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From: Easter, Stacy <stacy.easter@fhfa.gov>
Sent: Thu, Sep 21, 2017 11:23 am
Subject: FHFA FOIA No.: 2017-FOIA-076
September 21, 2017

Re: FHFA FOIA No. 2017-FOIA-076

This letter is in response to your Freedom of Information Act (FOIA) request, dated September 4, 2017. Your request was received in the Federal Housing Finance Agency's (FHFA) FOIA office on September 5, 2017, and assigned FHFA FOIA request number 2017-FOIA-076. Your request was processed in accordance with the FOIA (5 U.S.C. § 552) and FHFA's FOIA regulation (12 CFR Part 1202).

You requested the following:

"I request a digital/electronic copy of the final version of the OFHEO Examination Handbook."

A search of FHFA files and records located one document responsive to your request. The FHFA has determined that the document is releasable in its entirety. Please note that a signed copy could not be located. The responsive material is attached.

Your FOIA request is releasable to the public under subsequent FOIA requests. In responding to these requests, FHFA does not release personal information, such as home or email addresses and home or mobile telephone numbers which are protected from disclosure under FOIA Exemption 6 (5 U.S.C. § 552(b)(6)).

There are no fees associated with processing your request.

If you have any questions regarding the processing of your request, please contact me directly at stacy.easter@fhfa.gov or 202-649-3067 or at foia@fhfa.gov.

Additionally, you may seek dispute resolution services from the Office of Government Information Services (OGIS) at the National Archives and Records Administration. OGIS can be reached at 8601 Adelphi Road – OGIS, College Park, Maryland 20740-6001; by email at ogis@nara.gov; by telephone at 202-741-5770 or toll free at 1-877-684-6448; or by facsimile at 202-741-5769.

Sincerely,
Stacy J. Easter
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PREFACE

We are pleased to publish this first edition of the Office of Federal Housing Enterprise Oversight (OFHEO) *Examination Handbook*. OFHEO's Office of Examination and Oversight conducts comprehensive annual risk-based examinations of Fannie Mae and Freddie Mac to determine the condition of the Enterprises for the purpose of ensuring financial safety and soundness.

This *Examination Handbook* is intended to guide the examination staff in the performance of their examination-related activities, and it will be updated from time to time to reflect current practice.

December 1998

Mark A. Kinsey, Acting Director
Office of Federal Housing Enterprise Oversight

G. Scott Calhoun, Director
Office of Examination and Oversight

OFFICE OF FEDERAL HOUSING ENTERPRISE OVERSIGHT
OFFICE OF EXAMINATION AND OVERSIGHT
EXAMINATION HANDBOOK

TABLE OF CONTENTS

INTRODUCTION

The purpose of this *Examination Handbook* is to guide the examination staff of the Office of Federal Housing Enterprise Oversight's ("OFHEO") Office of Examination and Oversight ("OEO") in the performance of examination activities. This introduction briefly describes Fannie Mae and Freddie Mac (collectively, the "Enterprises"), and the formation of OFHEO as their financial safety and soundness regulator. Chapter 1 describes the core principles that drive examination work, and Chapter 2 describes the elements of the examination program itself. Chapter 3 describes OFHEO's standards for communication and emphasizes the sensitive and confidential nature of information gained through the examination program. The Appendix is reserved for Examination Guidance Bulletins that will be issued as needed to provide examiners with guidance on selected topics and for supplements to the handbook.

This Examination Handbook does not describe the full range of OFHEO activities or powers granted by Congress to OFHEO under the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (or the "1992 Act"). Where the handbook does not directly address a particular matter of interest, examiners should seek guidance from other sources within OEO or OFHEO.

CREATION OF THE ENTERPRISES AND THEIR PUBLIC MISSION

<u>Federal Intervention to Promote Housing Credit</u>. Congress created Fannie Mae and Freddie Mac in 1938 and 1970, respectively, to expand the availability of mortgage credit in America. These actions were based on the perception at that time that the private capital market was not effectively meeting the country's housing credit needs.

<u>The Public Mission</u>. Fannie Mae and Freddie Mac are required by law to serve important public purposes. These public purposes include providing liquidity to the residential mortgage market and increasing the availability of mortgage credit benefiting low- and moderate-income families and areas that are underserved by lending institutions. The Enterprises engage in two principal businesses: purchasing residential mortgages and guaranteeing residential mortgage securities.

<u>Government-Sponsorship</u>. The Enterprises operate under Federal charters that, as Federal statutes, are controlled by Congress. Each Enterprise is governed by an 18-member board of directors, of which 5 directors are

appointed annually by the President of the United States. The remaining directors are elected annually by the shareholders.

The Enterprises' shares are privately owned and publicly traded on the New York Stock Exchange. The Enterprises are self-supporting, but receive significant benefits from the Federal government in order to help them fulfill their public mission. These benefits are described below.

Congress provided the Enterprises with specific benefits to help them accomplish their mission. These benefits include, for example: (1) exemptions from the registration and periodic reporting requirements (but not the anti-fraud provisions) of Federal securities laws; (2) discretionary authority on the part of the Secretary of the Treasury to purchase up to $2.25 billion of outstanding securities of either Enterprise on terms and conditions established by the Secretary; and (3) exemptions from state and local income taxes.

Although the Enterprises further public purposes, the Federal government does not guarantee any of the Enterprises' obligations, and has no legal duty to protect the Enterprises' creditors. Nevertheless, the financial markets behave in a way that reflects the implicit presumption that the United States Government would not permit the Enterprises to fail—and thereby provides the Enterprises with enhanced access to markets that may not be available to other private sector firms.

OFHEO—THE ENTERPRISES' FINANCIAL SAFETY AND SOUNDNESS REGULATOR

OFHEO's Mission Statement reads: "**OFHEO effectively protects the interests of the American taxpayer and contributes to the strength and vitality of the nation's housing finance system through independent and fair safety and soundness regulation of Fannie Mae and Freddie Mac**."

Formation of the Office of Federal Housing Enterprise Oversight. Congress created OFHEO in 1992 through the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 to be the Enterprises' financial safety and soundness regulator. Congress recognized that the Enterprises have important public missions for housing in America. Congress stated that, as of the date the 1992 Act was passed, the Enterprises posed a low financial risk of insolvency. Because of the Enterprises' sheer size and enormous impact to the market resulting from the failure of either Enterprise, however, Congress concluded that more effective Federal regulation is needed to reduce the risk of failure of the Enterprises. OFHEO's primary objective is to fulfill this Congressional mandate.

The 1992 Act established OFHEO as an independent office within the Department of Housing and Urban Development (HUD), and created the framework within which OFHEO conducts its activities as financial safety and soundness regulator. The 1992 Act also defines the respective roles of OFHEO and HUD in regulating the Enterprises. The following description of OFHEO's authority is limited in scope, and is intended to provide examiners with a brief background.

OFHEO's Exclusive Authority in Matters of Financial Safety and Soundness. OFHEO and HUD share primary oversight responsibility over the Enterprises, however, the OFHEO Director exercises *exclusive* authority in matters of safety and soundness. The most important of the Director's exclusive authorities, in relation to this *Examination Handbook*, are the exclusive authorities to conduct annual safety and soundness examinations. The OFHEO Director also exercises exclusive authority to establish minimum and risk-based capital standards for each Enterprise.

The OFHEO Report to Congress. Once a year (by June 15, as required by the 1992 Act), the OFHEO Director submits a written report to Congress. OFHEO's Annual Report to Congress describes the financial safety and soundness of each Enterprise—including the results and conclusions of the annual examinations. This is an important document because it provides OFHEO with the opportunity to share with Congress, the public, the housing finance industry, and others, OFHEO's views on each Enterprise's current financial condition. The report also allows OFHEO to comment on matters that could affect financial safety and soundness in the future.

CHAPTER 1

THE EXAMINATION PHILOSOPHY AND CORE PRINCIPLES

THE EXAMINATION APPROACH

Background—Public Statements of Purpose and Objectives. The main sources of information that explain OFHEO's examination activities are this *Examination Handbook*; section 1317 of the 1992 Act (12 U.S.C. § 4517); the 1998 OFHEO Report to Congress; the OFHEO Mission Statement; and the Strategic Plan and corresponding Annual Performance Plan ("APP"). When considered in the aggregate, these sources provide the examination staff with the information necessary to understand OFHEO's examination authority, responsibilities, objectives, and approach.

The Mission Statement, Strategic Plan and Annual Performance Plan. As previously noted, the Mission Statement states that "OFHEO effectively protects the interests of the American taxpayer and contributes to the strength and vitality of the nation's housing finance system through independent and fair safety and soundness regulation of Fannie Mae and Freddie Mac." The strategic plan builds on the broad declaration contained in the Mission Statement. The OFHEO Strategic Plan for 1998-2003 identifies three strategic goals that will enable OFHEO to realize its mission. Those goals are to: (1) effectively regulate the Enterprises by ensuring that they are adequately capitalized and operate in a safe and sound manner; (2) promote an efficient secondary mortgage market through an independent and balanced approach to regulatory oversight of the Enterprises; and (3) effectively regulate the Enterprises by ensuring that they comply with all laws under OFHEO's jurisdiction. The Strategic Plan describes OFHEO's approaches to achieving its strategic goals, including the conduct of annual, comprehensive, risk-based examinations of the Enterprises. The APP (which is revised for each fiscal year) establishes specific performance measures that apply to OEO's examination activities. Examination staff should familiarize themselves with each of these documents.

OFHEO'S CORE EXAMINATION PRINCIPLES

OFHEO has identified certain core examination principles that examination staff should apply when evaluating Enterprise activities. The core examination principles are the foundation of OFHEO's risk-based examination program that is described in Chapter 2. These principles comprise OFHEO's view on the important considerations that serve as the foundation for OFHEO's annual assessments of each Enterprise's financial safety and soundness.

Statement of Core Examination Principles

Principle One - Effective examination (which incorporates all examination-related activities) evaluates the existing financial condition and state of risk management, and attempts to anticipate the onset of potential issues or problems that have the capacity to adversely impact the financial health of an Enterprise. OFHEO monitors relevant indicators and developments to analyze market conditions, considers management's expectations (including applicable forecasts and projections), and uses this knowledge to assess the implications for safety and soundness. Risk taking in a dynamic environment is a natural element of the Enterprises' operations and is fundamental to the mortgage finance business. OFHEO's examination program works to anticipate, rather than merely react to, potential problems.

Principle Two - Effective examination requires each Enterprise's management to exercise a degree of oversight and control that is commensurate with the risks at the Enterprise. The financial safety and soundness of an Enterprise does not require operations to be flawless in every area. OFHEO's oversight does not endeavor to *eliminate* risk, but to ensure that: (1) management and the Boards of Directors implement controls that are appropriate for the risks the Enterprises take, and (2) the risks taken are consistent with financial safety and soundness. The term "oversight" in this context includes all examination-related activities—including, for example, research, planning, testing, surveillance, and monitoring. As a financial safety and soundness regulator, OFHEO is concerned with volatile performance and with exposures to risk in the midst of market conditions that raise the probability that the Enterprise may suffer financial impairment.

Principle Three - Effective examination focuses examination resources on those areas where weaknesses could impair the financial health of an Enterprise and where weaknesses are pervasive or result from intentional disregard. Effective oversight accepts the reality that no business is free of errors or mistakes in judgment, and does not impose an unreasonable standard of performance on the Enterprises' managements and Boards of Directors. Examination activities should focus on matters that, if not sufficiently managed, could threaten financial safety and soundness.

Principle Four - Effective examination incorporates the opportunity to share with each Enterprise the regulator's unique perspective on best practices and emerging issues, promoting operations and performance enhancements through sharing knowledge. OFHEO is well-positioned to assess best practices in the secondary mortgage market, and to identify emerging issues from a knowledgeable and reasonable perspective. In light of this fact, OFHEO will share with Enterprise management nonproprietary information that can promote enhancements in the Enterprises' operations and performance.

Principle Five - Effective examination is goal- and results-oriented and does not rigidly prescribe the means by which an Enterprise achieves the desired goals or results. OFHEO will consider the operating environment and competitive pressures of the mortgage finance business when assessing the financial safety and soundness of each Enterprise. OFHEO recognizes that Enterprise management functions in a dynamic, competitive environment that requires management to make decisions on the best information available at any given time. This environment rewards innovative solutions to operating challenges, and it is appropriate for management to consider the full range of practical options before reaching a final decision in response to such challenges. Effective oversight recognizes that each Enterprise's business goals can be met in more than one way, and that minimizing competitive inefficiencies is an important factor for management to consider when deciding among options.

Principle Six - Effective examination uses the regulator's resources efficiently and does not impose unwarranted costs on an Enterprise. Effective oversight ensures that examination resources focus only on activities that could impact safety and soundness including violations of law, thereby avoiding inefficiencies in the use of examination resources. This approach will impose on the Enterprises only those constraints and costs necessary to ensure the appropriate balance of controls and financial performance. The oversight of the Enterprises should not impose costly incremental demands that do not benefit financial safety and soundness and promote adherence with applicable policies, laws and regulations.

CHAPTER 2

RISK-BASED EXAMINATION AND OVERSIGHT

INTRODUCTION

This chapter describes the attributes of a quality risk-based examination and oversight program. It sets out the four examination areas in the Office of Examination and Oversight (OEO) and identifies the Examination Objectives and Assessment Factors for each area. This chapter also describes the comprehensive examination framework and the process OEO employs both to maintain a current understanding of the financial safety and soundness of the Enterprises, and to report annually to the Enterprises' Boards of Directors and Congress.

As described in Chapter 1, OEO established its examination philosophy and core principles. OEO then developed a risk-based examination and oversight approach that is consistent with the established philosophy and core principles. A risk-based approach promotes the efficient use of OFHEO resources by focusing on areas of relatively higher risk in each Enterprise. Examiners will pay particular attention to those risks that can represent either an actual or potential threat to the stable operations of an Enterprise.

RISK-BASED APPROACH

OFHEO recognizes that the Enterprises must accept risks in order to meet their public purposes of providing a secondary mortgage market for conforming mortgages and to achieve acceptable financial performance. OEO's focus is on whether the risks assumed by the Enterprises are warranted and properly managed. ***A key to reaching these judgments is examiners evaluating whether the Enterprises knowingly accept risks and have the capacity to identify, measure, monitor and control or alter risks on an ongoing basis***. In making these evaluations, examiners will place equal emphasis on the Enterprise's actual practices - the actions it takes – and not singularly focus on the Enterprise's policies. An Enterprise that in OEO's opinion appropriately identifies, measures, monitors, and controls or alters its risks and effectively prices those risks would be considered to operate in a safe and sound manner.

OEO also recognizes that an Enterprise may reach a sound conclusion that certain marginal improvements in risk management do not warrant the associated costs. OEO's risk-based approach to examination will assess the process by which the Enterprises make such decisions. OEO's oversight role is to determine whether the decisions that are reached impair the safety and soundness of the Enterprise, are premised on sound information. OEO's role is first to determine that the Enterprise's operations and activities meet safety and soundness standards and are in compliance with laws and regulations. A second role is to share with the Enterprises information and guidance that, if applied, would result in operations that exceed or even substantially exceed the safety and soundness standards. OEO will not substitute examiner's judgment for the well-reasoned judgment of the Enterprise not to implement marginal improvements where operations adhere to safety and soundness standards.

OEO's risk-based approach focuses OFHEO's resources on the areas of relative higher risk in the Enterprises. A corollary is that OEO expects the Enterprises to spend their resources (both capital and human) to improve weaknesses in proportion to the risk posed by the weakness. This means OEO will require an Enterprise to address in a timely fashion any issue that OEO deems to introduce an actual or potential impairment to the overall safety and soundness of the Enterprise. It also means that OEO does not expect the Enterprises will implement all enhancements OEO identifies to Enterprise practices or activities when OEO has found these practices or activities to be conducted in a safe and sound manner.

