise. Are duties appropriately segregated, and staff provided with cross-training opportunities?

How well does Financial Reporting Operations integrate its processes with other departments to produce financial statements and reports that are timely, in accordance with GAAP and SEC disclosure requirements? Have there been significant changes to the organizational structure of Financial Reporting Operations since the last examination?

2) Development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function.

Assess the development of key accounting policies and practices, and oversight by the board of directors. Evaluate the adequacy of senior management oversight and the risk management function for Financial Reporting Operations, as applicable.

3) Key FHLBank policies and procedures

Identify and evaluate key FHLBank policies and procedures applicable to Financial Reporting Operations.

4) Risk assessment under Part 917 and internal control evaluation under SARBOX

Evaluate the annual risk assessment under Part 917 and of the internal control assessment under SARBOX applicable to Financial Reporting Operations. Also assess the FHLBank's procedures implemented to periodically attest to the adequacy of the control environment.

5) Testing performed by external audit, internal audit or consultants

Evaluate testing performed by the FHLBank's external auditors, internal auditors or consultants of controls over Financial Reporting Operations.

6) Information technology and controls

Identify and assess the automated and manual systems and applicable controls used by Financial Reporting Operations to record and account for financial transactions. Consider system limitations (certain legacy systems may not meet GAAP requirements, requiring inefficient workarounds), vendor technical support, utilization of spreadsheets and other user developed applications, and business continuity and recovery needs.

7) Identification and evaluation of controls and significant changes to the activity or function

Evaluate the process flow that captures, account and report financial transactions, focusing on controls, the level and direction of risks and the quality of risk management. If applicable, conduct an assessment of any significant changes since the prior examination or are being considered that may affect the FHLBank's risk profile.

8) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage. At a minimum, the evaluation and testing of the FHLBank's operating procedures to ensure the accuracy and timeliness of Call Report System (CRS) filings must be performed.

9) Assessment of Risks

Summarize the results of the activity or function examined in a separate memorandum. The memorandum must articulate the risks and the management of those risks. It should also clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the type(s) of risk (market, credit, operational); the level of the risk (low, moderate, high); the direction of the risk (stable, decreasing, increasing); and the quality of risk management (strong, adequate, weak). A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

10) Items requiring follow-up at the next on-site visitation

Identify key issues that have been communicated to management (written or oral) that require follow-up during the next on-site visitation.

Introduction

The principal role of the Office of Finance (OF) is to issue and service consolidated obligations (COs) on behalf of the twelve Federal Home Loan Banks (FHLBanks). The two over-arching considerations are that (1) COs be issued at the lowest long-term all-in cost consistent with the FHLBanks' status as government-sponsored enterprises and (2) COs are efficiently serviced, that is all principal and interest payment occur in a timely fashion. Attendant to the role of issuing COs, the OF is also responsible for the preparation of the combined financial reports of the FHLBanks and providing other securities' disclosures.

The OF was created by the former Federal Home Loan Bank Board in 1972 when it relocated the former fiscal agent office from New York City. In 1989, the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA) abolished all the joint offices of the FHLBanks with the specific exception of the OF, thus giving the OF an implicit federal existence although it has no charter, and it is neither a federal nor state corporation. The OF operates out of leased space in the Reston Town Center development in Reston, Virginia, and a disaster-recovery site near the Dulles Airport. It has approximately 72 employees.

The Federal Housing Finance Board (Finance Board) has the explicit statutory duty to ensure that the FHLBanks (also referred to as "System") remain adequately capitalized and able to raise funds in the capital markets. In the interest of providing a liquid and competitively priced source of funding for the System, the Finance Board monitors the regulatory compliance and efficient operation of the OF.

By regulation, the OF is governed by a three-person board of directors, two of whom are FHLBank presidents and the third being a private citizen, who serves as chair. The Finance Board appoints the directors to staggered three-year terms ending March 31. There are no statutory or regulatory provisions dealing with the rotation of directors among the FHLBank presidents. The OF operates under the day-to-day supervision of a managing director.

While the OF is governed by a board of directors, the OF seeks to achieve consensus with a number of interested groups, including FHLBank presidents, FHLBank chief financial officers, and FHLBank funding officers. These three groups have formed a number of standing and/or *ad hoc* committees and/or sub-committees that deal with funding issues.

To facilitate efficient decision-making, the FHLBanks and the OF have implemented procedures that permit the Debt Management Subcommittee to implement procedures without a unanimous vote. In the issuance of COs, the OF must consider the preferences of investors and potential investors and the Nationally Recognized Statistical Rating Organizations that rate COs.

The capital requirements applicable to the FHLBanks place an implicit limit on the issuance of COs. For any FHLBank which has not yet converted to their new capital

plan, asset leverage is generally limited to twenty-one times capital. For any FHLBank who has converted to a new capital plan, assets, and implicitly COs, are limited by the leverage or risk-based capital requirements, whichever of the two is the binding constraint.

Regulatory Environment

The primary authorities governing, or relevant to, Office of Finance are set forth below. The discussion does not address the application of authorities other than the FHLBank Act and the regulations, interpretations and issuances of the Finance Board to the Office of Finance. The examiner should ensure that the application of such authorities to the Office of Finance has been considered by the Office of Finance and its legal counsel.

1) Federal Home Loan Bank Act

Section 11(b) of the FHLBank Act, as amended, authorizes the Finance and the FHLBanks to issue FHLBank System COs. In addition, Sections 10 and 11(h) address that the COs' proceeds are used by the FHLBanks to make advances to their members and housing associates, to purchase mortgage loans, and for other authorized purposes, including the funding of eligible investments.

2) Rules and Regulations of the Federal Housing Finance Board, which include the following parts and sections relevant to Office of Finance:

Part 966 of the Finance Board regulations addresses consolidated obligations. In particular, Section 966.2, Issuance of consolidated obligations, Section 966.2(c), Negative pledge requirements and Section 966.3, Leverage limit and credit rating requirements, are pertinent.

Part 932 of the Finance Board regulations addresses Federal Home Loan Bank Capital Requirements.