Through its examination and oversight activities, OEO will identify issues that require the attention of three different groups at the Enterprises. These groups are the Boards of Directors, executive management, and operating/technical management. Issues that fall within the normal range of duties and responsibilities of the Board and executive managers, or that have the actual or potential ability to disrupt the stability of the Enterprise, will be addressed to the Board and executive management. This is a high standard that recognizes that only matters of appropriate significance warrant discrete Board or executive management involvement. By limiting the issues presented to the Board and executive management to those that pose potential safety and soundness concerns, OEO increases the likelihood that the Board and executive management will respond aggressively to the issues OEO raises with them. OEO is keenly aware that its effectiveness could be undermined if it presents relatively minor or insignificant issues to the highest level of the Enterprises.

Issues that should be addressed by the Enterprises but do not pose a safety and soundness concern will be addressed to operating/technical management. OEO will apprise the Board and executive management that issues have been presented to operating/technical managers to address, and share with the Board and executive management OEO's expectation that appropriate personnel will address the issues and report on the follow-up. OEO will maintain an inventory of outstanding and resolved operating/technical issues so it can evaluate over time whether these issues are isolated or pervasive. If such issues are pervasive, then OEO will communicate with operating/technical management, executive management, or the Board, as appropriate.

In addition to identifying the appropriate level at the Enterprises to discuss examination identified issues, and consistent with the risk-based approach to examination and oversight, OEO will also categorize the level of risk and quality of risk management of examination identified issues. The categories OEO will use are: substantially exceeding safety and soundness standards; exceeding safety and soundness standards; meeting or modestly exceeding safety and soundness standards; falling short of safety and soundness standards but posing neither an immediate nor serious threat to the Enterprise's financial stability; or substantially deficient in meeting safety and soundness standards and requiring immediate corrective action.

KEY ATTRIBUTES OF RISK-BASED EXAMINATIONS

OEO has identified five key attributes that will be the hallmark of its risk-based examination work. These attributes complement the examination core principles set forth in Chapter 1. The five key attributes are: transparency, customization, timeliness, flexibility, and comprehensiveness.

Transparency. OFHEO's effectiveness in its examination and oversight role is enhanced when the Enterprises are aware of and understand the examination objectives, approach and criteria used to assess the financial safety and soundness of the Enterprises. The examination and oversight role is also enhanced when the Enterprises understand OEO's examination strategies. A transparent risk-based examination program that defines terms and sets out expectations facilitates effective communication between the Enterprises and OEO. A transparent risk-based examination program should also expedite the Enterprises' taking corrective measures.

Customization. While the same examination standards are used at both Enterprises, OEO will customize its examination strategies to each Enterprise's risk profile, which reflects not only the Enterprise's operations and activities, but also the quality of risk and risk management. Customized examination strategies focus examination resources on the areas presenting the greatest potential exposure to each Enterprise. OEO will routinely review and validate each Enterprise's risk profile. OEO's examination strategies will reflect both risks that are unique to each Enterprise and risks that are common across the industry or in the economic environment.

Timeliness. The examination program is designed so that an examination cycle corresponds to one calendar year and a Report of Examination is delivered to the Enterprises' Boards of Directors no later than 60 days after the end of each calendar year. Although they operate with an annual examination cycle, examiners will not delay sharing significant issues and/or requiring the Enterprise to take corrective action until the annual Report of Examination is delivered to the Board of Directors. Instead, OEO will communicate significant issues to management and the Board as soon as practical.

Flexibility. The examination program demands that OEO review risk profiles and examination strategies quarterly to determine if adjustments in scheduling or resources are necessary to reflect changes in an Enterprise's risk profile, the state of the industry, or the economic environment. These processes allow the examination program to adapt to changes in each Enterprise's practices and the environment in which the Enterprises operate.

Comprehensiveness. OEO's risk-based examination program takes a comprehensive view of the sources of risk that have the potential to impair the Enterprises' safety and soundness and the quality of risk management and controls to address those sources of risk. OEO has identified four examination areas: Credit, Market, Operations and Corporate Governance. As described in detail below, these four areas, and the ten corresponding examination programs, are designed to assess the prudent operation and management of the Enterprises. OEO's examination resources will be directed toward:

- assessing the appropriateness of the levels of risk;
- assessing the appropriateness of Board of Directors and Executive Management governance;
- determining the adequacy of the policies, procedures, and limits intended to control risk;
- determining the appropriateness of the risk selection, and the effectiveness of risk measurement, management and reporting mechanisms;
- evaluating the adequacy of the framework for internal controls; and
- assessing the quality of issue resolution.

The Risk-Based Examination Program

OEO will have completed a full-scope examination when it has: 1) achieved the examination objectives in each of the four examination areas (the categories of risk and risk management); and 2) concluded at least annually on each of the assessment factors for the ten program areas. The process by which OEO conducts its comprehensive, annual, risk-based examinations is depicted on the chart on the ensuing page. The remainder of this Chapter describes the examination program in detail and walks the examiner through each step of the examination program, beginning with the creation of the risk profile and concluding with the communication of examination findings.

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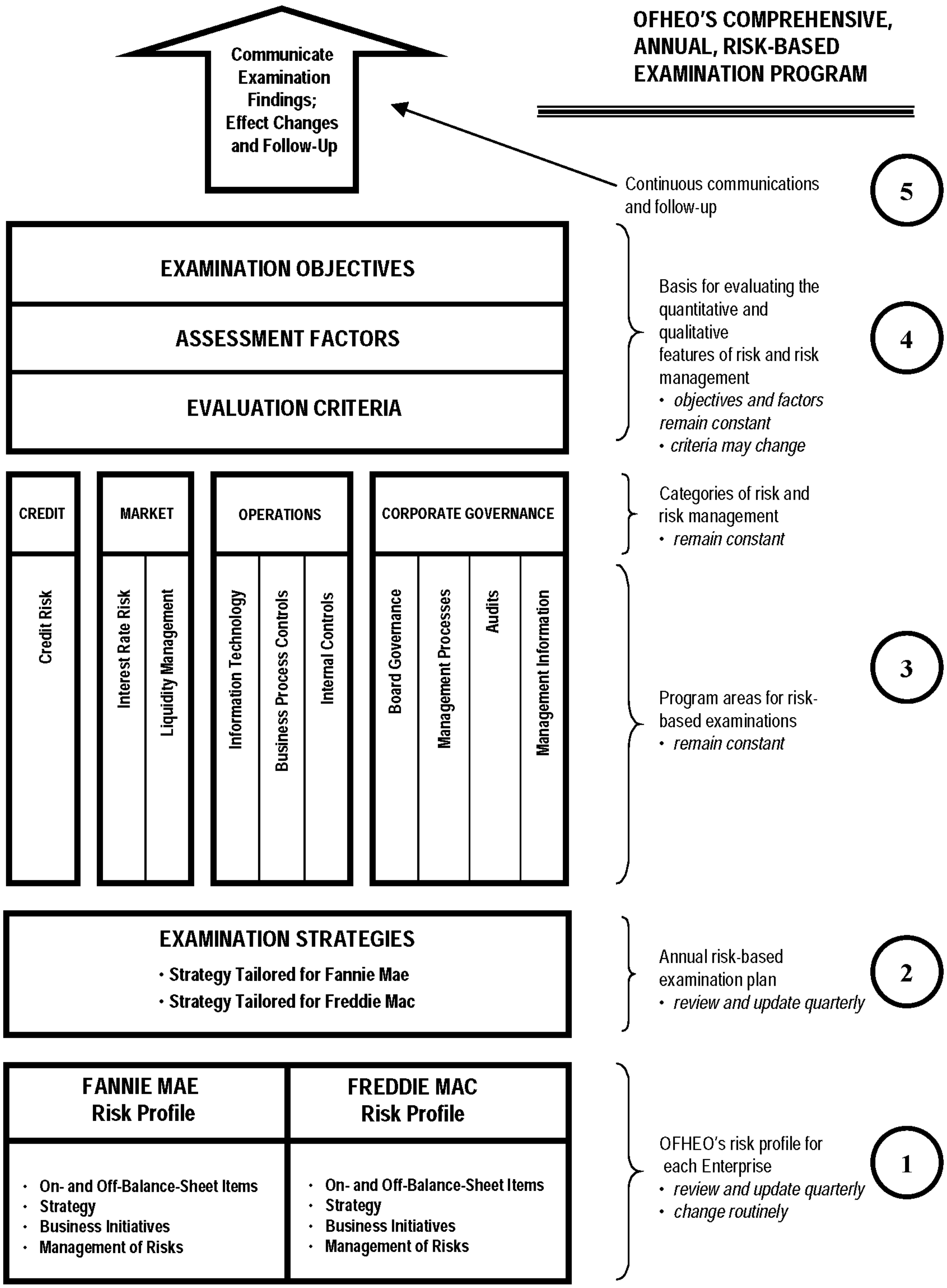

OFHEO'S COMPREHENSIVE, ANNUAL, RISK-BASED EXAMINATION PROGRAM
Communicate Examination Findings; Effect Changes and Follow-Up
Continuous communications and follow-up
5
EXAMINATION OBJECTIVES
ASSESSMENT FACTORS
EVALUATION CRITERIA
Basis for evaluating the quantitative and qualitative features of risk and risk management
• objectives and factors remain constant
• criteria may change
4
CREDIT
MARKET
OPERATIONS
CORPORATE GOVERNANCE
Categories of risk and risk management
• remain constant
Credit Risk
Interest Rate Risk
Liquidity Management
Information Technology
Business Process Controls
Internal Controls
Board Governance
Management Processes
Audits
Management Information
Program areas for risk-based examinations
• remain constant
3
EXAMINATION STRATEGIES
• Strategy Tailored for Fannie Mae
• Strategy Tailored for Freddie Mac
Annual risk-based examination plan
• review and update quarterly
2
FANNIE MAE Risk Profile
• On- and Off-Balance-Sheet Items
• Strategy
• Business Initiatives
• Management of Risks
FREDDIE MAC Risk Profile
• On- and Off-Balance-Sheet Items
• Strategy
• Business Initiatives
• Management of Risks
OFHEO's risk profile for each Enterprise
• review and update quarterly
• change routinely
1

RISK PROFILE – ①

OEO's examination program begins by considering each Enterprise's risk profile, and then giving form to that profile in an examination strategy. Building on knowledge gained through both previous examinations and ongoing continuous examination and oversight, OEO assesses the quantity of risk and the quality of risk management at each Enterprise, and derives an appropriate risk profile. In developing risk profiles, OEO considers each Enterprise's: corporate strategies; business initiatives; risk management practices; and on- and off-balance sheet portfolios. This consideration includes an assessment of management's responses to issues OEO raises through its examination program. OEO also considers relevant market factors; and current and prospective issues that impact, or have the potential to impact, each Enterprise's overall safety and soundness.

Every quarter, in keeping with the continuous nature of the examination program, OEO will review the Enterprises' risk profiles and will adjust the examination strategy where appropriate to address changes in an Enterprise's practices or operating environment.

EXAMINATION STRATEGIES – ②

To prepare for each examination cycle, OEO develops detailed, customized examination strategies that reflect each Enterprise's unique risk profile. As noted in the preceding section, OEO bases the examination strategies on OEO's knowledge of each Enterprise's management, strengths, weaknesses, past performance, and environment. The examination strategies take into account relevant economic conditions and reflect the potential or actual impact of those conditions on the Enterprise. The strategies also reflect OFHEO's priorities and statutory examination requirements. OEO will share the strategies with the applicable Enterprise's executive management, and encourage executive management to share the strategies with the appropriate Enterprise personnel.

Each strategy focuses OEO's efforts on monitoring the effectiveness of the Enterprise's risk management processes, enhancements management has made and, if applicable, actions management has taken in response to previously identified issues.

The examination strategies also detail examination activities that directly correlate to the level of risk in the Enterprise or the applicable business proposition. The work plans included in the examination strategies outline the scope, timing, and resources needed to meet the examination objectives and complete examination activities.

In addition, the examination strategies detail both the means by which OEO will maintain a sound understanding of the condition of the Enterprise, (including the quality of management, the degree of control provided by risk management systems and business strategies) and a communication plan that details the means and frequency of communication with the Enterprise.

The examination strategies are dynamic. They are reviewed and updated quarterly based on Enterprise, industry, and economic developments.

PROGRAM AREAS – ③

In order to complete examinations and allocate resources efficiently, OFHEO has grouped the ten program areas into four categories of risk and risk management and aligned its examiner force into four teams that correspond to the categories of risk and risk management. The four categories of risk and risk management are: credit, market, operations and corporate governance. The ten program areas, grouped by category, are:

Credit

- **Credit Risk Program –** assesses the risk that borrowers and counterparties will fail to meet their contractual or other obligations to the Enterprise

Market

- **Interest Rate Risk Program –** assesses the risk associated with movements in interest rates, including changes in: the level of interest rates; the shape of the yield curve; the level of volatility; and the relationships or spreads among various yield curves or indices.
- **Liquidity Management Program** – assesses the Enterprise's ability to meet its obligations as they come due and to transact the next incremental dollar of business cost effectively.

Operations

- **Information Technology Program** – assesses the infrastructure, or the general controls, needed to safeguard data, protect computer application programs, prevent system software from unauthorized access, and ensure continued computer operations in case of unexpected interruptions.
- **Business Process Controls Program** – assesses the process employed to ensure business initiatives and endeavors are considered and evaluated within a complete business context with particular attention directed to risk assessment and risk management framework.
- **Internal Controls Program** – assesses the plan of organization, methods and procedures adopted by management to ensure that: goals and objectives are met; resource use is consistent with laws, regulations and policies; resources are safeguarded against waste, loss and misuse; and reliable data are obtained, maintained and fairly disclosed in reports.

Corporate Governance

- **Board Governance Program**- assesses the manner in which the Board discharges its duties and responsibilities in governing the Enterprise.

- **Management Processes Program –** assesses the processes used to drive behaviors to support the Enterprise's defined corporate goals, standards and risk tolerances.
- **Audit Program** – assesses the appropriateness of Board and management's reliance on internal or external audits.
- **Management Information Program** – assesses the effectiveness, accuracy and completeness of information and reports.

EXAMINATION OBJECTIVES
ASSESSMENT FACTORS - ④
EVALUATION CRITERIA

EXAMINATION OBJECTIVES

OFHEO conducts examination work in each of the ten program areas by using evaluation criteria, assessment factors and examination objectives. The examination objectives are broad in scope, the assessment factors are more narrowly focused and the evaluation criteria are narrower still. For each program area there are four to six examination objectives. These are the broad statements of what OFHEO's examiners will determine through their work and are substantially similar across the ten program areas. The examination objectives are the foundation for all activities and work plans. The objectives allow OFHEO's oversight activities to be focused and efficient. They also help OFHEO to ensure consistent and appropriate application of policy and resources.

The examination objectives for the ten program areas are:

CREDIT RISK PROGRAM

- ✓ Evaluate the risk management framework surrounding credit risk.
- ✓ Identify and evaluate any changes occurring in the level and quality of credit risk as well as the potential impact on the Enterprise.
- ✓ Assess the overall adequacy and effectiveness of credit risk management. Determine how well the Enterprise manages and/or hedges credit risk.
- ✓ Communicate OFHEO's determinations about credit risk and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise for credit risk management.

INTEREST RATE RISK PROGRAM

- ✓ Evaluate the risk management framework surrounding interest rate risk.
- ✓ Identify and evaluate any changes occurring in the level and quality of interest rate risk as well as the potential impact on the Enterprise.
- ✓ Identify and evaluate the use of derivative instruments.
- ✓ Assess the overall adequacy and effectiveness of interest rate risk management. Determine how well the Enterprise manages and/or hedges interest rate risk.
- ✓ Communicate OFHEO's determinations about interest rate risk and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise for interest rate risk management.

LIQUIDITY MANAGEMENT PROGRAM

- ✓ Evaluate the liquidity positions and the surrounding management framework.
- ✓ Identify and evaluate any changes occurring in the quality of liquidity and the Enterprise's position in the credit markets.
- ✓ Communicate OFHEO's determinations about liquidity management and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise for managing liquidity.

INFORMATION TECHNOLOGY PROGRAM

- ✓ Evaluate the information technology infrastructure and the surrounding risk management framework
- ✓ Identify and evaluate changes that may influence the risks associated with information technology as well as the potential impact on the Enterprise.
- ✓ Assess the overall adequacy and effectiveness of risk management and controls for information technology.
- ✓ Communicate OFHEO's determinations about risk management and controls for technology management and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise for managing the risks associated with information technology.

Business Process Controls Program

- ✓ Evaluate the framework for building the control environment surrounding substantive revisions to the business proposition or new initiatives.
- ✓ Identify changes to the business proposition that may influence the quality of controls and the potential impact on the Enterprise.
- ✓ Determine the adequacy and effectiveness of the due diligence process for new or substantially revised business initiatives.
- ✓ Communicate OFHEO's determinations about the business process control framework and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise that impact the process employed in governing the control framework for new or substantially revised business initiatives.

Internal Controls Program

- ✓ Evaluate the framework for internal controls and the management of this framework.
- ✓ Identify and evaluate any changes that may influence the quality of internal controls and the potential impact on the Enterprise.
- ✓ Determine the adequacy and effectiveness of the Enterprise's system of internal controls.
- ✓ Communicate OFHEO's determinations about internal controls and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise that impact internal controls.

Audit Program

- ✓ Assess the overall adequacy and effectiveness of both internal and external audit functions and the management of the audit program.
- ✓ Identify and evaluate any changes occurring in internal and external audit functions or roles, as well as the potential impact on the Enterprise.
- ✓ Communicate OFHEO's determinations about the audit program and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise that impact the audit program.

Management Information Program

- ✓ Evaluate the framework employed to produce reliable management information.
- ✓ Identify and evaluate any changes occurring that may substantially alter the production of management information.
- ✓ Determine whether the Enterprise's management information produces timely, accurate and meaningful information and reports that are appropriately tailored for their audiences and purpose.
- ✓ Communicate OFHEO's determinations about management information and effect changes when appropriate.

- ✓ Follow-up on examination findings and planned initiatives by the Enterprise for management information.

MANAGEMENT PROCESS PROGRAM

- ✓ Evaluate the framework for key management processes influencing organizational talent and behavior and the management of this framework.
- ✓ Identify and evaluate any changes occurring that may influence the quality of the key management processes, as well as the potential impact on the Enterprise.
- ✓ Determine the adequacy and effectiveness of the key management processes influencing organizational talent and behavior on a company-wide basis.
- ✓ Communicate OFHEO's determinations about the key management processes and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise that impact the key management processes.

BOARD GOVERNANCE PROGRAM

- ✓ Evaluate the framework the Board of Directors uses to govern the Enterprise.
- ✓ Identify and evaluate the changes occurring in the structure and composition of the Board of Directors as well as the potential impact on the Enterprise
- ✓ Determine whether the board effectively discharges its duties and responsibilities for governing the Enterprise.
- ✓ Communicate OFHEO's determinations about board governance and effect changes when appropriate.
- ✓ Follow-up on examination findings and planned initiatives by the Enterprise that impact board governance.

ASSESSMENT FACTORS

Together with the examination objectives, the assessment factors form the basis for OEO's evaluating the qualitative and quantitative features of risk and risk management in the Enterprises. In fact, OEO's examination and oversight activities are centered on the assessment factors. There are between six and thirteen assessment factors for each program area. The assessment factors link directly to one or more examination objectives, and are the means OEO uses to achieve the examination objectives. Before OEO can make a determination on an examination objective, examiners must make judgments on each of the assessment factors supporting that examination objective.

Consistent with the fundamentals of the risk-based oversight approach, the type and scope of examination work OEO performs on each assessment factor will vary. Underlying the assessment factors are points for the examiner to consider. These points are the evaluation criteria. These evaluation criteria, which are discussed below, establish the parameters within which OEO will make its determination on each assessment factor.

Every quarter, based on the examination activities performed through the quarter, the Examination Managers responsible for each program area, in consultation with the Director of OEO, will update conclusions on all of the assessment factors for the ten program areas. The assessment factors will be characterized as substantially exceeding safety and soundness standards; exceeding safety and soundness standards; meeting or modestly exceeding safety and soundness standards; falling short of safety and soundness standards but posing neither an immediate nor serious threat to the Enterprise's financial stability; or substantially deficient in meeting safety and soundness standards.

Table 1: Credit Risk

Examination Objectives
Evaluate the risk management framework surrounding credit risk.
Identify and evaluate any changes occurring in the level and quality of credit risk as well as the potential impact on the Enterprise.
Assess the overall adequacy and effectiveness of credit risk management. Determine how well the Enterprise manages and/or hedges credit risk.
Communicate OFHEO's determinations about credit risk and effect change when appropriate.
Follow-up on examination findings and planned initiatives by the Enterprise for credit risk management.
Assessment Factors
Determine the degree and trend of diversification of credit risk. Determine whether there are any noteworthy concentrations. For the concentrations identified, determine the nature of any identifiable trends. Determine whether the actual profile of credit risk is in compliance with prescribed limits or guidelines.
Determine the quality of policies, procedures, internal controls, and management reporting for the credit function. Share determinations with the examination teams responsible for internal controls, management process, management information and board governance.
Determine whether the enterprise is adequately compensated for the credit risk it assumes. Determine whether credit models produce accurate and reliable results.
Determine whether management prudently manages counterparty exposure.
Determine the manner and extent to which new products, programs or initiatives impact the credit risk profile.
Determine the adequacy of the reserve determination process.
Determine whether credit risk management tools are effective. Share determinations about proprietary risk management programs and systems with the examination team responsible for management processes.
Determine the effectiveness of credit risk sharing strategies.
Determine the quality of the Enterprise's methodology for identifying and quantifying credit risk exposure.
Determine the quality of the Enterprise's tracking and analyzing of credit risk exposures.
Determine the effectiveness of technology and controls supporting the credit management function. Share determinations with the examination teams responsible for information technology and internal controls.
Determine whether management appropriately/effectively reconciles differences between actual and expected credit portfolio performance.
Determine whether management has an effective means of following up on credit related issues. Share determinations with the examination teams responsible for audit, management information, management process and internal controls.

Table 2: Interest Rate Risk

Examination Objectives
Evaluate the risk management framework surrounding interest rate risk.
Identify and evaluate any changes occurring in the level and quality of interest rate risk and the potential impact on the Enterprise.
Identify and evaluate the use of derivative instruments.
Assess the overall adequacy and effectiveness of interest rate risk management.

Determine how well the Enterprise manages and/or hedges interest rate risk.
Communicate OFHEO's determinations about interest rate risk and effect changes when appropriate.
Follow-up on examination findings and planned initiatives by the Enterprise for interest rate risk management.
Assessment Factors
Determine the quality of policies, procedures, internal controls, and management reporting relating to interest rate risk. Share determinations with the examination teams responsible for internal controls, board governance, management process and management information.
Determine whether management has established a meaningful methodology for quantifying and monitoring the level and nature of interest rate risk and determine whether management routinely evaluates the impact of events or alternative environments.
Determine management's effectiveness in following up on issues related to interest rate risk. Share determinations with the examination teams responsible for audit, management information, management process and internal controls.
Determine the manner and extent to which new products, programs or initiatives impact the interest rate risk profile. Share determinations with the examination team responsible for business process controls.
Determine the effectiveness of technology and controls supporting the interest rate risk management function. Share determinations with the examination teams responsible for information technology and internal controls.
Evaluate the quality of the tools used to model interest rate risk and the strategies to alter the exposures to interest rates. Share determinations about proprietary risk management programs and systems with the examination team responsible for management processes.
Determine management's effectiveness at incorporating tactical and strategic issues into the management of interest rate risk. Share determinations with the examination team responsible for management processes.
Determine whether the appropriate separation of responsibilities exists between the strategy and analytics function and the execution function.
Identify the various derivative instruments being used and determine whether these derivative instruments are used prudently.
Determine whether management governs the use of derivatives in accordance with the standards used by other large financial intermediaries.

Table 3: Liquidity Management

Examination Objectives
Evaluate the liquidity positions and the surrounding management framework.
Identify and evaluate any changes occurring in the quality of liquidity and the Enterprise's position in the credit markets.
Communicate OFHEO's determinations about liquidity risk and effect changes when appropriate.
Follow-up on examination findings and planned initiatives by the Enterprise for liquidity management.
Assessment Factors
Determine the quality of policies, procedures, internal controls, and management reporting for liquidity management. Share determinations with the examination teams responsible for internal controls board governance, management process and management information.
Determine whether management has established an effective methodology for quantifying and monitoring liquidity and determine whether management routinely evaluates the impact of events or alternative environments and develops appropriate contingency plans.
Evaluate the quality of the planning process for liquidity management including tactical, strategic, and contingency planning.
Determine the manner and extent to which new products, programs or initiatives impact the liquidity management profile. Share determinations with the examination team responsible for business process controls.
Determine management's effectiveness in following up on issues or initiatives that influence liquidity.
Determine the effectiveness of technology and controls for the liquidity management program. Share determinations with the examination teams responsible for information technology and internal controls.
Evaluate the quality of the tools used to manage and monitor liquidity, and the quality of tools used to perform scenario analyses. Share determinations about proprietary risk management programs and systems with the examination team responsible for management processes.
Determine whether the appropriate separation of duties exists between the strategy and analytics function and the execution function.
Determine trends and/or anomalies in funding spreads.
Determine the quality of integration of liquidity management with other management and financial performance issues.

Table 4: Information Technology (IT) Infrastructure

Examination Objectives
Evaluate the information technology infrastructure and the surrounding risk management framework.
Identify and evaluate changes that may influence the risks associated with information technology as well as the potential impact on the Enterprise.
Assess the overall adequacy and effectiveness of risk management and controls for information technology.
Communicate OFHEO's determinations about risk management and controls for technology management and effect changes when appropriate.
Follow-up on examination findings and planned initiatives by the Enterprise for managing the risks associated with information technology.
Assessment Factors
Determine whether operating processes are in place to ensure secure, effective and efficient data center processing and problem management.
Determine whether there are effective policies and processes in place to ensure that data, information and computing resources are secure and accessed only by authorized users.
Determine whether there are effective policies and processes in place to ensure the timely and appropriate resumption of business in the event of a disaster.
Determine whether management has an adequate process to ensure information technology plans effectively addresses business unit and corporate objectives.
Determine whether effective processes are in place to ensure appropriate controls are implemented and documentation is complete for system development and maintenance.
Determine whether effective processes have been implemented for the processing of data and information to ensure accuracy and timeliness.

The following three assessment factors will be dropped from the examination program once the Enterprises demonstrate satisfactory information and data processing after the millenium date change.
Determine whether there is an effective plan for identifying, renovating, testing and implementing solutions for the Year 2000 issue.
Determine whether the Year 2000 processing capabilities are effectively coordinated with customers, vendors and business partners.
Determine the effect of Year 2000 efforts on strategic and operating plans.

Table 5: Business Process Controls

Examination Objectives
Evaluate the framework for building the control environment surrounding revisions to the business proposition or new initiatives.
Identify changes to the business proposition that may influence the quality of business process controls and the potential impact on the Enterprise.
Determine the adequacy and effectiveness of the due diligence process for new or revised business initiatives.
Communicate OFHEO's determinations about business process control framework and effect changes when appropriate.
Follow-up on examination findings and planned initiatives by the enterprise that impact the business process control framework.
Assessment Factors
Determine if there is an effective "process" or "control environment" used when considering or developing new or substantially revised business initiatives.
Determine the appropriateness of criteria used to subject a business initiative to review as new or substantially revised.
Evaluate the quality of the analysis and review conducted for new or substantially revised business initiatives.
Evaluate after consulting with the other examination teams, the quality of the communication flows associated with new or substantially revised business initiatives.
Evaluate the appropriateness of the balance between risk management, internal controls and the pressure to deliver new or substantially revised business initiatives.
Determine the effectiveness of pilot programs used with new or substantially revised business initiatives.
Determine if corporate culture and desired employee behavior are appropriately considered when plans for managing and marketing new or substantially revised business initiatives are developed.
Evaluate the quality of analysis conducted after new or substantially revised business initiatives are launched that determine whether the initiative is a success and/or has aspects that warrant reconsideration or modification.
Evaluate after consulting with the other examination teams, the corporate environment to determine if the introduction of new ideas and intellectual capital are promoted and supported.
Determine after consulting with the other examination teams whether the Board and executive management are appropriately informed about the adequacy of due diligence for new or substantially revised business initiatives. Share determinations with the examination teams responsible for management information and board governance.

Table 6: Internal Controls

Examination Objectives
Evaluate the framework for internal controls and the management of this framework
Identify and evaluate any changes that may influence the quality of internal controls and the potential impact on the Enterprise.
Determine the adequacy and effectiveness of the Enterprise's system of internal controls.
Communicate OFHEO's determinations about internal controls and effect changes where appropriate.
Follow-up on examination findings and planned initiatives by the enterprise that impact internal controls.
Assessment Factors
Determine after consulting with the other examination teams whether management has an accurate and reliable process for identifying risks to business processes and implementing the appropriate controls.
Determine after consulting with the other examination teams whether implemented controls properly address the risks assessed by management.
Determine after consulting with the other examination teams whether management has a reliable process for ensuring timely resolution of control-related issues.
Determine after consulting with the other examination teams whether internal audit appropriately identifies and communicates internal control deficiencies to management and the Board of Directors. Share determinations with the examination team responsible for audit and board governance.
Determine after consulting with the other examination teams whether there are established policies and procedures that delineate internal control process and standards for the control environment.
Determine after consulting with the other examination teams whether management ensures compliance with established internal controls.

Table 7: Audit

Examination Objectives
Assess the overall adequacy and effectiveness of both internal and external audit functions and the management of the audit program.
Identify and evaluate any changes occurring in internal and external audit functions or roles as well as the potential impact on the Enterprise.
Communicate OFHEO's determinations about the audit program and effect changes when appropriate.
Follow-up on examination findings and planned initiatives by the Enterprise that impact the audit program.
Assessment Factors
Determine if the Audit Functions have the appropriate independence.
Determine if the auditors performing the work possess the appropriate professional proficiency.
Determine after consulting with the other examination teams if the scope of the audit work performed is appropriate.
Determine after consulting with the other examination teams if the performance of the audit work has been complete.
Evaluate the quality of the management of the Internal Audit Department.
Determine after consulting with the other examination teams the appropriateness of executive management's involvement and follow-up of identified audit issues. Determine the quality of the Board of Directors' involvement and follow-up of identified audit issues.
Determine after consulting with the other examination teams the quality of the auditor's risk assessment process.
Determine after consulting with the other examination teams the appropriateness of internal audit's involvement with new products and new initiatives. Share determinations with the examination team responsible for business process controls.

Table 8: Management Information

Examination Objectives
Evaluate the framework employed to produce reliable management information.
Identify and evaluate any changes occurring that may substantially alter the production of management.
Determine whether the Enterprise's management information produces timely, accurate and meaningful information and reports that are appropriately tailored for their audiences.
Communicate OFHEO's determinations about management information and effect changes when appropriate.
Follow-up on examination findings and planned initiatives by the Enterprise for management information.
Assessment Factors
Determine if executive management and the Board of Directors receive necessary reports on the Enterprise's performance relative to established goals and objectives.
Determine if management reporting provides the levels of management with the necessary information to carry out their responsibilities efficiently and effectively, and to gauge the quality of their decisions.
Determine if information systems are linked to the Enterprise's overall strategy, and if the information systems are developed and refined pursuant to a strategic plan for information systems.
Evaluate after consulting with the other examination teams the accuracy of reports used by management for decision making.
Determine after consulting with the other examination teams the effectiveness with which Enterprise strategy, roles and responsibilities are communicated.
Evaluate the effectiveness of channels of communication available to employees to provide feedback, report irregularities, and suggest enhancements.
Determine after consulting with the other examination teams the effectiveness of communication across the Enterprise.