Part 985 of the Finance Board regulations addresses the Office of Finance. In particular, Section 985.2, Authority of the Office of Finance, Section 985.3, Functions of the Office of Finance, Section 985.4, Finance Board oversight, Section 985.5, Funding of the Office of Finance, Section 985.6, Debt management duties of the Office of Finance, Section 985.7, Structure of the Office of Finance board of directors, and Section 985.8, General duties of the Office of Finance board of directors are relevant.

Section 985.6(b)(2) of the Finance Board regulations requires that the scope, form, and content of the combined financial reports be consistent with the requirements of Regulations S-K and S-X of the Securities and Exchange Commission (SEC). The disclosures contained in the combined financial reports should also satisfy SEC reporting requirements now applicable to the FHLBanks and be consistent with the disclosures made in their periodic financial reports to the SEC on Forms 10-K and 10-

Q, except for certain items that obviously do not apply given the unique nature of the combined financial reports. However, the Finance Board retains the exclusive authority to determine the adequacy of the disclosures made in the combined financial report.

3) ***Advisory Bulletins of the Federal Housing Finance Board that provide supervisory guidance relating to Office of Finance activities are:***

   Advisory Bulletin 06-03, dated July 18, 2006, provides guidance on disclosure in SEC filings of unpublished information as defined in Part 911 of Finance Board regulations.

   Advisory Bulletin 02-7, dated August 27, 2002, provides guidance to the FHLBanks on reporting their unsecured credit exposure to OF in order to meet the Finance Board's reporting requirement of Section 932.9(e)(1).

4) ***Regulatory Interpretation 2005-01, dated March 30, 2005, provides guidance to*** Part 966.8(c), which prohibits COs from being directly placed with an FHLBank Act.

5) ***Local Registration Requirements.*** While COs are permissible investments for most fiduciaries in most states, there may be instances where COs are subject to local registration requirements. The OF should have policies and procedures in place to prevent the marketing and sale of COs in jurisdictions that subject them to local registration requirements.

6) ***Daylight Overdrafts.*** In April 2006, the Federal Reserve Bank of New York implemented new rules concerning "daylight overdrafts." Under practices before this change, the Federal Reserve Bank of New York would release early all the principal and interest payments on consolidated obligations due that day. During the course of the day, the FHLBanks would remit funds to the Federal Reserve Bank of New York to cover the daylight overdraft by 4:00 p.m., New York time.

   Under the new procedures, the Federal Reserve Bank of New York will not release any payment unless it has already received those funds. If funds are not available at the Federal Reserve Bank of New York by 4:00 p.m., New York time, it will not make the principal or interest payment due on some of the COs scheduled for payment that day. If this were to occur, investors in COs would not receive the timely payment of principal or interest.

   The OF and the FHLBanks must maintain satisfactory contingency plans to prevent the non-payment of any scheduled CO payment in the event funds are not remitted to the Federal Reserve Bank of New York in a timely fashion.

7) ***Investor Suitability.*** COs only should be sold to investors who have the knowledge and experience to evaluate the risks and benefits of the investment. Standards of this type are commonly referred to as "suitability standards." When COs are sold by

dealers, as in the case with most of all COs issued through the OF, it is the dealer's responsibility to sell them to suitable customers, that is, customers sufficiently sophisticated to fully understand the risks associated with the security purchased.

The OF's Selling Group agreement contractually obligates dealers to sell COs only to suitable investors and provides the OF access to dealer records to review sales for suitability. The OF maintains a compliance program to monitor this requirement as the OF and FHLBanks could face legal and reputation risk if an underwriter sells a CO to an unsuitable investor.

Office of Finance Environment

The five areas of principal supervisory interest at the OF are governance, issuing COs, servicing COs, preparing combined financial reports of the FHLBanks, and information technology.

1) Governance. As with the FHLBanks, good corporate governance is critical to the success of the OF. By regulation, the OF board of directors consists of two FHLBank presidents and a private citizen who serves as chair. Other FHLBank presidents usually participate in these board meetings, but they do not vote.

   Finance Board rules enumerate a number of explicit duties for the OF's directorate that complement the implicit duties typical of corporate boards. Also, by regulation, the audit committee of the OF consists only of the three board members.

   The Finance Board's regulations that pertain to corporate governance are found at Part 917. While many portions of this part do not explicitly apply to the OF, many of these provisions represent "best practices" of corporate governance that the OF is encouraged to follow.

   OF management is responsive to FHLBank presidents, chief financial officers, and funding officers. These groups have a number of standing and *ad hoc* committees dealing with funding, accounting, and disclosure issues.

2) Issuing COs. The OF has a number of debt programs.

   Discount notes have a maturity of less than one year. They are issued in one of two ways. One is a regular Tuesday and Thursday auction of 4-, 9-, 13-, and 26-week discount notes. The second is the "window" program in which the OF each day posts rates at which it will offer discount notes of a given maturity.

   The OF has a number of bond (maturity of one year or longer) programs.

   a) TAPS bonds are fixed-rate, fixed-maturity bonds that may be auctioned daily. During a three-month period, all TAPS bonds of a given maturity date are cumulated into a single CUSIP number.

b) Global bonds are usually fixed-rate, fixed-term bonds sold in syndicated issues of at least $3 billion.

c) Each day the OF stands ready to auction fixed-rate bonds with American (continuous after an initial lock out) call options.

d) The largest bond program in terms of unit count is the negotiated callable bond program. Most of these transactions are "reverse inquiries" in which an underwriter is seeking an FHLBank to issue a bond with investor-determined features. Each day the OF negotiates bond issues for bonds with European (one-time) or Bermudan (periodic) call options. In most, but not all cases, these transactions have an associated mirror-image interest-rate swap. The OF may issue bonds with complex structures, such as range bonds and step-up notes. All complex structures get swapped by the Federal Home Loan Bank that receives the proceeds to create simple floating-rate financing.

3) Servicing COs. At any one time, the OF may have more than 10,000 separate bond issues outstanding. These create many thousand servicing events each year, including the payment of regular interest, the payment of principal, bond calls, and other servicing events such as the adjustment of the rate on floating-rate bonds and the adjustment of the coupon payments on the more complex bond structures.

   All bonds need to be entered into the Federal Reserve System's book entry system. The FHLBanks need to remit through the OF payments each day for the principal and interest due that day.

4) Preparing the combined financial statements of the FHLBanks. A review of the process for preparing and distributing the combined financial statements, and an evaluation of the accuracy and adequacy of the statements and included disclosures, is performed by the Finance Board's accounting department.

5) Information Technology. The OF is highly dependent on information technology for issuing and servicing COs. There are two principal systems. Financial Management Systems (FMS) deals with issuing COs, and includes a number of Internet-based auction platforms. Debt Special Services (DSS) is the debt servicing system that governs the payment of interest and principal on COs. These two systems are customized applications written for the OF. FMS and, to an even greater degree DSS, largely automate the CO issuance and servicing process.

Principal Risks at the OF

1) Management Succession. As a small, IT-dependent organization carrying on highly-specialized activities, management succession planning at the OF is important. The management succession issues OF faces are comparable to other organizations of its size and type.

2) Reputation Risks Associated with Debt Programs. On behalf of the FHLBanks, the OF issues "agency" debt. Because of both the real and perceived special status of agency debt, it is critical that the OF follow the highest standards in issuing COs. The OF needs to have "world class" disclosures when marketing COs and adhere to strict suitability standards. Since the OF relies upon its dealers to perform the suitability analyses, it is imperative that the OF has high standards for the selection and retention of dealers and a rigorous compliance program to assure that dealers are selling COs only to suitable investors.

3) Disclosure. The OF and the FHLBanks are potentially subject to law suits from investors if they were to lose money on any COs they were to purchase. Moreover, because of the agency status of COs, the OF has an obligation to follow the highest disclosure standards. The reputation of the FHLBanks could suffer and spreads on COs could widen if the disclosures prepared by the OF were viewed as inferior.

4) Suitability. The OF has established a schedule of minimum denominations for COs where the minimum increases as the bond structure gets more complex. The minimum denomination for the most simple bond structures is $10,000, compared with $1,000 for U.S. Treasury bonds and notes. These minimum denominations are one portion of a suitability regimen as investors need significant financial resources to purchase the more complex bond structures. As noted above, the OF qualifies dealers and makes these dealers responsible for assessing suitability. Monitoring of dealer efforts to assure suitability is critical to control any resulting risks.

5) Timely Payments. While the CO servicing process is highly automated, a number of potential human and technological factors could result in an investor not receiving timely payment of principal and interest. Such factors could include a bond not being entered into the servicing system correctly, the bond not getting entered into the Federal Reserve's book entry system correctly, the bond being assigned the wrong CUSIP number, systems failures at the Federal Reserve Bank of New York, information technology hardware or software failures at the OF, an FHLBank not remitting funds on time, malfeasance or misfeasance by an employee, or human or technological factors at the dealer.

6) Technological Obsolescence. The OF makes extensive use of information technology. The OF may be exposed to vendor risk if a particular piece of hardware or software were no longer supported or if new hardware or software is incompatible with the existing systems.

7) Business Continuity and Recovery. The OF has a three-stage business continuity plan. First, it owns a generator on the roof of its offices that can provide electrical power to its offices. Second, the OF has a disaster recovery site near Dulles Airport. This site is on a different power grid than the Reston location. Third, the OF has a secondary disaster recovery site at the disaster recovery site of the FHLBank of Pittsburgh. The OF runs real-time computer back-ups of mission-critical systems at both locations.

Specific Risk Controls Relating to OF

1) Governance. The board of directors and senior management have the ultimate responsibility for the design, implementation, and monitoring of the OF's internal control environment. Specific attributes of a strong internal control environment include the identification of key risks, implementation of controls, organizational structure, departmental policies and procedures, managerial review and exception reporting, hiring practices and contingency planning, and retention of staff possessing the necessary technical expertise.

2) Internal Audit. The OF maintains an internal audit staff, under the direction of an audit director who reports directly to the board of directors' audit committee. The audit director is responsible for providing adequate independent assessment concerning risk management, risk identification, and internal controls. To be effective, the frequency and scope of internal audit should be incorporated into an annual audit plan and communicated to the board of directors and management of the OF.

3) Granularity. The OF engages in many transactions. The potential for losses resulting from errors depends upon the structural complexity of a transaction and its dollar amount. Large dollar transactions, global bonds, and overnight discount notes are simple structures and therefore may be less prone to errors. The more complex structures tend to be smaller dollar transactions; thus, if an operational failure were to occur on a complex structure, any financial losses would likely be relatively small.

4) Interested Parties. While the OF has a board of directors, a number of other groups act in advisory roles, including committees and subcommittees of the FHLBank presidents, chief financial officers, and funding officers. Most new policies and procedures are reviewed and agreed upon by one or more of these groups.

Financing Corporation

The Financing Corporation (FICO) was established for the purpose of recapitalizing the Federal Savings and Loan Insurance Corporation and its sole purpose is to function as a financing vehicle for the Federal Savings and Loan Insurance Corporation Resolution Fund. FICO was originally authorized to issue $10.825 billion in obligations, the proceeds of which would be transferred to the FSLIC Resolution Fund. In December 1991, as provided by the Resolution Trust Corporation Refinancing, Restructuring, and Improvement Act of 1991, FICO's ability to issue new debt was terminated. Outstanding FICO bonds of $8.170 billion mature in 2017 through 2019.

FICO is housed within the OF and oversight of all FICO's activities is responsibility of the OF. FICO is under the management of a directorate composed of the Managing Director of the OF and two FHLBank presidents. The directorate serves without compensation and FICO may not have any paid employees.

FICO is a mixed-ownership, tax-exempt government sponsored corporation, chartered by the former Federal Home Loan Bank Board pursuant to the Competitive Equality Banking Act of 1987 (CEBA). The capitalization of FICO was provided by a distribution of approximately $700 million in retained earnings from the FHLBanks to FICO in exchange for FICO nonvoting capital stock. With the enactment of FIRREA, oversight responsibility for FICO was transferred to the Finance Board.