Table 9: Management Process

Examination Objectives
Evaluate the framework for key management processes influencing organizational talent and behavior, and the management of this framework.
Identify and evaluate any changes occurring that may influence the quality of the key management processes, as well as the potential impact on the Enterprise.
Determine the adequacy and effectiveness of the key management processes influencing organizational talent and behavior on a company-wide basis.
Communicate OFHEO's determinations about the key management processes and effect changes when appropriate.
Follow-up on examination findings and initiatives by the Enterprise that impact the key management processes.
Assessment Factors
Evaluate the comprehensive nature of the planning process.
Determine after consulting with the other examination teams the effectiveness of business unit goals, implementing plans and programs to achieve the corporate plans.
Determine after consulting with the other examination teams management's ability to monitor and manage change.
Determine after consulting with the other examination teams if key performance measures are appropriate, effective and align with strategy.
Determine after consulting with the other examination teams if the behavior management programs are designed to achieve corporate goals and objectives.
Determine if the Enterprise has an effective program for career and management development.
Determine if the Enterprise has effective programs for recruiting competent people.
Determine after consulting with the other examination teams the effectiveness of proprietary risk management systems or programs.
Determine after consulting with the other examination teams whether management effectively conveys an appropriate message of integrity and ethical values.
Determine after consulting with the other examination teams the pervasive effect of management's philosophy and operating style on the Enterprise.
Determine after consulting with the other examination teams if the decision making roles and the assignment of responsibilities provide for accountability and controls. Share determinations with the examination team responsible for internal controls.

Table 10: Board Governance

Examination Objectives
Evaluate the framework the Board of Directors uses to govern the Enterprise.
Identify and evaluate the changes occurring in the structure and composition of the Board of Directors as well as the potential impact on the Enterprise.
Determine whether the Board effectively discharges its duties and responsibilities for governing the Enterprise.
Communicate OFHEO's determinations about board governance and effect changes when appropriate.
Follow-up on examination findings and planned initiatives by the Enterprise that impact board governance.
Assessment Factors
Determine whether the Board has been engaged in the development of a strategic direction for the Enterprise.
Determine whether the Board ensures that executive management appropriately defines: the operating parameters and risk tolerances of the Enterprise consistent with the strategic direction; legal standards; and ethical standards.
Determine whether the Board has a process for hiring and maintaining a quality executive management team.
Determine whether the Board holds the executive management team accountable for achieving the defined goals and objectives.
Determine after consulting with the other examination teams, whether the Board remains appropriately informed of the condition, activities and operations of the Enterprise.
Determine whether the Board has sufficient well-organized time to carry out its responsibilities.

EVALUATION CRITERIA

For each assessment factor, OEO has developed evaluation criteria. These evaluation criteria are designed to assist the examiners and to ensure that the examination work done across the Enterprises is consistent. The evaluation criteria detail items that examiners may consider when making decisions about the assessment factors. There are hundreds of evaluation criteria. Examiners will be guided by the evaluation criteria when rendering judgments on the assessment factors. It is neither expected nor appropriate for examiners in all cases to perform or document examination activities on every one of the evaluation criteria. Depending on the condition of the Enterprise, the industry and the economy, such examination work may be both unnecessary and inconsistent with the fundamentals of the risk-based approach to examination and oversight. Because the evaluation criteria are more likely to change over time than either the examination objectives or the assessment factors, the evaluation criteria are included in an appendix to this Handbook as examination guidance.

EFFECT CHANGES AND FOLLOW-UP
COMMUNICATE EXAMINATION FINDINGS - ⑤

EFFECT CHANGES AND FOLLOW-UP

A primary goal of the examination process is to effect needed changes in the Enterprises to enhance their financial safety and soundness. Both the degree of specificity OEO provides to the Enterprises about items to be changed, and the level of follow up with the Enterprises, relate directly to the risk presented by an issue. If, for example, OEO identifies a practice that is substantially deficient in meeting safety and soundness standards, OEO will require management to develop and execute a corrective action plan that, at a minimum, ensures the practice will be changed to meet safety and soundness standards. In such a case, OEO will also expect the Board to hold management accountable for executing the action plan. OEO will review the action plan to ensure that it identifies the steps or methods management expects will cure the root causes of significant deficiencies, and to determine whether the plan is likely to result in a safe and sound practice within an appropriate time frame. As part of follow up, OEO will verify that the action plan has been executed and evaluate its success. OEO will also consider the responsiveness of the Enterprise in recognizing the issue and formulating an effective solution when determining if OFHEO needs to take further action. If an Enterprise is unresponsive or does not effect the resolution of meaningful issues, OFHEO will take more formal steps to ensure deficiencies are corrected.

On the other hand, if OEO determines that a practice already meets or exceeds safety and soundness standards, OEO will provide information or guidance to the Enterprises about ways to further enhance the safe and sound practice. The detail in follow-up in such cases, consistent with the risk-based examination and oversight approach, will be less than in those instances in which OEO finds a practice that does not meet safety and soundness standards.

When following up on corrective actions at the Enterprises, examiners will be attuned to the fact that new deficiencies can arise during the process of correcting others. This can occur either directly or indirectly. For example, corrective action may be flawed, creating new or unanticipated issues.

COMMUNICATE EXAMINATION FINDINGS

Throughout the course of conducting examinations, OFHEO communicates with Enterprise personnel not only to gather information, but also to share findings and discuss observations. The type of communication runs the gamut from a hallway discussion with a technical expert to clarify a point, to a letter addressed to executive management or the Board of Directors. Regardless of the format, OFHEO has the same goal for all communications: that the free flow of information furthers the objective of ensuring the safe and sound operations of the Enterprises. OFHEO is committed to continuous, effective communication with the Enterprises. Examiners are expected to engage in open, continuous and effective communications with the Enterprises throughout the examination and oversight process. Effective communication is so important to the examination program that the supervisory strategies include communication plans.

OEO's communications are tailored to the individual structure and dynamics of the Enterprise. The timing of the communication will depend on the situation being addressed. However, OEO will communicate with the senior levels of the Enterprises at least quarterly. This quarterly communication is in addition to the ongoing and regular communications examiners have with the business units and personnel throughout the Enterprises. It is essential that examiners are certain executive management and the Board are appropriately informed. OEO will communicate with them as often as required by the Enterprise's condition and the findings from examination and oversight activities.

Examiners must clearly and concisely communicate their safety and soundness concerns (including significant material weaknesses, unwarranted risks or violations of law) to the Enterprise, and not focus on items that have minimal safety and soundness impact. Whenever discussing significant weaknesses or unwarranted risks, examiners will allow management an opportunity to understand the examiner's position and to respond to the examiner's concerns and commit to corrective action. Consistent with the risk-based approach, OEO has identified different levels at the Enterprises with whom it is appropriate to have particular discussions. For those issues that have the actual or potential ability to disrupt the stable operation of the Enterprise, fall under the normal duties and responsibilities of the Board, or otherwise warrant the attention of the Board and executive management, OEO will communicate with executive management and the Board immediately. On technical issues and matters relating to a single line of business or activity, OEO will generally communicate with technical and operating managers, and will keep the Board and executive management appropriately informed on both the nature of any concern and the quality of follow-up.

In addition to regular and routine communications, OEO will provide each Enterprise with an annual Report of Examination that describes OEO's assessment of the Enterprise's safety and soundness. Each Report of Examination will have an open date and a close date. The open date will be January 1 and the close date will be December 31. The annual written Report of Examination will be delivered to each Enterprise within 60 days following the close date. It should be emphasized that the annual written Report of Examination is separate and distinct from the OFHEO Annual Report delivered to Congress.

The Report of Examination will reflect the cumulative conclusions made throughout the year-long examination process and will address the Enterprise's safety and soundness on an ongoing basis. The Report of Examination will not be a snapshot of the Enterprise's condition on a given date but will reflect assessments made during the course of the year. The Report of Examination also will reflect the focus of the examination activities at each Enterprise. Thus, while the same examination standards will be applied to each Enterprise, the same issues may not be highlighted in both Reports of Examination. It is expected that the emphasis and level of detail in the Reports of Examination will vary between Enterprises and from year to year, consistent with changes in the Enterprises' risk profiles.

CHAPTER 3

STANDARDS FOR EXAMINATION-RELATED COMMUNICATIONS

OVERVIEW

The collection of sensitive and proprietary information, the analysis of that information, and the formulation and communication of assessments of each Enterprise's financial safety and soundness are essential examination activities. Effective communication is essential to the successful fulfillment of OFHEO's examination objectives. This chapter describes OFHEO's standards of effective communication; the prohibition against unauthorized disclosure of Enterprise information; and the protection of examination-related materials from public disclosure.

STANDARDS FOR COMMUNICATION

The examination function is a confidential, iterative process through which OFHEO staff interact with Enterprise management and business staff to gather and evaluate information sufficient to determine each Enterprise's financial safety and soundness. In order to develop a complete and balanced understanding of each Enterprise's activities and operations, formulate opinions, conclusions, and recommendations, and effect change where appropriate, OFHEO staff must communicate with Enterprise staff at all levels. The following section, "Attributes of Effective Communication," describes the OFHEO qualitative standards that should be observed at all times by OFHEO examination staff.

<u>Attributes of Effective Communication</u>. Though not a comprehensive list, the following collection of qualities are common to effective communication. The purpose of describing the following qualities is to provide the examination staff with guidance to maximize the value of OEO's risk-based examination program. The examination staff should apply these qualities in all communications within OFHEO and with Enterprise representatives.

Candor. Candor means the open, uninhibited sharing of knowledge and opinion, and ensures a genuine exchange of views within OEO and OFHEO, and between OFHEO and the Enterprises. OFHEO and Enterprise representatives must be candid with each other at all times or the risk-based examination program will be seriously undermined. For example, the examination function requires OEO personnel to make many qualitative assessments, some of which are preliminary in nature, in order to achieve OFHEO's examination objectives. OEO personnel rely, in part, on management and business staff responses and representations when reaching these qualitative assessments. Likewise, Enterprise management and staff benefit when OEO personnel share their preliminary observations and allow the Enterprises the opportunity to confirm or supplement information as appropriate. Clearly, OEO's assessments will lack integrity unless *all* participants in the examination process candidly share their perspectives and knowledge.

Accuracy. Accuracy means the absence of material error or omission. The issue of accuracy arises in various ways in the examination environment. Two examples are the accuracy of financial information and the accuracy of descriptions or characterizations (whether generated by the Enterprises or OFHEO) of Enterprise policies, procedures, and practices upon which OFHEO opinions, conclusions, and recommendations are to be based. In these contexts, inaccuracy may result from incomplete, as well as incorrect, information.

Clarity. Clarity means the unambiguous expression of one's message. The lack of clarity may result in confusion, misperception, and distortion. These adverse consequences impair effective communication between OFHEO and the Enterprises. Clarity is achieved when there are no significant gaps between the message one intended to send and the message that is actually received.

Focus. Focus means tailoring the communication to the appropriate recipient(s), identifying the relevant, substantive issue, and providing the appropriate degree of detail, given the audience and the nature of the information to be conveyed. The concept of focus recognizes that, in the examination environment, communication occurs within, and across, hierarchical levels at OEO and the Enterprises. The concept further recognizes, for example, that the degree of detail that is appropriate for a communication from OEO to mid-level management or a business unit employee generally is not appropriate for a communication to the Boards of Directors or an executive officer. Focus promotes effective communication because it ensures that the right level of information gets to the right people.

Customization. Customization means crafting communications in a manner that appropriately reflects each Enterprise's corporate organization and culture. Although the Enterprises share many similarities, each Enterprise is unique — and OFHEO will customize its communications to maximize its effectiveness and achieve the desired objective.

CONFIDENTIALITY OF INFORMATION

Communications in the Regulatory Environment. Under OFHEO's examination program, examination activities take place throughout the year. A successful examination program requires frequent and expansive contact between OEO and Enterprise personnel, particularly where preliminary views and opinions may benefit from clarification and additional information. The exchange of information, observations, and opinions must be conducted in a climate of mutual respect and trust in order to promote meaningful dialogue and effect results. To promote the open exchange of views and opinion necessary for effective oversight, Congress and the courts have consistently recognized that examination-related communications between a safety and soundness regulator and the regulated institutions are confidential.

Examination-Related Materials are Withheld from the Public. OFHEO's reports of examination, and all other examination-related materials are protected from public disclosure under an exemption to the Freedom of Information Act. The reports of examination and the related materials are the property of OFHEO, and are not disclosed unless expressly permitted by the Director or by OFHEO regulations. OFHEO provides the reports to the Enterprises' respective Boards of Directors for each Enterprise's confidential use.

CRIMINAL PENALTIES FOR UNAUTHORIZED DISCLOSURE OF ENTERPRISE INFORMATION

OEO staff cannot disclose otherwise nonpublic information learned during the course of an examination or obtained through employment with OFHEO to any person or organization outside OFHEO, except as authorized by the Director of OFHEO or in accordance with OFHEO regulations. All OFHEO employees, and any person acting on behalf of OFHEO, are subject to criminal penalties under Federal law for the unauthorized use or disclosure of reports of examination (18 U.S.C. § 641) and the unauthorized disclosure of proprietary Enterprise information (18 U.S.C. § 1905).

MISCELLANEOUS

The Feedback Questionnaire. OFHEO intends to provide each Enterprise the opportunity to submit feedback to OEO regarding the examination program. The questionnaire seeks Enterprise feedback on aspects of the examination activities. OFHEO believes the information obtained through the questionnaire will be useful in evaluating the success of the examination program and identifying opportunities for OFHEO to enhance the examination program.

Examination Guidance Bulletins. OFHEO will issue *Examination Guidance Bulletins* from time to time that address examination-related topics and provide further guidance to examination personnel. The purpose of these bulletins is to aid the examination staff by explaining the standards and practices to be used when applying the program to the specific topic. These bulletins, and this handbook, will be shared with each Enterprise, and will be available to the public.

APPENDIX

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OFHEO
Office of Examination and Oversight

Examination Guidance

Issuance Date: Dec-31-1998 Doc. #: EG-98-01
Subject: Risk-based Examinations - Evaluation Criteria

To: All OFHEO Examining Personnel

OFHEO conducts its risk-based examination work in each of the ten program areas by using examination objectives, assessment factors and evaluation criteria. These examination objectives, assessment factors and evaluation criteria form the standards used in the examination program to assess each Enterprise's financial safety and soundness. By sharing these standards with its examiners and the Enterprises, OFHEO provides the transparency necessary to ensure the fair and equitable application of the program. The discrete aspects and interplay of these standards are important to understand the program and the context of the judgements that accrue from their application.

The following brief descriptions summarize the importance and interplay of these standards.

> **Examination objectives** are broad in scope. For each program area there are four to six examination objectives. These are the broad statements of what OFHEO's examiners will determine through their work and are substantially similar across the ten program areas. The examination objectives are the foundation for all activities and work plans in OEO. The objectives allow OFHEO's examination oversight to be focused and efficient. They also help OFHEO to ensure consistent and appropriate application of policy and resources. Because of their breadth and role, examination objectives are not subject to frequent revision. (A more detailed discussion and a listing of the examination objectives in each of the ten program areas are found in OFHEO's Examination Handbook.)
>
> Together with the examination objectives, the **assessment factors** form the basis for OEO's evaluating the qualitative and quantitative features of risk and risk management in the Enterprises. In fact, OEO's examination and oversight activities are centered on the assessment factors. There are between six and thirteen assessment factors for each program area. The assessment factors link directly to one or more examination objectives, and are the means OEO uses to achieve the examination objectives. Before OEO can make a determination on an examination objective, examiners must make judgements on each of the assessment factors supporting that examination objective. Assessment factors are subject to periodic review, but they are not expected to change frequently.