FICO used the proceeds received from the sale of stock to purchase zero-coupon Treasury bonds with maturities equivalent to those of the FICO bonds to be used as the primary source of repayment of the principal of the FICO obligations. The primary source of payment on the interest on the obligations is the receipt of assessments imposed on and collected from institutions insured by the Bank Insurance Fund (BIF) and the Savings Association Insurance Fund (SAIF), which were merged in March 2006 into a newly created Deposit Insurance Fund (DIF).

FICO's activities are currently limited to servicing its outstanding obligations through assessments on all depository institutions insured by the Federal Deposit Insurance Corporation (FDIC). The administrative expenses of FICO are funded by the FHLBanks through periodic assessments based upon an approved budget.

A Memorandum of Understanding (MOU) between the FDIC and FICO establishes the procedures for establishing the semi-annual assessment rate and quarterly collection of assessments for all insured depository institutions.

Resolution Funding Corporation

The Resolution Funding Corporation (REFCORP) is subject to the general oversight and direction of the U.S. Secretary of the Treasury.

REFCORP is a mixed-ownership, tax-exempt government sponsored corporation established by FIRREA. Day-to-day operations of REFCORP are under the management of a three-member directorate comprised of the Managing Director of the OF and two FHLBank presidents. The directorate serves without compensation, and REFCORP may not have any paid employees.

Following the enactment of FIRREA, $2.5 billion in FHLBank retained earnings were used to capitalize REFCORP. In exchange, the FHLBanks received REFCORP non-voting, non-dividend-bearing capital stock. Further, FIRREA required the FHLBanks to pay a fixed $300 million annual assessment toward interest on the REFCORP bonds. The Gramm-Leach-Bliley Act of 1999 (GLB) changed the method of assessing the FHLBanks for mandated annual payments to REFCORP from a fixed payment to 20 percent of the net earnings of the FHLBanks after contributions to the Affordable Housing Program.

REFCORP was authorized to issue up to $30 billion in debentures, bonds and other obligations. To date, REFCORP has issued nearly all of the authorized $30 billion

obligations and no additional issuance is anticipated. Proceeds of the debt, net of issuance costs, were used solely to purchase RTC non-redeemable capital certificates or to refund any previously issued obligations. Non-marketable U.S. Treasury Zero coupon bonds of equal maturity value as the REFCORP obligations issued were purchased to repay the obligations at maturity.

REFCORP's activities have been limited to servicing the outstanding obligations through assessments on the FHLBanks, the FSLIC Resolution Fund, and the U.S. Treasury. The administrative and custodial expenses are funded by the FHLBanks through periodic assessments based upon an approved budget.

Examination guidance

A work program for the OF accompanies this narrative. Below are illustrative examples of various considerations used by examiners in completing the analyses required. In determining the extent of review and testing to be conducted in completing each analysis, the examiner should take into account the quality and effectiveness of corporate governance, risk management, internal controls, and audit coverage.

For each section, the examiner should review the previous examination report, internal and external audit reports, and the results of visitations for any comments about the area under examination. Examiners should identify issues or concerns that require follow-up or closer review. A review of all written policies, procedures, and guidelines should complement each section and all conclusions should address their adequacy.

1) Organizational structure

a) Review the organizational chart and determine the adequacy of the functional organization and reporting structure.

b) Review management succession plan(s), determine if the OF has appropriately planned for ongoing training of key senior managers and has an adequate management succession plan(s) that addresses each key department of the OF.

c) Determine if the organizational structure supports the goals of the OF and affords proper separation of duties.

d) Evaluate key personnel primary duties, responsibilities and technical expertise of personnel, note training efforts to maintain skills current.

e) Evaluate any cross-training of personnel to help ensure sufficient trained staff is available.

f) Evaluate senior management's coordination among key departments such as risk management, information technology, treasury and cash management, accounting, credit and human resources as appropriate.

g) Evaluate the impact of any significant changes made in the foregoing since the last examination, including any anticipated changes by management in the near future.

2) Evaluate the establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function

a) Establishment of risk tolerances and development of key policies

(1) Evaluate the process used to establish risk tolerances.

(2) Obtain and evaluate the adequacy of risk tolerances established in the various respective activities of debt issuances, debt servicing, dealer selection, dealer activities monitoring, investment disclosures, cost of funds, data sources, data usage, development and use of key indicators, etc.

(3) Determine if the OF has adequate policies, procedures and guidelines governing debt issuance, debt servicing, dealer selection, dealer activities monitoring and compare those policies, procedures and guidelines to evaluate their appropriateness.

(4) Obtain and evaluate the adequacy of enterprise policies and procedures.

b) Oversight by the board of directors

(1) Review board of directors minutes and evaluate if the board is reviewing key activities and policies of the OF.

(2) Determine if key risks are appropriately reviewed by the board of directors in a timely manner.

(3) Determine if all key areas of the OF provide adequate reporting to the board of directors or a committee of the board.

(4) Determine the adequacy of the OF's budgetary process.

c) Adequacy of senior management oversight

(1) Determine if senior management has implemented overall adequate departmental policies, procedures, guidance to ensure sufficient controls are in place.

(2) Review internal reports used by senior management to provide adequate oversight to each key risk area of the enterprise.

(3) Evaluate if senior management takes appropriate action(s) to identify control failures and if it takes appropriate action(s) to implement corrective action(s).

d) Risk Management Function

(1) Evaluate the adequacy of the risk identification process used by senior management for each key area.

(2) Determine if line management provides adequate reporting to senior management to assist in ongoing monitoring of day-to-day activities.

(3) Determine if management takes appropriate action to risks identified as a result of risk identification processes.

e) Additional Considerations

(1) Does Capital Markets Administration (CMA) monitor for receipt of Original Issue Discount certificates or inform OF bond counsel of bond issues with OID? (Tax Compliance.)

(2) Interview the managing director and the senior director of accounting policy and financial reporting to determine whether the OF is appropriately managing the System's relationship with the Nationally Recognized Statistical Rating Organizations (NRSROs).

(3) Interview the director of debt servicing to determine whether the OF has policies and procedures in place to assure timely and accurate preparation of the monthly unsecured credit report. Determine whether these reports are accurate and prepared in a timely fashion.

(4) Determine if draft operating notices are reviewed by FHLBanks, CMA, and the applicable dealers prior to finalization and posting on website.

(5) Determine if the OF has appropriately assessed the insurance needs of the enterprise and taken appropriate action.

(6) Evaluate the adequacy of contingency plans to prevent the non-payment of any scheduled payment on a CO in the event funds are not remitted to the Federal Reserve Bank of New York in a timely fashion.

(7) Determine if the board of directors and senior management are properly overseeing the issues described in Section 2)e) (1) through (6), above. Assess reporting, staffing resources, expertise, cross-training, etc.

3) Debt issuance

a) Evaluate the process used by management to identify risk and if management takes appropriate and timely action to control risk.

b) Determine if the investment disclosures have clear policies, procedures and guidelines specifically to promote high disclosure standards.

c) Evaluate the process that management takes to determine that CO disclosures meet the highest disclosure standards.

d) Determine if adequate management information systems exist to promote adequate day-to-day monitoring as well as providing timely identification of trends.

e) Determine if at the Operations level, appropriate guidance has been formalized to control risk.

   Consider if the formal risk tolerances for key risk areas, appropriate departmental policies, procedures and guidelines have been established and sufficient reporting mechanisms are in place.

f) Determine if policies and procedures are in place to prevent the marketing and sale of COs in jurisdictions that subject them to local registration requirements.

g) If appropriate, prepare finding(s) memorandums and provide copies to the examiner-in-charge for distribution to OF's senior management.

h) Consult with the examiner-in-charge to reach an overall rating(s) and an overall debt issuance conclusion(s) and prepare report write-ups if necessary.

4) Debt servicing

a) Evaluate the process used by management to identify risk and if management takes appropriate and timely action to control risk.

b) Determine if adequate management information systems exist to promote adequate day-to-day monitoring as well as providing timely identification of trends.

c) Determine whether the OF has clear written policies and procedures for servicing COs.

d) If appropriate, prepare finding(s) memorandums and provide copies to the examiner-in-charge for distribution to OF's senior management.

e) Consult with the examiner-in-charge to reach an overall rating(s) and an overall debt servicing conclusion(s) and prepare report write-ups if necessary.

5) Underwriters and suitability

a) Determine whether the OF has clear written policies and procedures to specifically address underwriters' suitability.

b) Evaluate the process used by management to identify risk and if management takes appropriate and timely action to control risk.

c) Determine if adequate management information systems exist to promote adequate day-to-day monitoring as well as providing timely identification of trends.

d) Consult with the examiner-in-charge to reach an overall rating(s) and an overall underwriters and suitability conclusion(s) and prepare report write-ups if necessary.

6) Cost of funds

a) Evaluate the process used by management to identify risk and if management takes appropriate and timely action to control risk.

b) Determine if adequate management information systems exist to promote adequate day-to-day monitoring as well as providing timely identification of trends.

c) Determine whether the OF has clear written policies and procedures addressing underwriters and suitability.

d) Consult with the examiner-in-charge to reach an overall rating(s) and overall cost of funds conclusion(s) and prepare report write-ups if necessary.

7) Data sources, data identification, and shared information

a) Evaluate the process used by management to identify risk and if management takes appropriate and timely action to control risk.

b) Determine if adequate management information systems exist to promote adequate day-to-day monitoring as well as providing timely identification of trends.

c) Consult with the examiner-in-charge to reach an overall rating(s) and an overall conclusion(s) and prepare report write-ups if necessary.

8) Supplemental internal and external audit procedures

a) Refer to the Federal Housing Finance Board's examination manual for guidance regarding the evaluation of audit activities.

b) Select audit representing global or new products, such as APLS and determine the quality of audit activities.

c) Determine if audit appropriately tracks all findings to a satisfactory resolution.

d) Evaluate the auditor's skill sets commensurate with the needs of the OF.

9) Supplemental information technology procedures, business continuity and recovery, and end-user computing

a) Information technology

(1) Refer to the Federal Housing Finance Board's examination manual for guidance regarding the evaluation of IT activities. Coordinate with other examiners to avoid duplicative work.

(2) Determine the adequacy of management's processes to identify and control IT risks.

(3) Determine if management has appropriate controls over vendors who provide critical processing services.

(4) Evaluate the processes used to identify and maintain adequate controls over all input and output.

(5) Determine if management has implemented sufficient controls to identify and ensure that all processing is well-documented to support all established IT standards.

(6) Determine the level of internal software development done within the OF or by vendors for the benefit of the OF and evaluate if risks are well-controlled.

b) Business continuity and recovery

(1) Refer to the Federal Housing Finance Board's examination manual for guidance regarding the evaluation of business continuity and recovery.

(2) Obtain and review the last recovery center risk assessment and determine if distance, capacities and various types of disasters are considered.

(3) Obtain and review lines of business resumption plan(s) and evaluate for adequacy. Consider the last test of the BRP and management's ability to address any identified areas which needed improvement.

c) End-user computing

(1) As appropriate, review and complete other areas of the examination guidance and work programs that address automated and/or manual processing (end-user computing, or EUC).

(2) Evaluate the processes used to identify all end-user computing applications and maintain adequate controls over input and output as well as any calculations done within each EUC application.

(3) Determine if management has implemented sufficient controls to identify and ensure that all end-user computing is well documented to support established standards for end-user computing.

(4) Prepare a summary addressing the level of OF's EUC usage, quality of controls, policies, practices and guidelines over EUC. Consult with the examiner-in-charge any weaknesses or recommendations in this area and prepare memorandums as appropriate.

10) Financing Corporation (FICO) activities

a) Review the most recent report of examination and workpapers, visitation reports, and any correspondence since the last examination and identify any issues of concern and follow-up.

b) Assess the adequacy of the FICO's board of directors and senior management's oversight of the risks arising from FICO activities.

c) Prepare a conclusion memorandum to the examiner-in-charge that summarizes the results of the review in this section.