(A more detailed discussion and a listing of the assessment factors in each of the ten program areas are found in OFHEO's Examination Handbook.)

Underlying the assessment factors are the **evaluation criteria**. For each assessment factor, OEO has developed evaluation criteria. These evaluation criteria are designed to assist the examiners and to ensure that the examination work done across the Enterprises is consistent. The evaluation criteria detail items that examiners may consider when making decisions about the assessment factors. There are hundreds of evaluation criteria. Examiners will be guided by the evaluation criteria when rendering judgments on the assessment factors. It is neither expected nor appropriate for examiners in all cases to perform or document examination activities on every one of the evaluation criteria. Depending on the condition of the Enterprise, the industry and the economy, such examination work may be unnecessary and/or inconsistent with the fundamentals of the risk-based approach to examination and oversight. Because the evaluation criteria are more likely to change over time than either the examination objectives or the assessment factors, the evaluation criteria are included in the appendix to the Examination Handbook as *examination guidance*.

The following pages detail the evaluation criteria to be considered by OFHEO's examiners in conducting the risk-based examinations at the Enterprises.

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Mark A. Kinsey, Acting Director
Office of Federal Housing Enterprise Oversight

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G. Scott Calhoun, Director
Office of Examination and Oversight

ASSESSMENT FACTOR	EVALUTION CRITERIA
1. Determine the degree and trend of diversification of credit risk. Determine whether there are any noteworthy concentrations. For the concentrations identified, determine the nature of any identifiable trends. Determine whether the actual profile of credit risk is in compliance with prescribed limits or guidelines.	• Distribution of mortgage portfolio by LTV range • Distribution of mortgage portfolio by FRM versus ARM; long versus medium/short term • Distribution of mortgage portfolio by UPB and geographic region • Distribution of serious delinquencies by geographic region; product type; origination year; occupancy status; and at-risk versus shared-risk • Percentage of mortgage portfolio in peak default years (3-5 years from the year of origination) • Distribution of sources of credit-related losses by geographic region; origination year, and product type • Distribution of mortgage portfolio by applicable score • Distribution of REO acquisitions and sales by region • Provision for loan losses • Foreclosure forecasts and REO activity • Distribution of mortgage portfolio by seller/servicer • Distribution of mortgage portfolio by TPO and non-TPO • Concentrations in exposures to mortgage insurance companies • Concentrations in forms of credit enhancements Multifamily-specific criteria: • Distribution of mortgage portfolio by DSCR ranges • Distribution of serious delinquencies by geographic region; DSCR; product type; origination year; and at-risk versus shared-risk • Distribution of portfolio by asset quality rating • Percentage of portfolio (by UPB) maturing within 18 months • Percentage of portfolio (by UPB) no longer subject to yield maintenance requirements • Distribution of portfolio by geographic region; DSCR; product type; origination year; and at-risk versus shared-risk
2. Determine the quality of policies, procedures, internal controls, and management reporting for the credit function. Share determinations with the examination teams responsible for internal controls, management process, management information, and board governance.	• Credit-related policies and procedures reflect management's considered judgment and are appropriately comprehensive to meet management's needs. • Credit-related policies and procedures are formalized when the activity and professional standards warrant formalization. • Management identifies and addresses deviations from established policy/procedures that could introduce financial safety and soundness concerns. • The internal controls related to credit risk management are comprehensive, developed by management responsible for the business activity, and validated periodically. • Management reporting within the credit risk management framework includes the appropriate Board and management committees, and provides comprehensive, timely, and detailed credit-related information.

3. Determine whether the Enterprise is adequately compensated for the credit risk it assumes. Determine whether credit models produce accurate and reliable results.	• The Enterprise receives compensation commensurate with the credit risk it assumes, and consistent with corporate objectives. • Management incorporates the Enterprise's return on equity and other relevant financial performance objectives into its pricing models and practices. • Management confirms that credit enhancements actually provide the protection they are intended to provide. • Management ensures that data input into models are reliable and accurate. • Management periodically revisits and revalidates the assumptions on which model logic relies. • Management periodically revisits and revalidates the methodology/logic embedded in its models. • Management periodically analyzes model outputs for accuracy. • Management maintains appropriate documentation for each model
4. Determine whether management prudently manages counterparty exposure.	• Management has established eligibility requirements for counterparties to ensure that counterparties maintain financial capacity commensurate with their obligations to the Enterprise. • Management analyzes seller/servicer financial capacity in relation to the Enterprise's exposure to the seller/servicer. • Management can identify seller/servicers that do not adhere to applicable eligibility requirements, and take appropriate corrective action when necessary. • Management identifies seller/servicers that deliver loans of substandard quality; and identifies seller/servicers with shortcomings in servicing operations. • Management detects fraud in the loans it purchases and guarantees. • Management identifies loan quality problems attributable to third party originators (TPOs), and identifies and tracks TPOs that consistently originate poor quality loans. • Management monitors the financial capacity of each mortgage insurance company (MI), the Enterprise's exposure to each MI, and each MI's claims payment history. • Management tracks each counterparty's compliance with applicable contractual agreements.
5. Determine the manner and extent to which new products, programs, or initiatives impact the credit risk profile.	• Management analyzes the potential impact on the Enterprise's overall credit risk profile of new loan products (i.e., prior to the date a product becomes a standard product offering). • Management conducts appropriate pilot programs to evaluate actual credit performance of products prior to implementation. • Management analyzes the potential impact on the Enterprise's overall credit risk profile of new programs (as defined under section 1303 of the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 Act, as amended). • Management analyzes the potential impact on the Enterprise's overall credit risk profile of new initiatives (defined for purposes of these evaluation criteria as activities that constitute a noteworthy change in corporate strategy or outlook).

ASSESSMENT FACTOR	EVALUATION CRITERIA
6. Determine the adequacy of the reserve determination process.	• Management follows a formal and consistent approach to determining loan loss reserves and allowances. • The reserve determination process comports with applicable professional standards. • The reserve determination process considers the Enterprise's actual and expected mortgage performance experience in determining reserves and allowances. • The reserve determination process reflects a level of sophistication commensurate with the Enterprise's business and credit risk profile.
7. Determine whether credit risk management tools are effective. Share determinations about proprietary risk management programs and systems with the examination team responsible for management processes.	• The Enterprise's underwriting standards effectively define the Enterprise's desired credit risk parameters. • The underwriting development process ensures the involvement of appropriate Enterprise personnel. • Management periodically supplements, amends, and interprets the Enterprise's underwriting standards to communicate current practice to seller/servicers. • Management has a formal process for granting and tracking waivers of underwriting standards. • Credit risk management tools detect significant differences between actual credit performance and desired or expected credit performance. • Credit risk management tools detect significant differences in credit performance between manually underwritten loans and AUS-underwritten loans. • Credit risk management tools detect significant deviations from the Enterprise's underwriting requirements. • Credit risk management tools minimize credit losses. • Credit risk management tools identify, track, and address early payment defaults. • Credit risk management tools identify opportunities to request loan repurchases, and track pending repurchase requests. • Credit risk management tools identify excessive delays in loan repurchases. • Credit risk management tools allow management to analyze the Enterprise's credit risk profile (e.g., using proprietary scores and asset quality ratings) • Credit risk management tools can identify credit losses attributable to mortgage fraud. • Property valuation tools produce reliable property values. • The internal audit function provides substantive analysis of credit risk management tools. • BOD authorizations/delegations are in place, and management policies are in place for nonmortgage investments. • Credit-related models produce reliable results. • The Enterprise follows a defined and documented model review protocol.

8. Determine the effectiveness of risk sharing strategies.	• Risk-sharing strategies and tools meet management's expectations to reduce the Enterprise's credit risk exposure. • Management tracks the value of the credit enhancement instrument against the applicable credit risk exposure. • Management obtains timely recovery under the credit enhancement instrument when appropriate.
9. Determine the quality of the Enterprise's methodology for identifying and quantifying credit risk exposure.	• The Enterprise has an appropriately sophisticated portfolio management system that allows management to quantify the credit risk of the loans purchased and guaranteed by the Enterprise. • Management analyzes the Enterprise's portfolio to estimate the potential impact on credit risk resulting from different economic, industry, and other relevant forecasts. • Management identifies high risk loans. • Management identifies and measures changes and trends in portfolio concentrations that may adversely impact earnings and capital. • Management identifies TPO-related loans as a percentage of total deliveries, and tracks related performance trends for TPO-related loans. • The Enterprise's internal asset grading tools provide early detection of potential problems and noteworthy trends. • Management identifies and quantifies appropriate credit quality and performance measures. • Management measures the efficiency of loss mitigation activities.
10. Determine the quality of the Enterprise's tracking of risk exposures.	• The Enterprise's credit risk exposure tracking framework ensures that the appropriate levels of management receive appropriately detailed information regarding credit risk exposures. • The Enterprise's tracking framework ensures that relevant items that management and/or the internal (or external) audit function have identified as weaknesses or otherwise substandard are tracked. • The credit risk exposure tracking framework provides management with the information necessary to track credit risk exposures in all pertinent areas.
11. Determine the effectiveness of technology and controls supporting the credit risk management function. Share determinations with the examination team responsible for information technology and internal controls.	• Management integrates the evaluation of information technology needs in its consideration of business objectives and activities. • Management's control framework ensures that information technology supports business needs. • Management evaluates technology performance in relation to the Enterprise's business needs.
12. Determine whether management effectively reconciles differences between actual and expected credit portfolio performance.	• Management collects and evaluates statistical and other information to identify material differences between actual and expected credit portfolio performance.

13. Determine whether management has an effective means for following up on credit-related issues. Share determinations with the examination teams responsible for audit, management information, management process, and internal controls.	• Management committees (e.g., a credit policy committee) routinely evaluate and address credit risk-related issues. • Management committees include the appropriate personnel responsible for managing the Enterprise's credit risk. • The management reporting framework provides the applicable committees with appropriately comprehensive and detailed information to identify and follow-up on significant credit-related issues.

ASSESSMENT FACTOR	EVALUTION CRITERIA
1. Determine the quality of policies, procedures, internal controls, and management reporting relating to interest rate risk. Share determinations with the examination teams responsible for internal controls, board governance, management process and management information.	• Current policies and procedures should exist for all departments that manage interest rate risk. • Policies and procedures should detail the lines of authority for managing interest rate risk. • Policies and procedures should describe the functions of all departments that manage interest rate risk. • Personnel involved with interest rate risk know policies and procedures, and comply with them. • Risk limits are clearly communicated. • Desired appetites for risk are clearly communicated. • The interest rate risk analysis functions are separate from the transaction functions. • Management reports for interest rate risk should present the balance sheet and projected earnings in sufficient detail to allow one to identify the sources of interest rate risk.
2. Determine whether management has established a meaningful methodology for quantifying and monitoring the level and nature of interest rate risk and determine whether management routinely evaluates the impact of events or alternative environments.	• Measures to quantify interest rate risk should include ➢ Duration estimates ➢ Convexity estimates ➢ Market value sensitivity ➢ Estimates of sensitivity to prepayment speed ➢ Estimates of sensitivity to volatility ➢ Estimates of sensitivity to changes in the shape of the yield curve ➢ Stochastic net interest income estimates ➢ Tests of earnings and capital under extreme rate shifts and numerous rate scenarios.
3. Determine management's effectiveness in following up on issues related to interest rate risk. Share determinations with the examination teams responsible for audit, management information, management process and internal controls.	• Management frequently reviews reports relating to interest rate risk and takes prompt and appropriate action whenever risk limits are approached or breached. • Actions to alter the Enterprise's risk/reward relationships are thoroughly analyzed and discussed by appropriate members of management.
4. Determine the manner and extent to which new products, programs or initiatives impact the interest rate risk profile. Share determinations with the examination team responsible for business process controls.	• New products, programs, or initiatives are adequately researched before being implemented. • New products, programs, or initiatives receive appropriate senior management and board review. • Management and the board establish appropriate limits on new products, programs and initiatives. • Management and the board regularly assess the impact of new products, programs, and initiatives on the Enterprise's interest rate risk profile.

ASSESSMENT FACTOR	EVALUATION CRITERIA
5. Determine the effectiveness of technology and controls supporting the interest rate risk management function. Share determinations with the examination teams responsible for information technology and internal controls.	• The Enterprise supports the asset/liability management function with specialists who ➢ Develop new tools for IRR and investment analysis ➢ Maintain a reliable hardware infrastructure ➢ Enhance and maintain existing applications • Controls are in place to assure the integrity of data used in IRR and portfolio management models. • Controls exist for adjustments to model parameters by end-users. • Business continuity plans adequately provide for the continuous monitoring of interest rate risk in emergency situations.
6. Evaluate the quality of the tools used to model interest rate risk and the strategies to alter the exposures to interest rates. Share determinations about proprietary risk management programs and systems with the examination team responsible for management processes.	• The Enterprise has tools to evaluate the effect of changing interest rates on all areas of the balance sheet, including guarantee fee income and MBS float. • The Enterprise's prepayment models include the effects of ➢ The refinancing component (the difference between the mortgage coupon rate and the market rate) ➢ The seasoning ramp ➢ Burnout ➢ Seasonal components ➢ Current LTVs • Prepayment models are specific to all asset categories (i.e., 30-year fixed, 15-year fixed, balloon mortgages, ARMs, asset-backed REMICs) for which there are material volumes on the balance sheet. • For ARMs, market value and duration/convexity models appropriately account for the effects of periodic and lifetime caps. • IRR models incorporate call rules that are consistent with the Enterprise's procedures for calling debt. • Interest-rate generation models incorporate appropriate mean reversion parameters and provide for changes in the shape of the yield curve. • Volatility parameters appropriately account for changes in volatility along the yield curve. • Market value and duration/convexity models provide sensitivity estimates for changes in prepayment speeds and interest rate volatility. • Model assumptions and parameters are reviewed for reasonableness. • Models are calibrated to appropriate benchmarks. • Appropriate documentation for models exist.
7. Determine management's effectiveness at incorporating tactical and strategic issues into the management of interest rate risk. Share determinations with the examination team responsible for management processes.	• Forecasts of net interest income derived from the IRR modeling process are regularly compared to corporate earnings forecasts. • Tools used to measure IRR sensitivity are consistent and compatible with those used for strategic planning forecasts. • Management routinely discusses the earnings and regulatory capital implications of its asset/liability strategies.