11) Testing

Examiners should identity areas in each step above to verify and document. Document how the selection was made, considering the risk impact of items selected. Consider audit activities and work done by consultants, management, and/or others and evaluate if it meets our needs or if other items should be verified. Determine if management maintains a quality assurance (or compliance) process and evaluate the effectiveness of those activities.

a) Establishment of risk tolerances and development of key policies

Determine if tolerances are made based on quantifiable metrics; evaluate the quality of those metrics.

b) Debt issuance

(1) Interview capital markets personnel and assess their ability to keep abreast of market conditions.

(2) Evaluate the adequacy of policies and procedures to ensure FHLBanks maintain assets free of any lien or pledge at least equal to the amount of COs outstanding.

(3) Evaluate the adequacy of policies and procedures to ensure that COs maintain the highest rating from **any** Nationally Recognized Statistical Rating Organization (NRSRO).

(4) Select an appropriate number of tapes of transactions to review and evaluate if term funding officers are complying with the established policies and procedures. Consider sampling each type of COs, including global bonds due to their size.

(5) Observe the daily auction processes for the discount note (DN) auction, eCallable auctions, and TAP (fixed rate and maturity bonds that may be auctioned daily) auctions and evaluate if the Financial Management System is calculating auction winners correctly and allocating funds correctly to winning dealers and appropriate Banks.

(6) Review daily confirms to ensure short-term trades are confirmed twice daily with applicable dealers and ensure any differences are quickly resolved.

(7) Observe the web-based auction award confirmation process (DN, eCallable, and TAP auctions).

(8) Evaluate the process of posting current rates and trading activity on the OF website; consider the timing of these posting and the controls to prevent and/or detect errors.

(9) Evaluate the process of how swap rates, trade data, and DN indications are posted to certain third-party information providers (Telerate and Bloomberg) and evaluate the quality of management's oversight (supervision).

(10) Review procedures regarding lockouts or adherence to a lockout list policy if applicable.

(11) Review auto-charge agreements to determine which dealers have limits and Capital Markets management's monitoring of same.

(12) Sample trades for accuracy of final term sheets, deal confirms, and trade tickets.

(13) Review last dealer access review to determine if access is appropriate.

(14) Determine that bond data entry is checked by manager.

(15) Randomly select a daily work folder and review contents for cross-checks and approvals noted on Daily Bond Issues Report versus the Offer Log sorted by settlement date to ensure all trades were processed.

(16) Randomly select a few bond issuance packages and review items (source docs, Fed NY term sheet, Bond Digest Report, dealer confirmation), and check for approval on Bond Digest Report and Fed sheet.

(17) Determine whether OF issuance activities comply with applicable laws and regulations, especially Section 985.8(c) (4).

(18) Determine whether OF has policies and procedures in place to prevent the direct issuance of a consolidated obligation to another Federal Home Loan Bank.

(19) Determine whether the OF has policies and procedures in place to modify posted rates for DN as Federal Home Loan Bank demand for DN or market conditions change.

(20) Determine whether the OF has a formal mechanism to review the pricing of global bonds relative to that of comparable Treasury or agency bonds.

(21) Assess whether bond call/no call decisions and debt retirements are promptly and accurately executed. Evaluate the call notification process and determine adequacy.

(22) Determine that physical access by employees (by Kastle key) to FedLine Advantage access rights, and access controls to CitiDirect are appropriate.

(23) Interview the manager about finalizing Cash Sheet, determine if sufficient metrics exist to detect problems, issues, trends, quality of controls and determine if any outstanding un-reconciled items exist and if management is taking appropriate steps to address those.

(24) Interview senior and line management to determine whether they believe that the OF's committee structure has an adverse effect upon the cost-effective issuance of COs.

(25) Assess adequacy of internal audit, internal control, business continuity and insurance as they relate to this area or consult with examiners assigned those areas for coordination.

(26) Assess the input and output process of COs by the OF into the Federal Reserve Bank of New York's book entry system.

(27) Determine if the OF has developed contingency plans should issues or problems occur at the Federal Reserve Bank of New York that prevent the input of bonds into its book-entry system.

c) Debt servicing

(1) Determine whether the internal controls on updating and maintaining the automated servicing system are adequate and appropriate.

(2) Determine whether interest payments on COs are accurately calculated.

(3) Determine if automated calculation of interest payments accommodates all types of bonds and DN or whether it requires "work-around(s)."

(4) Assess the level of human input necessary to calculate interest payments.

(5) Assess the frequency and adequacy of internal and external audit review of these procedures.

(6) Determine if there have been recent instances where interest payments have not been calculated correctly.

(7) For scheduled debt settlements and P & I payment activity, interview and observe staff inputs as needed and obtain screen prints or necessary servicing reports.

(8) Obtain and determine the source of indicative rates; ensure the rates were reviewed and updated by OF.

(9) Determine whether OF debt issuance activities are in conformance with guidelines established by its board of directors. Determine whether these guidelines meet the criteria established in Section 985.8(c)(1).

(10) Determine whether the OF is timely and accurately implementing bond calls when requested by the Federal Home Loan Bank that is the principal obligor for the bond in question.

(11) Determine whether the OF accurately calculates the interest rate on floating-rate instruments at reset dates and whether it uses the appropriate index.

(12) Determine whether the OF can ensure that the coupons on complex bonds are accurately calculated on reset dates.

(13) Determine if automated calculations of interest payments accommodate all types of bonds and DN or whether they require "work around(s)".

(14) Evaluate the adequacy of the frequency of internal and external audit review of these procedures.

(15) Assess the policies and procedures over selecting index values and ensuring that they are correctly and accurately entered into the servicing system.

(16) Ascertain if OF can service all bonds it issues, including ones with new IT characteristics such as "work-arounds" and other manual interventions.

(17) Determine whether the automated servicing system accurately incorporates all relevant features of each bond or DN. For example, does the servicing system need any "work-around(s)"?

d) Underwriters and suitability

(1) Determine the effectiveness of the OF's Underwriters and Dealers Compliance Program.

(2) Determine that the compliance program can provide reasonable assurance that each dealer has proper policies, procedures, and practices in place to prevent COs from being sold to accounts for which they are not appropriate investments.

(3) Determine that the compliance program can provide reasonable assurance that each dealer adheres to established policies, procedures, and practices.

(4) Obtain and evaluate the OF's Selling Group Agreement which contractually obligates dealers to sell COs only to suitable investors. Assess whether the compliance program is likely to prevent the placement of COs by underwriters to unsuitable investors.

(5) Determine that the compliance program can provide reasonable assurance that can ensure each dealer has appropriate procedures in place to report any exceptions.

(6) Determine whether the OF board of directors has established a clear charter for the compliance program.

(7) Determine whether OF has adequately staffed and funded this function.

(8) Interview the director of compliance to determine how compliance reviews are conducted.

(9) Review the work program for the compliance reviews to determine whether they scope of the reviews is adequate and complete.

(10) Review the workpapers of the compliance function for accuracy and completeness.

(11) Determine whether the compliance function of the OF can reasonably establish that underwriters are in compliance with selling group agreements, the master underwriting agreement, the global debt agreement, and all other applicable laws and regulations.

(12) Assess the adequacy of the internal audit's work program concerning the compliance function.

(13) Review all Issuance Practice Bulletins and Dealer Issuance Practice Bulletins that were issued since the previous OF audit and determine if they were sent to the proper recipients.

(14) Obtain a list of OF's user guides to determine if guidance is given for all applicable applications.

(15) Determine if the user guides have been given to the banks (IPB), dealers (DIPB), and other appropriate users of information.

(16) Determine whether the policies, procedures, and practices that the OF uses to qualify and disqualify dealers are clear and that they are adhered to OF management and staff.

(17) Determine whether the criteria the OF uses to disqualify dealers have been approved by the board of directors or senior management.

(18) Determine whether there have been any instances where the application of special criteria resulted in either the retention or disqualification of a dealer.

(19) Determine whether the policies governing the rotation of dealers in and out of the various selling groups are clear, in written form, approved by either the board of directors or senior management, and that they are adhered to by OF management and staff.

(20) Determine whether the policies used to determine the leads and co-leads on global bonds are clear, in written form, approved by either the board of directors or senior management, and equitably administered.

(21) Where COs are placed directly by the OF with the investor rather than through an underwriter, determine whether the OF implements policies and procedures to determine the appropriateness of the investment for the purchaser. Such policies and procedures may include but are not limited to considering:

(a) The investor's knowledge of the product;

(b) The appropriate minimum denominations for securities based on different levels of complexity and risk;

(c) The customer's net worth;

(d) The customer's financial goals;

(e) The customer's ability to evaluate the risks and merits of the security; and,

(f) Determine whether the customer is able to bear the risks of the security.

e) Cost of funds

(1) Interview the director of long-term funding, the director of short-term funding, and the senior director of research and planning and ascertain how they ensure COs are consistent with the requirements of Section 985.8(c)(4) of the Finance Board regulations.

(2) Determine whether the OF has clear written policies and procedures for ensuring that COs are issued consistent with the requirements of Section 985.8(c)(4) of the Finance Board regulations.

(3) Determine whether the OF has a methodology to assess whether the compensation for underwriters, including that in the form of swap fees, is appropriate and reasonable.

(4) Determine whether the OF has the management information systems in place to monitor the cost of various debt products relative to comparable instruments issued by other government-sponsored enterprises. For example, can time series of spreads be readily generated?

(5) Determine the extent to which comparative information about the cost of funds is shared with the Federal Home Loan Banks.

(6) Determine the extent to which the OF makes use of comparative information on the cost of funds.

(7) Assess the oversight of the board of directors and senior management in assessing funding costs. Assess reporting, staffing resources, expertise, cross-training, etc.

f) Data sources, data identification, shared information

(1) Identify the sources of data used by the OF and determine if controls are effective to help promote accurate and timely data is gathered.

(2) Determine how management verifies data accuracy for each source.

(3) Determine the adequacy of documentation to denote end-to-end collection of data, use of data and output of data.

(4) Identify the various models used in the preparation of market forecasts, price setting, and other key indicators.

(5) Evaluate the processes used to validate model adequacy and maintain satisfactory level of documentation.

(6) Consider management's processes to identify interest rates, volatilities, and bond structures.

(7) Identity all models used (Principia, A. Kalotay, etc.) and evaluate the work flow of each model used and determine if adequate controls are in place throughout the process.

(8) Determine the extent that various data is shared with the FHLBanks or other interested parties.

(9) Evaluate the process used to document the work flow in and out of the Risk Valuation Analysis (RVA) report. Determine if the distribution of the output is adequate. Determine if the source of data used into RVA is acceptable.

g) Information technology, business continuity and recovery and end-user computing

(1) Information technology

(a) Capture all unique connections in and out of the OF processing environment, consider all third parties used by key departments as well as by IT.

(b) Review results of the last quarterly access reviews for Financial Management Systems (FMS) Web, Debt Special Services (DSS) Web, eSpeed, Issuance and Servicing, eNegotiated and determine if all required

access reviews were performed and requested changes made? (See access approval forms for banks and dealers and documentation that access for all appropriate users is checked quarterly.

(c) Review individual access rights within FMS to ensure that OF employees have appropriate access rights.

(d) Test the process over how Swap Counterparties are granted access to Financial Management Systems. Ensure that none have trade authority. (See forms Swap Counterparties must sign prior to entrance to FMS).

(e) Test in FMS that Tier 1 (related to capital strength) underwriters do not have the ability to write complex COs.

(f) Confer with the examiner conducting the Information Technology review to determine whether the Unix/Sybase audit has disclosed any significant control weaknesses.

(g) Ensure that trade data are "locked" to prevent any changes once finalized and "released" by the funding officer.

(h) Determine whether data entry internal controls are adequate.

(2) Business continuity and recovery

(a) Determine the general process to maintain up to date business continuity plans (lines of business).

(b) Determine the general process to maintain up to date disaster recovery plan(s) (equipment and connectivity).

(3) End-user computing

(a) Determine if the number of EUC is identified and well controlled. Consider management information systems (metrics) that provide the name of the EUC, use of the EUC, version of the EUC, and identify controls of each EUC.