<table>
<tr><th>ASSESSMENT FACTOR</th><th>EVALUTION CRITERIA</th></tr>
<tr><td>8. Determine whether the appropriate separation of responsibilities exists between the strategy and analytics function and the execution function.</td><td>• Divisions that analyze and craft portfolio strategies are separate from those that execute portfolio transactions.
• Traders and portfolio analysts do not code software used for portfolio management.</td></tr>
<tr><td>9. Identify the various derivative instruments being used and determine whether these derivative instruments are used prudently.</td><td>• Derivatives are identified by
➢ Type
➢ Notional amount
➢ Index (floating-rate swap)
➢ Pay/receive rates
➢ Strike prices (caps/floors)
➢ Counterparty
➢ Market value
➢ Linked asset/liability
• Derivatives are used in a manner consistent with the Enterprise's risk management policies.
• Derivatives are marked-to-market at least weekly.
• All derivatives are included in the Enterprise's IRR sensitivity analyses and cash management forecasts.
• Data for derivatives used in the Enterprise's asset/liability models are accurate.
• Master agreements should be used to document existing and future derivative transactions.
• Derivative transactions are undertaken by an appropriate number of professionals with sufficient expertise in risk management.
• Adequate systems for data capture, processing, settlement, and management reporting are in place.
• Derivative transactions and subsequent gains and losses are accounted for in accordance with GAAP.
• Management has analyzed derivative transactions to determine the quality of execution.</td></tr>
<tr><td>10. Determine whether management governs the use of derivatives in accordance with the standards used by other large financial intermediaries.</td><td>• Both market risk measurement and credit risk measurement are performed independently of the portfolio management function.
• Credit risk is estimated based upon current exposure (i.e., market value) as well as potential exposure based on estimates of future replacement costs.
• Credit exposure should be aggregated, taking into consideration enforceable netting agreements.
• Credit exposure should be calculated regularly and compared to credit limits.
• Policies and procedures address the selection of counterparties.
• The credit quality of counterparties is routinely monitored.
• Counterparty risk is appropriately diversified.
• Authority to commit the Enterprise to derivative transactions is clearly specified in its policies and procedures.</td></tr>
</table>

ASSESSMENT FACTOR	EVALUTION CRITERIA
11. Determine the quality of policies, procedures, internal controls, and management reporting relating to liquidity management. Share determinations with the examination teams responsible for internal controls, board governance, management process and management information.	• Management of liquidity risk is embedded/articulated in current policies and procedures. • P&P clearly describe how liquidity risk is managed. • Risk limits and lines of authority are clearly communicated. • Liquid investment policies limit investments by ➢ Type ➢ Maturity ➢ Credit quality ➢ Issue • Liquid investments are consistent with the goals and strategies of the Enterprise. • Operating management is aware of and complies with current policies. • Liquidity management is consistent with corporate asset/liability management strategies. • Internal controls are adequate and operate as intended. • Management promptly addresses internal control issues. • Management reports are timely, accurate, and provide meaningful information on liquidity. • Management reports are distributed to the appropriate personnel. • Frequency of reporting supports management's ability to incorporate information into tactical and strategic decisions.
12. Determine whether management has established an effective methodology for quantifying and monitoring liquidity and determine whether management routinely evaluates the impact of events or alternative environments and develops appropriate contingency plans.	• Management reviews short-term cash needs, purchase commitments, and funding costs daily • Management reviews liquidity risk for the entire Enterprise as well as for appropriate business units. • Management continuously reviews compliance with exposure limits. • Management has a method for assessing the liquidity of its derivatives portfolio. • Management assesses the adequacy of its liquidity in simulated interest rate environments.
13. Evaluate the quality of the planning process for liquidity management including tactical, strategic, and contingency planning.	• Plans consider short-term cash needs, access to capital markets, cost of capital and the ability to liquidate market positions. • Liquidity risk is reviewed and compared to corporate limits, goals and strategies. • Current market conditions are reviewed and analyzed. • Capital allocation strategies are set at the business unit level and reflect the board's capital allocation decisions.
14. Determine the manner and extent to which new products, programs or initiatives impact liquidity. Share determinations with the examination team responsible for business process controls.	• New products, programs, or initiatives are adequately researched before being implemented. • New products, programs, or initiatives receive appropriate senior management and board review. • Management and the board establish appropriate limits on new products, programs and initiatives. • Management and the board regularly assess the impact of new products, programs, and initiatives on the Enterprise's liquidity.

ASSESSMENT FACTOR	EVALUATION CRITERIA
15. Determine management's effectiveness in following up on issues or initiatives that influence liquidity.	• Liquidity issues are effectively communicated between business units. • There is appropriate audit coverage and follow-up of liquidity issues. • Management tracks and promptly follows up on any audit findings relating to liquidity. • Management's self-assessment of risk reflects consideration of liquidity risk issues.
16. Determine the effectiveness of technology and controls for the liquidity management program. Share determinations with the examination teams responsible for information technology and internal controls.	• The Enterprise supports the liquidity management function with specialists who ➢ Develop new tools for liquidity management ➢ Maintain a reliable hardware infrastructure ➢ Enhance and maintain existing applications • Information technology systems provide timely and accurate liquidity management information. • Business continuity plans adequately provide for the continuous monitoring of liquidity in emergency situations.
17. Evaluate the quality of the tools used to manage and monitor liquidity, and the quality of tools used to perform scenario analyses. Share determinations about proprietary risk management programs and systems with the examination team responsible for management processes.	• Management assesses the effect of liquid investments in its interest rate risk modeling. • Net interest income models account for the effect of reduced liquidity (e.g., wider bid-ask spreads, adverse debt spreads) in alternate rate environments.
18. Determine whether the appropriate separation of duties exists between the strategy and analytics function and the execution function.	• The corporate organizational structure supports separation. • There is clear definition of the roles and responsibilities for strategy and analytics and risk-taking functions • Regular analysis of the underlying markets is performed independent of the traders.
19. Determine trends and/or anomalies in funding spreads.	• Management regularly reviews and assesses spreads for ➢ Discount notes ➢ Medium-term notes ➢ Benchmark/Reference Notes ➢ Callable Debt ➢ Interest Rate Swaps ➢ Mortgages and non-mortgage investments relative to funding benchmarks • Management appropriately uses spread information in its management of liquidity.
20. Determine the quality of integration between liquidity management and other management and financial performance issues.	• Liquidity risk and other risks are incorporated in Enterprise-wide and business unit plans. • Liquidity risk is reflected in the management of derivatives (e.g., counterparty credit rating downgrades may result in reduce liquidity for derivatives).

<table>
<tr><th>ASSESSMENT FACTOR</th><th>EVALUATION CRITERIA</th></tr>
<tr><td>1. Determine whether operating processes are in place to ensure secure, effective and efficient data center processing and problem management.</td><td>
• Policies and procedures relevant to operations management are documented
• Comprehensive system documentation is maintained and secured
• Job processing procedures are fully documented and secured
• User procedures are fully documented and secured
• Network management and capacity planning tools are utilized in operations management
• Capacity planning and performance monitoring includes, but not limited to:
➢ Systems downtime
➢ CPU usage
➢ Availability of disk space
➢ Identification of processing bottlenecks
➢ CPU availability or future growth requirements
➢ Reliability of disks or tapes
➢ Software problems
➢ Systems reliability
• Documented procedures to control the issuance and maintenance of tapes, cartridges, etc.
• Documented procedures for report handling and distribution
• Shift turnover logs are maintained
• Documented policies and procedures for third party contract management
• Documented policies and procedures related to database management and security
• Documented policies and procedures relevant to problem management and incident reporting
• Problem reports are reviewed regularly to correct deficiencies and improve the level of services to users
• Documented escalation procedures for addressing high impact issues
• Incidents are automatically reported and logged
• Policies and procedures are adequate for facilities management, physical security and safety, fixed asset inventory, and capital acquisition/leasing
• Security of the building is appropriate to the activities of the organization
• Management regularly reviews the list of persons with physical access to the computer room and tape libraries
• A record is maintained of all visitors
• Service maintenance visits are scheduled, authorized, and, as practical, monitored
• Controls exist to prevent the loss or disruption of communications—secure cable pits, locked PBX room
• Environmental controls implemented within the building and computer area(s) (e.g., existence of an alternative power supply) are appropriate
• Fire precautions and evacuation procedures posted in all departments are adequate
• Fire practices are regularly held and fire fighting equipment is regularly serviced
• A maintenance contract for environmental control hardware exists and is current
</td></tr>
</table>

ASSESSMENT FACTOR	EVALUATION CRITERIA
2. Determine whether there are effective policies and processes in place to ensure that data, information and computing resources are secure and accessed only by authorized users.	• Formal computer security policy that clearly defines the responsibilities of users, management, and security administrators • Security policy is supported by documented standards and procedures • There is a security committee or similar body that is responsible for establishing, maintaining and reviewing security standards and guidelines • There is a security administration function and the organizational placement of this function allows for adequate segregation of duties • Security violations are monitored and there are documented follow-up procedures for correcting identified weaknesses • Access control software packages are used • All application systems have designated owners and ownership is clearly documented • User access is established on the basis of a written request approved by management and the application system owners • Procedures for emergency or temporary access are documented • Procedures for contractor (non-GSE employee) access are documented • Unique user-ids are assigned to end users • Password parameters are reasonable (e.g., automatic expiration) • Inactive user accounts are monitored and removed when not needed • User-ids or passwords are promptly removed from the system when an employee leaves • Employees' access rights are changed when they are relocated internally • Allocation, authorization, and use of powerful user-ids or passwords are controlled and monitored • Appropriate security measures have been implemented to restrict users' access to sensitive or critical data and programs • Development staff are prevented from accessing data and software in the QA and production environment • Adequate procedures to control the use of dial-up access • Documented procedures that outline the actions required in the event of a penetration • Organization conducts self-assessments of security weaknesses • Computer-generated logging file is used to maintain an audit trail of security-related events and data • Data is encrypted when being transmitted over communications links to ensure integrity and confidentiality • Adequate access controls over users' access to the network
3. Determine whether there are effective policies and processes in place to ensure the timely and appropriate resumption of business in the event of a disaster.	• Backup copies of data files' databases and programs are performed regularly • System and data backups are synchronized with one another • Backup versions are taken off-site regularly to include, but not limited to: ➢ Data files ➢ Programs ➢ System software ➢ System documentation ➢ Operating procedures ➢ User procedures ➢ Disaster recovery plan ➢ Environmental and physical security information

ASSESSMENT FACTOR	EVALUATION CRITERIA
Cont'd.	• Off-site storage has been tested to ensure that the backup copies are reusable • Access to the backup copies is limited to specific individuals • Access to the backup copies is available 24 hours a day • There is a computer equipment maintenance contract • Business critical systems and data files have been identified • Users have specified their recovery requirements • Disaster recovery plan has been developed, documented and tested (note frequency of testing) • Current emergency contact list • All critical business units are included in the testing process. Testing should include: ➢ Setting of goals in advance ➢ Realistic conditions ➢ Use of actual backup systems and files from off-site storage ➢ Participation and review by internal audit ➢ Post-test analysis reports and review process that includes comparison of test results with original goals ➢ Development of corrective action plans that are incorporated into the next test • Current hardware requirements are conveyed to the recovery site provider (note frequency) • Network components are identified in the recovery plan
4. Determine whether management has an adequate process to ensure information technology plans effectively address business unit and corporate objectives.	• Overall responsibility for the IT function has been allocated to a director of the board or senior manager • Senior management level IT steering committee exists • Formal IT organizational structure—organizational charts, job descriptions, etc. • IT management has adequate standards and procedures governing: ➢ Personnel administration ➢ Budgeting and costing of information technology projects ➢ Systems development and support functions ➢ Computer operations ➢ Telecommunications network operations ➢ Computer and information security ➢ Contingency planning and disaster recovery ➢ Information architecture ➢ IT and business risk assessments • There is an architecture model • Formal IT strategy covering the next 1-3 years • Formal IT budget showing planned hardware costs and software development costs • Reports used by senior management or relevant management committees to supervise and monitor IT activities are effective • Compliance with the IT aspects of statutory and regulatory requirements • Segregation of duties is adequate • There are training and development plans for all staff—training budget • Insurance coverage is adequate

ASSESSMENT FACTOR	EVALUATION CRITERIA
5. Determine whether effective processes are in place to ensure appropriate controls are implemented and documentation is complete for system development and maintenance.	• Business sponsors are leading projects • Business requirements are clearly defined • Documented policies and procedures that govern the acquisition, implementation and maintenance of hardware and software • There is a formal change request process • All systems software upgrades are tested before they are implemented • All systems software upgrades are properly authorized • All programs and data files (compilers, assemblers, link editors, macro libraries, source libraries, etc.) used to construct and maintain system software are adequately protected • Documented policies and procedures that govern the database administration function • Database administration function is separate from the systems and programming and operations functions • Violation reports are produced for the database environment • Complete backup copy of the database is performed regularly • Fully documented restore procedures for the database • Restore procedures for the database are regularly tested • Standard methodology exists for in-house developed systems • Feasibility study is performed and approved prior to the development of new systems • Adequate internal controls and audit trails are specified for the system (i.e., access, application and user controls) • Adequate training and technical support is provided by the vendor/suppliers • Comprehensive systems and program documentation is produced or provided by the vendor/suppliers • Requests for program changes are formally approved by authorized users • Program updates to the production environment are specifically authorized by IT management • Development staff are prevented from implementing new program versions into the production environment • Documented procedures for controlling any emergency changes made by systems development staff • Formal sign-off is required after system testing • Regression testing is carried out when failures have been rectified • Documented file conversion procedures • Post-implementation review occurs to ensure that the system has achieved its objectives • Users receive training on the features of new systems before implementation • User manuals are current and secured • Operating manuals are current and secured • Documented policies and procedures relevant to project management • Application systems are tested and approved before they are put into operational use • Quality assurance function exists • Users of the systems sign-off at critical points in the development process • Comprehensive and structured approach to testing exists, including clearly defined test procedures and appropriate documentation and analysis of test results

ASSESSMENT FACTOR	EVALUATION CRITERIA
Cont'd.	• Users are involved in user and acceptance testing • Overall systems and program documentation adheres to standards • Standards and procedures for end user computing exist • Documentation produced for end user computing systems (e.g., models, spreadsheets) is adequate • Risk assessments are performed for end user computing systems
6. Determine whether effective processes have been implemented for the processing of data and information to ensure accuracy and timeliness.	*Input:* • Written procedure statements that explain the manner in which data is to be converted and entered • Data control procedures specify the: ➢ Proper authorizations for each application ➢ Edits to be used during the initial input of the data ➢ Error messages for each application ➢ Establishment of control logs that record errors and exceptions ➢ Procedures for clearing errors and exceptions ➢ Controls that ensure that all input data is reviewed by appropriate personnel prior to processing ➢ Controls over master file changes and updates ➢ Appropriate routing for approval or return routing to the originator for correction of electronic documents • Data input controls are used (e.g., record counts, predetermined control totals) • Source documents used in data conversion or entry processes are marked to protect against the duplication or re-entry of the data or the relevant applications are designed to prevent the duplication of entries • Controls are in place for managing the authorization of access to on-line transactions and their associated record • Controls are in place to manage batch access to data files • Preprogrammed keying formats exist to ensure that data is entered in the proper field and format • Procedures exist to assure that incorrect data are identified, rejected, and not allowed to be entered into the system or to update the master file • Data validation and editing procedures are used (e.g., check digits on all identification keys, valid field sizes, signs, cross-footing) • Data input procedures permit data validation and error editing routines to be overridden or bypassed • All instances where supervisors are allowed to override or bypass the data validation and error editing routines are logged and reviewed • Maintenance of a log of source document numbers entered to ensure that all of these documents are accounted for • Data entered is included in an audit trail record • Where master files are updated directly, the data validation and editing procedures produce before-image and after-image versions of the record being updated • Procedures exist for the identification, correction, and resubmission of rejected data containing errors • Error messages that are generated are stated clearly and easily understood by the terminal or workstation operator • Rejected data is automatically written onto suspense files • Corrections are reviewed and approved independently by supervisors • Only authorized personnel who can remove entries from the suspense file

<table>
<tr><th>ASSESSMENT FACTOR</th><th>EVALUATION CRITERIA</th></tr>
<tr><td>Cont'd.</td><td>Processing:
Procedures exist that document the calculations generated by this application
There are standardized default options built into the program logic
Output control totals are reconciled to input control totals to ensure that calculations are accurate
There are programmed controls to verify that the proper versions of the data files are used
There is a logging facility (examination trail) in the application to assist in reconstructing damaged or destroyed data files
Controls are in place over the processing of unusual items (e.g., the entering of special console data like dates and bypass commands)
Run-to-run control totals are checked and printed to ensure completeness and accuracy of processing
Edit routines within programs cross-check the accuracy of arithmetic computations
Application generates control totals and/or performs reconciliations to check for completeness of processing
Trailer records contain control totals to provide a check that all records are on the file
File completion checks exist to ensure that both the transaction file and the master file have been processed completely
Transaction dates on input are compared to system controlled month-end cutoff dates to ensure consistency
There are controls present to ensure the accuracy of values in any tables used within the application

Output:
Reports contain clear identification information and end of report message
Pages are numbered and forms are counted
There are controls in place for the distribution of reports
An IS Department control group has responsibility for reviewing all data processing output reports for their general acceptability and completeness
Written procedures exist for balancing and reconciling output produced by data processing application programs
Output batch totals are reconciled with input batch totals before the output report is transmitted to ensure that no data was added or lost during the processing activity
Report processing procedures provide for user reconciliation of the current system balances with the previous day's or run's balance
User departments have procedures that they use to ensure the accuracy and completeness of all output
Written procedures for output distribution exist
The relevant distribution lists are changed whenever any change is made in the data processing output distribution requirements
Controls over on-line output control software prevent the unauthorized reading, copying, deleting, or redirecting of output
A log of application output errors is maintained by various control groups to assure that the errors are corrected
There are written procedures that provide listings of output that are classified as critical or sensitive and outlines the process for securing this output
</td></tr>
</table>

ASSESSMENT FACTOR	EVALUATION CRITERIA
7. Determine whether there is an effective plan for identifying, renovating, testing and implementing solutions for the Year 2000 issue.	• The Enterprise has conducted an assessment of its use of information technology, including preparing an appropriate inventory, and adequately addresses potential and specific Year 2000 issues ➢ The assessment includes all applications, hardware and systems software ➢ The Enterprise's assessment includes computer-controlled systems such as telecommunication devices, audio response systems, and other environmental systems with embedded microchips (e.g., security and alarm systems, elevators, telephones, fax machines, and HVAC systems) • The enterprise has established a plan for ensuring that their systems will be Year 2000 compliant and has provided sufficient time for implementation ➢ The plan is complete, reasonable, achievable, and appropriately monitored with periodic reports to management and the Board ➢ The plan includes appropriate testing and validation, including a complete systems test, and appropriate testing of remote interfaces and communications ➢ The enterprise has ensured that software license agreements permit them to use the software at alternate sites for Year 2000 testing ➢ The enterprise has developed specific plans to address legacy systems which may not have sufficient documentation or source code to enable their modification to become Year 2000 compliant ➢ The plan includes computer-controlled devices such as doors, alarms, elevators, security codes, passes, fax machines, etc. ➢ The use of `99' defaults (i.e., 99365 to specify non-delete retention of archived files) has been appropriately addressed ➢ Leap year processing has been appropriately addressed ➢ The plan addresses Year 2000 legal and liability issues ➢ Year 2000 specific contingency plans have been developed and tested • Internal Audit is actively monitoring the Year 2000 compliance efforts ➢ Assessment of internal controls surrounding the Year 2000 efforts ➢ Monitoring of Year 2000 project management for effectiveness ➢ Reporting of issues to management and the Board of Directors • Progress of Year 2000 efforts is reported to senior management and the Board of Directors
8. Determine whether the Year 2000 processing capabilities are effectively coordinated with customers, vendors and business partners.	• All current software and hardware license agreements specify Year 2000 compliance and/or a Year 2000 compliance target date has been specified by the vendor ➢ Software contract review to assess risks associated with licensing and maintenance agreements pertaining to Year 2000 processing • The enterprise has adopted a policy requiring all new software to be certified Year 2000 compliant • Business partners are required to report on their Year 2000 efforts, and are required to test and certify Year 2000 compliance with the Enterprise ➢ Outsourcing agreements have been reviewed for Year 2000 maintenance obligations ➢ On-going communications with vendors and servicers to determine progress toward implementing Year 2000 solutions • A process to certify Year 2000 compliance has been established ➢ Electronic interfaces with suppliers will be Year 2000 compliant, and records of certification are maintained

ASSESSMENT FACTOR	EVALUATION CRITERIA
9. Determine the effect of Year 2000 efforts on strategic and operating plans.	• The Enterprise has sufficient resources to undertake and complete the planned Year 2000 initiatives, including validation testing, in the required timeframe ➢ A program has been developed to address the retention of current IT staff resources ➢ If the Enterprise is to rely on outside resources to complete their Year 2000 plan, such resources are already under contract • The adequacy of computer resources for testing Year 2000 solutions in addition to day-to-day processing ➢ Establishment of "time machine environment"

ASSESSMENT FACTOR	EVALUATION CRITERIA
1. Determine after consulting with the other examination teams, whether management has an accurate and reliable process for identifying risks to business processes and implementing the appropriate controls.	• Process is fully documented with roles and responsibilities identified • Process is risk- and control-focused • Process occurs frequently enough to be useful in timely identifying risks and the controls needed • Management assumes responsibility for assessing risks and implementing an adequate control environment
2. Determine after consulting with the other examination teams, whether implemented controls properly address the risks assessed by management.	• There is a process that evaluates the controls to ensure that identified risks are appropriately mitigated • Process is risk-focused to ensure that the controls are adequate to address the risks and are not excessive or redundant
3. Determine after consulting with the other examination teams, whether management has a reliable process for ensuring timely resolution of control-related issues.	• Adequate reporting mechanism to ensure that senior management is aware of the risks and corrective actions to be taken to address these risks • Process occurs frequently enough to be useful in timely implementing corrective actions • Process is fully documented with roles and responsibilities identified (including Internal Audit) • The process can be validated by a third party • Adequate reporting mechanism to ensure that senior management is aware of any issues
4. Determine after consulting with the other examination teams, whether Internal Audit appropriately identifies and communicates internal control deficiencies to management and the Board of Directors. Share determinations with the examination team responsible for audit and board governance.	• Internal Audit's role is fully documented with appropriate lines of communication established • Adequate reporting mechanism to ensure that senior management is aware of the status of all unresolved issues, as well as the nature of the deficiencies and the potential impact on operations
5. Determine after consulting with the other examination teams, whether there are established policies and procedures that delineate internal control process and standards for the control environment.	• Existence and reasonableness of the policies and procedures that delineate the process and controls • Policies and procedures delineate individual roles and responsibilities • Policies and procedures are current—reflect the current business practices • Adequate reporting mechanism to ensure that senior management is aware of any potential legal issues and areas of noncompliance with applicable laws and regulations

ASSESSMENT FACTOR	EVALUATION CRITERIA
6. Determine after consulting with the other examination teams, whether management ensures compliance with established internal controls.	• Existence of a process to ensure compliance with established policies and procedures. For example: ➢ Approval limits established within policies and procedures ➢ Authorized signatures required for certain transactions (e.g., overrides) ➢ Review and approval of documents by legal counsel ➢ Review and approval of certain transactions or initiatives by senior management

ASSESSMENT FACTOR	EVALUTION CRITERIA
1. Determine if the Audit Functions have the appropriate independence	• Placement of the internal audit function in the management structure. • Internal audit's reporting line. • Internal audit manager's business operations responsibilities. • Who develops objective performance criteria used to evaluate the work of internal audit? • IA managers have no responsibilities for operating the business. • External audit engagement negotiated at arms-length. • The external audit engagement letter reviewed by audit committee. • External audit's reporting line. • IA has the opportunity to discuss with the Board audit findings without management present.
2. Determine if the auditors performing the work posses the appropriate professional proficiency	• Educational and professional background (certification) of the internal audit staff. • Continuing education opportunities for internal audit staff. • Professional background and expertise of external audit staff.
3. Determine after consulting with the other examination teams, if the scope of the work performed is appropriate	• Consistent with the nature, complexity, and risk in the Enterprise's on- and off-balance-sheet activities. • Consistent with risk assessment. • Consistent with approved audit plan. • Appropriate reliance on work of outsourcing vendor, external audit (for internal) and internal audit (for external). • Scope expands if significant issues arise or when significant changes occur in the Enterprise's environment, structure, activities, risk exposures or systems including: a) new management; b) areas or activities experiencing rapid growth; and c) new lines of business, products or technologies. • Consistent with the long-range goals of the Enterprise. • Responsive to the Enterprise's internal control needs.
4. Determine after consulting with the other examination teams, if the performance of the audit work has been complete	• Consistent with audit plan. • Describes the objectives of the audit work and lists the procedures that will be performed. • Includes a summary of key internal controls within each significant business activity. • Evaluates the information received. • Communicates results. • Follows up on findings. • Full scope audit work complies with professional standards. • Workpapers adequately document the work performed and support conclusions.
5. Evaluate the quality of the management of the Internal Audit Department.	• Background or experience provides an understanding of the audit function. • Ensures appropriate risk assessments are developed and maintained. • Ensures that audit plans are met, programs are carried out, and results of audits are promptly communicated to managers and directors. • Appropriate budget. • Establishes, updates, enforces policies and procedures to guide audit staff.

ASSESSMENT FACTOR	EVALUATION CRITERIA
6. Determine after consulting with the other examination teams, the appropriateness of executive management's involvement and follow-up of identified auditing issues. Determine the quality of the Board of Directors' involvement and follow-up of identified audit issues.	• Reviews and is appropriately informed of the internal audit manager's risk assessment. • Reviews and is appropriately informed of the scope of the audit plan. • Periodically reviews internal audit's adherence to the audit plan. • Considers requests for expansion of basic internal audit work when appropriate. • Fosters forthright communications and critical examination of issues. • Keeps informed of issues. • Tracks issues for follow up, including operating management's solutions. • Significant issues promptly brought to direct attention. • Significant issues promptly addressed. • Meets with management and the manager of internal audit. • Assesses whether internal control weaknesses or other exceptions are being resolved appropriately. • Promotes the internal audit manager's impartiality and independence. • Gives the manager of internal audit the opportunity to discuss findings without management being present. • Uses reasonable standards when assessing the performance of internal audit.
7. Determine after consulting with the other examination teams, the quality of the auditor's risk assessment process.	• Documents the understanding of the significant business activities and their associated risks. • Analyze the risks inherent in a given business line and potential risk due to control deficiencies. • Updated as need to reflect changes to the system of internal control or work processes, and to incorporate new lines of business. • Is appropriate for the institution's activities.
8. Determine after consulting with the other examination teams, the appropriateness of internal audits in new products and new initiatives. Share determinations with the examination team responsible for business process controls.	• Stage at which internal audit is first involved/apprised of new product. • Any internal audit review prior to going live with new product. • Timing of internal audit work after new product introduced. • Scope of work conducted during design, development and implementation of new products. • Internal audit's risk assessment of new products. ➢ Operational impact (policies, procedures, systems) ➢ Financial statement impact ➢ Compliance and regulatory impact. • Degree of integration and communication with other key stakeholders.

ASSESSMENT FACTOR	EVALUATION CRITERIA
1. Determine if the Enterprise executive management and the Board of Directors receive necessary reports on the Enterprise's performance relative to established goals and objectives	• Do the executive management team and the Board of Directors have adequate sources of information? Are the channels in place for information to be communicated timely and effectively, without infiltration? • Do the executive management team and the Board receive the right kinds of information, both with respect to performance and future prospects? • Do the executive management team and the Board of Directors receive information to evaluate Enterprise's performance against established goals and objectives? • Is the information relevant, timely and accurate? Determine if it is overwhelming in quantity.
2. Determine if management reporting provides the levels of management with the necessary information to carry out their responsibilities efficiently and effectively, and to gauge the quality of their decision making.	• Determine if mechanisms are in place to obtain relevant external information such as market conditions, legislative and regulatory developments and economic changes. • Determine if management receives the appropriate analytical information and reports that enable them to identify what actions need to be taken. • Determine if information is provided at the right level of detail. ➢ Pertinent data is summarized. ➢ Reports are designed to eliminate clutter. • Determine if information is available on a timely basis to allow effective monitoring of events and activities (internal and external) and prompt reaction to economic and business factors. ➢ Information systems are designed to expedite reporting of information and are able to collect and edit data, summarize results, adjust and correct errors quickly. • Determine if management reports support and are aligned with the Enterprise's strategic and business unit goals and objectives, key performance measures and risk management plans. ➢ Reports are used to identify, monitor, measure, limit and manage risks
3. Determine if information systems are linked to the Enterprise's overall strategy, and if information systems are developed and refined pursuant to a strategic plan for information systems.	• Determine if mechanisms are in place for identifying emerging information needs. • Determine if information needs and priorities are determined by executives with sufficiently broad responsibilities. • Determine if a long-range information technology has been developed and linked with the Enterprise strategy.
4. Evaluate after consulting with the other examination teams, the accuracy of reports used by management for its decision-making.	• Do the systems generating reports edit data? • Can errors in reports be adjusted or corrected promptly? • What is the process by which data is transferred from the source to report. • Do control procedures ensure that information is correct and relevant. • Is there a sound system of automated and manual internal controls. • Subject to comprehensive internal and external audit reviews. • Information systems are developed according to a sound methodology. • Collection points and times to send updated information are established. • Source of information originates from expected business area. • Flow of information /reports is consistent with org chart. • Identify and note points where adjustments to data occur. • Processes are followed as data is acquired, merged, manipulated and up-loaded from systems.

5. Determine after consulting with the other examination teams, the effectiveness with which Enterprise strategy and roles and responsibilities are communicated	• Determine the extent of formal and informal communication plans. • Determine if effective communication vehicles – formal and informal – are sufficient in effecting communication related to roles and responsibilities. • Key personnel understand how their duties affect and are affected by , duties of other employees.
6. Evaluate the effectiveness of channels of communication available to employees to provide feedback, report suspected improprieties, and suggest enhancements	• Determine if there are mechanisms to communicate upstream through someone other than direct superiors, such as an ombudsman or corporate counsel. • Determine if there are realistic mechanisms for employees to provide suggestions for improvement. • Determine if management acknowledges good employee suggestions.
7. Determine after consulting with the other examination teams, the adequacy of communication across the organization	• Determine if communication mechanisms promote sharing of Enterprise knowledge. • Determine if effective communication mechanisms are in place to promote communication and resolution of corporate issues that cross organizational lines.

ASSESSMENT FACTOR	EVALUATION CRITERIA
1. Evaluate the comprehensive nature of the strategic planning process	• Determine how the strategic and business plans are formulated and developed. • Determine if all key stakeholder groups are involved in the planning process. • Determine the timeframe of the planning process and that the process is iterative, rather than periodic. • Determine if the strategic plan states the strategic intent and purpose. • Determine if the strategic plan is realistic in the current economic and secular/political environment. Examples of analysis performed by the Enterprise to support this conclusion could include: ➢ SWOT Analysis ➢ Situational Analysis ➢ Financial analysis / projections ➢ Market assumptions • Determine if the Enterprise uses a consistent business plan in developing and refining its strategic plan. • Determine if strategic goals are specific, measurable, time-bound, and results-oriented. Also, determine if these goals support the vision and mission of the Enterprise. • Determine if the level of congruence among strategic goals is appropriate (i.e. is the level of emphasis and prioritization) • Determine if critical success factors have been incorporated. ➢ Factors that have brought success in the past. ➢ Factors for success in 5 year's time? • Determine if goal champions or teams have been assigned to monitor the achievement of goals. • Determine if the strategic goal adequately addresses resource allocation issues. ➢ Are the budgets, capital deployments and operating plans consistent with the strategic plan? Does capital allocation include an appropriate risk vs. reward analysis?
2. Determine after consulting with the other examination teams, the effectiveness of business unit goals, implementation plans and programs to achieve the corporate plan	• Determine if clear guidelines are communicated to develop goals and objectives in business units. • Determine if business unit goals and objectives are aligned with the Enterprise strategic plan. ➢ Linked to the strategic plan ➢ Linked to long-term budgets and annual budgets • Determine if business unit goals are specific, measurable, time-bound, and results-oriented. • Determine if implementation and action plans support and are aligned with the strategic and business unit plans. • Determine if champions or teams have been assigned to monitor the achievement of business plans. • Determine what type of framework or process is used to prioritize implementation / action plans; e.g. risk vs. reward framework.