(b) Obtain from IT senior management how work flow is diagramed and updated for each EUC.

(c) Obtain from line management how data flow is controlled in and out of each individual EUC used in the critical path of the OF mission.

h) FICO activities

(1) Review the minutes of the board of directors.

(2) Obtain and review any FICO specific policies, procedures, and practices.

(3) Obtain and determine if the board adequately reviewed and properly approved FICO's operating budget.

(4) Obtain and review any study, audit, or any type of assessment done by OF, outside consultants, auditors, etc. concerning the operations of FICO.

(5) Review any processes used by the board of directors and/or FICO's senior management to monitor the operations of FICO's activities.

(6) Assess audit, internal control or business continuity concerns or consult with examiner(s) assigned same for coordination and cross-reference.

(7) Evaluate the processes used by management to identify, implement, and maintain satisfactory internal controls.

(8) Determine the level of audit activities, including reviewing the current year's audit plan and evaluating its adequacy.

(9) Consult with the examiner(s) assigned business continuity for OF and coordinate any efforts to evaluate FICO's recovery abilities.

(10) Determine if there are any operations that need to be captured in business resumption plans independently from OF.

(11) Determine if any changes occurred since the last examination which may result in a different business continuity approach for FICO.

(12) Evaluate the accounting process of FICO.

(13) Verify that FICO bills OF $250 per month and that OF pays the bill.

(14) Review the process used to maintain appropriate accounting records.

12) Assessment of Office of Finance

Summarize the results of Office of Finance activities examined in a separate memorandum. The memorandum should clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the quality and effectiveness of corporate governance (strong, satisfactory, supervisory concern, unacceptable) and the level (low, moderate, high), direction (stable, decreasing,

increasing) and quality of risk management that pertains to operational risk. A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

13) Items requiring follow-up at the next on-site examination

Identify key issues that have been communicated to management (written and oral) that require follow-up during the next on-site visitation.

Examination Work Program
Office of Finance Work Program
As of XXXXXX

1) Organizational structure

Evaluate the effectiveness of the functional organization, reporting structure, staffing, primary duties, responsibilities and technical expertise, segregation of duties, cross-training, coordination with other departments, and changes in the foregoing since the last examination.

2) Establishment of risk tolerances and development of key policies and oversight by the board of directors. Adequacy of senior management oversight and the risk management function

Evaluate the process to establish risk tolerances, the development of key policies, and oversight by the board of directors. Evaluate the adequacy of senior management oversight to the entire enterprise (Office of Finance, FICO, and REFCORP). Review and determine the effectiveness of senior management oversight and the risk management function, including the various areas addressed in 12 C.F.R. 985. Review any corporate compliance programs in place. Review if management has implemented appropriate procedures and guidelines in key Office of Finance operations.

3) Debt issuance

Evaluate the debt issuance process. Assess whether appropriate guidance has been given to control risk. Select an appropriate number of transactions for review. Assess lines of control and division of responsibilities. Assess the adequacy of information flow and the adequacy of management information systems. Assess whether debt issuance complies with Finance Board regulations.

4) Debt servicing

Evaluate the debt servicing process. Assess whether interest is being correctly calculated. Assess the accuracy of the bond call process. Assess the adequacy of the information-technology systems associated with debt servicing. Evaluate the debt servicing automated processes. Assess the interaction of the Office of Finance with the Federal Reserve Bank of New York regarding debt servicing.

5) Underwriters and suitability

Determine that the compliance program can provide reasonable assurance that (1) each dealer has policies, procedures, and practices in place to prevent CO's from being sold to accounts for which they are not appropriate investments; (2) each dealer adheres to these policies, procedures, and practices; and (3) each dealer has appropriate procedures in place to report any exceptions. Assess whether the compliance function of the OF can reasonably establish that underwriters are in compliance with selling group agreements, the master underwriting agreement, the global debt agreement, and all other applicable laws and regulations. Evaluate the process that the OF uses to qualify and disqualify underwriters.

6) Cost of funds

Evaluate the methods used by the Office of Finance to determine that it is raising debt at the lowest all-in cost consistent with regulatory requirements.

7) Data sources, data identification, shared information

Evaluate the OF's use of external sources for gathering data, the effective use of that data and determine if the shared information with FHLBanks is effective and reflective of sound practices. Evaluate the effectiveness use of models and documentation maintained to support those models.

8) Supplemental internal and external audit procedures

Refer to the Federal Housing Finance Board's examination manual for guidance regarding the evaluation of internal audit, external audit and outside consultants. Assess the adequacy of their testing performed on Office of Finance activities.

9) Supplemental information technology procedures, business continuity and recovery, and end-user computing

Refer to the Federal Housing Finance Board's examination manual for guidance regarding the evaluation of information technology, business continuity and recovery and end-user computing.

Evaluate business resumption plans and recovery capabilities. Determine if the processing environment satisfactory supports the mission and goals of the OF. Determine the extent of the use of work sheets, end-user applications and other supplemental work-around(s). Evaluate the adequacy of controls and determine the adequacy of documentation to promote an end-to-end view of work flow, controls, inputs and outputs. Evaluate management efforts to achieve end-to-end automated processing and reduce dependency of work-around(s).

10) Financing Corporation (FICO) activities

Determine if the affairs of FICO are administered in a sound and safe manner. Assess the adequacy of the FICO's board of directors and senior management's oversight of the risks arising from FICO activities.

11) Testing

Conduct testing as appropriate. The scope of testing should be based on the preliminary review of governance, risk management, internal controls and audit coverage.

12) Assessment of Office of Finance

Summarize the results of Office of Finance activities examined in a separate memorandum. The memorandum should clearly and specifically describe the basis and analysis for the assessment. The memorandum should discuss the quality and effectiveness of corporate governance (strong, satisfactory, supervisory concern, unacceptable) and the level (low, moderate, high), direction (stable, decreasing, increasing) and quality of risk management that pertains to operational risk. A memorandum must be prepared irrespective of whether the examiner's assessment is positive or negative.

13) Items requiring follow-up at the next on-site examination

Identify key issues that have been communicated to management (written and oral) that require follow-up during the next on-site visitation.