3. Determine after consulting with the other examination teams, management's ability to monitor and manage change	• Determine if mechanisms exist to anticipate, identify and react to routine events or activities that affect achievement of entity or activity-level objectives. • Determine if mechanisms exist to identify and react to changes that can have a more pervasive effect on the Enterprise.
4. Determine after consulting with the other examination teams, if key performance measures are appropriate, effective, and align with strategy for key performance measures	• Determine how the achievement of strategic and business goals is measured, monitored and reported. • Determine if performance measures have been established to measure / evaluate the Enterprise's achievement toward strategic and business unit goals and objectives. • Determine if the performance measures are linked directly with the Enterprise's strategy and support the Enterprise's actions, people / culture and critical success factors. • Determine if the performance measures are relevant, meaningful and balanced.
5. Determine after consulting with the other examination teams, if the behavior management programs are designed to achieve corporate goals and objectives	• Determine if accountability measurement system includes corporate objectives and goals. • Determine if compensation or incentives are linked to achieving goals, both long and short term. • Determine if performance hurdles are tied to corporate goals and objectives.
6. Determine if the Enterprise has an effective program for career and management development	• Determine if the criteria for selecting or evaluating individuals address: delivery of results; customer satisfaction; technical proficiency; ability to formulate/implement plans; demonstrated leadership/professionalism; ability to work with others; contributions to the company's objectives. • Determine if there is a plan for succession for key management positions within the Enterprise. • Determine if there is a process for identifying individuals throughout the Enterprise who possess growth potential. Determine if management has an inventory of the talent pool and has established developmental plans for those individuals. Are the plans followed and developmental assignments given?
7. Determine if the Enterprise has effective programs for recruiting competent people	• Determine that personnel policies, procedures and practices result in recruiting or developing competent and trustworthy people necessary to support an effective internal control system. • Determine that employee retention and promotion criteria are aligned with codes of conducts and other behavioral guidelines.
8. Determine after consulting with the other examination teams, the effectiveness of proprietary risk management programs or systems	• Determine if there is a process for identifying, analyzing and prioritizing risk. Determine if it is subject to internal and external audit review. • Determine if the risk management process is aligned with and supports the Enterprise strategy and is measured against standards or plans. • Determine if adequate mechanisms are in place to identify risks from external sources. • Determine if adequate mechanisms are in place to identify risks from internal sources. • Determine the thoroughness and relevance of the risk analysis process, including estimating significant risks, assessing the likelihood of their occurrence and determining required actions.

9. Determine after consulting with the other examination teams, whether management effectively conveys an appropriate message of integrity and ethical values	• Ascertain if codes of conduct are comprehensive, addressing conflicts of interest, illegal or other improper payments, etc and are period acknowledged. • Verify the establishment of the tone at the top including explicit moral guidance about what is right and wrong. • Determine if everyday dealings with employees, investors, customers, creditors, insurers, competitors and auditors are based on honesty and fairness. • Determine if management responds to violations of behavioral standards. • Determine if management has stringent policies towards overriding internal established internal controls. • Ascertain that deviations from policies are investigated and documented. • Ascertain that there are no conditions, such as extreme incentives or temptations, that exist that can unnecessarily and unfairly test people's adherence to ethical values. ➢ Determine if controls are in place to reduce temptations that might otherwise exist
10. Determine after consulting with the other examination teams, if management's philosophy and operating style have a pervasive effect on the Enterprise.	• Determine that there are regular interaction between levels of management. • Ascertain that management avoids focus on short-term reported results. • Determine if managers respond to signs of inappropriate practices.
11. Determine after consulting with the other examination teams, if the organization structure and the assignment of responsibility provide for accountability and controls. Share determinations with the examination team responsible for internal controls.	• Determine if the Enterprise's organizational structure is appropriately centralized and decentralized. • Determine if the responsibilities and expectations for the Enterprise's business activities are communicated clearly to the executives in charge of those activities. • Determine if established reporting relationships – formal or informal, direct or matrix - are effective. • Determine that the executives of the business activities have access to communication channels to senior operating executives. • Determine if management periodically evaluates the entity's organizational structure, particularly when there are changes in the business or industry. • Determine that delegated authority in relation to assigned responsibilities is appropriate and is related to the Enterprise's goals and objectives.

ASSESSMENT FACTOR	EVALUATION CRITERIA
1. Determine whether the Board has been engaged in the development of a strategic direction for the Enterprise.	• Does the Board communicate its direction to management? • Does the Board review the strategic direction? How frequently? • Does the Board's review address: goals and benchmarks for the Enterprises to achieve; and time frames? • Is the Board's compensation tied to meeting the strategic goals?
2. Determine whether the Board ensures that executive management appropriately defines the operating parameters and risk tolerances of the Enterprise consistent with the strategic direction; and legal standards; and ethical standards	• Does the Board regularly review the operating parameters and risk tolerances? • Does the Board require management to report to it on how activities and operations, individually or in concert, impact the Enterprise's operating parameters and risk tolerances? • Is there an appropriate Code of Conduct? • Does the Board receive periodic reports on compliance with the Code of Conduct? • Is there a policy that defines responsibilities for compliance with laws and regulations? • Does the Board receive periodic reports on compliance with that policy?
3. Determine whether the Board has a process for hiring and maintaining a quality executive management team	• Is there a suitable nomination process? • Does the board review each candidate's competence, knowledge, understanding prior to approval?

4. Determine whether the Board holds the executive management team accountable for achieving the defined goals and objectives.	• Does the Board have a role in identifying the qualities desired in key members of senior management, particularly the CEO? Does the Board review the written job descriptions for key members of senior management, particularly the CEO?
	• Has the Board defined the CEO / executive management plans for training, development and succession for other positions?
	• Does the Board evaluate the CEO's performance on a regular/ongoing basis?
	  ➢ Determine the CEO's performance against short-term objectives and long-term initiatives.
	  ➢ Have clear objectives been set for the future?
	• Does the Board provide the CEO with a performance evaluation? Is it written?
	• Does the Board have the ability to act timely if it needed to replace the CEO?

5. Determine after consulting with the other examination teams, whether the Board remains appropriately informed of the condition, activities and operations of the Enterprise	• Does the Board receive appropriate information about all significant areas of operations, activity and risk to the Enterprise? • What are the sources of the information? Are they all internal sources? • Does the Board effectively utilize committees to obtain information? • Does the Board receive non-financial information about the Enterprise? • Does the Board receive information about the progress being made towards achieving its strategic plans? • Are Board members offered opportunities to obtain/maintain an appropriate knowledge base?

ASSESSMENT FACTOR	EVALUATION CRITERIA – BOARD GOVERNANCE
6. Determine whether the Board has sufficient well-organized time to carry out its responsibilities	• Assess the frequency of Board meetings • Does the Board have adequate time to prepare for meetings? • Does the Board have adequate time to deliberate significant issues? • Does the Board use its meeting time effecively? • Does it receive information in advance? • Does it spend the meeting time discussing significant issues? • How many other boards do Board members sit on simultaneously?

OFHEO
Office of Examination and Oversight

Examination Guidance

Issuance Date: Jan 4 1999 Doc. #: EG-99-01
Subject: Risk-based Examinations –Worksheet

To: All OFHEO Examining Personnel

Beginning today as part of the continuous risk-based examination program, OFHEO's examiners will be required to complete "OFHEO Examination Worksheet Observation and Follow-Up" ("worksheet") on an ongoing basis. The worksheet will provide summary documentation of more detailed examination working papers and will memorialize qualitative determinations made during the course of an examination cycle. In addition, worksheets will be used as an avenue for communicating examination observations with the Enterprises.

Worksheets will be compiled during each examination cycle, and will be maintained in OFHEO's permanent examination files.

The worksheets, completed as part of OFHEO's official examination work, are protected by the examination privilege. The worksheets contain information gathered in official OFHEO examinations, and reflect examiner judgments. Unauthorized use or disclosure of worksheets or information contained in worksheets is a violation of Federal law that may result in criminal penalties.

A sample worksheet is attached.

G. Scott Calhoun
Director
Office of Examination and Oversight

OFHEO EXAMINATION WORKSHEET
OBSERVATION AND FOLLOW-UP

Date:
Workpaper #: (Team Leaders will supply)

Enterprise:
- ☐ Fannie Mae
- ☐ Freddie Mac

Subject:

Primary Exam Program:
(Check One)
- ☐ Credit Risk
- ☐ Interest Rate Risk
- ☐ Liquidity Risk
- ☐ Information Technology
- ☐ Business Process Controls
- ☐ Internal Controls
- ☐ Board Governance
- ☐ Management Processes
- ☐ Audits
- ☐ Management Information

Secondary Exam Program(s):
(Check all that apply)
- ☐ Credit Risk
- ☐ Interest Rate Risk
- ☐ Liquidity Risk
- ☐ Information Technology
- ☐ Business Process Controls
- ☐ Internal Controls
- ☐ Board Governance
- ☐ Management Processes
- ☐ Audits
- ☐ Management Information

Initiating Examiner:

Reviewed By:
Date:

Observation is a:
- ☐ Strength with no apparent opportunities for improvement at this time
- ☐ Strength with opportunities for improvement
- ☐ Meets safety and soundness standards with opportunities to improve
- ☐ Weakness that requires action to meet safety and soundness standards

1. Related Assessment Factors are:

(Insert each relevant assessment factor)

2. Description of observation:

(Insert description)

3. The observation represents an action, program, or process that:
(Check one)

- ☐ substantially exceeds safety and soundness standards
- ☐ exceeds safety and soundness standards
- ☐ meets or modestly exceeds safety and soundness standards
- ☐ falls short of meeting safety and soundness standards
- ☐ is substantially deficient in meeting safety and soundness standards
- ☐ the impact to safety and soundness standards is "to be determined".

4. Does the GSE agree with the observation?

- ☐ Yes
- ☐ No (Provide reason/s.)

(Insert reason/s)

5. The observation was discovered through:
(Check all that apply)

- ☐ review of management reports
- ☐ review of policy
- ☐ review of procedures
- ☐ review of internal audit reports
- ☐ review of external audit reports
- ☐ discussion with Executive Management
- ☐ discussion with Operating Management
- ☐ discussion with Line Technician
- ☐ other (Describe.)

(List documents reviewed. List discussion dates and participants.)

6. The observation relates to risk management in the following area(s):
(Check all that apply)

- ☐ Identification
- ☐ Measurement
- ☐ Monitoring
- ☐ Control

7. Is there an apparent opportunity for the Enterprise to improve?

- ☐ Yes (Describe.)
- ☐ No
- ☐ Not Applicable

(Describe the opportunity)

8. Does the GSE concur with the described means of improving?

- ☐ Yes
- ☐ No (Provide reason/s.)
- ☐ Not Applicable

(Insert reason/s)

9. Did the GSE present factors, plans, or mitigating circumstances that provided insight to, and/or reduced or negated the importance of addressing the opportunity to improve?

- ☐ Yes (Describe.)
- ☐ No
- ☐ Not Applicable

(Insert description)

10. Failure to take action to improve could result in …

- ☐ An Immediate Risk
- ☐ A Probable Future Risk
- ☐ A Possible Future Risk
- ☐ Minimal Risk
- ☐ No Risk
- ☐ Not Applicable

(Describe expected timing and severity of risk)

11. The observation warrants the attention and/or involvement of:
(Check all that apply)

☐	Board of Directors	☐	attention	☐	involvement
☐	Executive Management	☐	attention	☐	involvement
☐	Operating Management	☐	attention	☐	involvement
☐	Line Technicians	☐	attention	☐	involvement

12. Follow-up is required as follows:
(Insert date, responsible parties, actions items, etc)

OFHEO
Office of Examination and Oversight

Examination Guidance

Issuance Date: Aug-31-1999 Doc. #: EG-99-02
Subject: Enterprise Examination Survey

To: All OFHEO Examining Personnel

The Office of Examination and Oversight (OEO) is committed to an effective and efficient examination process. A critical component of OFHEO's risk-based examination and oversight process includes the ongoing review and assessment of the effectiveness of the program. To this end, OFHEO developed a questionnaire that covers the key aspects of our risk-based supervision program. This questionnaire is designed to provide OEO with feedback from the Enterprises regarding their perspective of OEO's performance and progress in discharging our examination efforts.

OEO solicits input from each Enterprise on an annual basis following the completion of the examination cycle and Board meetings to discuss the examination findings. OFHEO will use this feedback to adjust practices and to improve the efficiency and effectiveness of supervision activities, as appropriate.

The questionnaire is attached.

____
G. Scott Calhoun
Director
Office of Examination and Oversight

Office of Federal Housing Enterprise Oversight
Examination and Oversight Questionnaire
Office of Examination and Oversight (OEO)

This form is being used to help measure the effectiveness of the overall supervision of your enterprise during the last 12 months. Your input will give us your perspective on OEO's performance and progress in improving the efficiency and effectiveness of our supervision efforts. Please send your completed form to ***G. Scott Calhoun, Director, Office of Examination and Oversight***.

Enterprise: ❑ Fannie Mae ❑ Freddie Mac

Date: ______________________________

Contact: ______________________________

Office of Federal Housing Enterprise Oversight
Examination and Oversight Questionnaire
Office of Examination and Oversight (OEO)

	Completely Disagree		Somewhat Agree		Completely Agree
1. OEO's examination approach attempts to anticipate the onset of potential issues or problems.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
2. OEO's oversight does not interfere with management's ability to prudently manage its business and risks.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
3. OEO's examination focus is on those areas or issues that pose heightened risk to the Enterprise.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
4. OEO appropriately provides useful observations, suggestions, and best practices.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
5. OEO's recommendations or suggestions are results-oriented and not prescriptive.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5

1. OEO's examination approach attempts to anticipate the onset of potential issues or problems.

   Optional Comments: (attach other pages as necessary)

   ____
   ____
   ____

2. OEO's oversight does not interfere with management's ability to prudently manage its business and risks.

   Optional Comments: (attach other pages as necessary)

   ____
   ____
   ____

3. OEO's examination focus is on those areas or issues that pose heightened risk to the Enterprise.

   Optional Comments: (attach other pages as necessary)

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   ____
   ____

4. OEO appropriately provides useful observations, suggestions, and best practices.

   Optional Comments: (attach other pages as necessary)

   ____
   ____
   ____

5. OEO's recommendations or suggestions are results-oriented and not prescriptive.

   Optional Comments: (attach other pages as necessary)

   ____
   ____
   ____

	Completely Disagree		Somewhat Agree		Completely Agree
6. OEO does not impose costly incremental demands that are not in the interest of financial safety and soundness.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
7. OEO's risk-based approach is easily understood and clearly sets out the framework for the examination of the Enterprise.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
8. OEO's examination approach recognizes the unique aspects of the Enterprise and its approach to business.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
9. Results of ongoing examination activities were communicated throughout the year in a timely fashion.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
10. Significant issues were raised and communicated in a timely fashion.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5

6. OEO does not impose costly incremental demands that are not in the interest of financial safety and soundness.
   Optional Comments: (attach other pages as necessary)
   ____
   ____
   ____

7. OEO's risk-based approach is easily understood and clearly sets out the framework for the examination of the Enterprise.
   Optional Comments: (attach other pages as necessary)
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   ____
   ____

8. OEO's examination approach recognizes the unique aspects of the Enterprise and its approach to business.
   Optional Comments: (attach other pages as necessary)
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   ____
   ____

9. Results of ongoing examination activities were communicated throughout the year in a timely fashion.
   Optional Comments: (attach other pages as necessary)
   ____
   ____
   ____

10. Significant issues were raised and communicated in a timely fashion.
   Optional Comments: (attach other pages as necessary)
   ____
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	Completely Disagree		Somewhat Agree		Completely Agree
11. OEO's examinations are sufficiently flexible and are adjusted, as needed, to reflect changes in the condition or the environment.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
12. The examination strategy appropriately assesses key sources of risk; the quality of risk management; and the effectiveness of controls.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
13. OEO is accessible ensuring that communication is interactive, free-flowing, and continuous, precluding surprises.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
14. OEO's communications are meaningful, appropriately tailored to the audience, and professionally conducted.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
15. The worksheets used by OEO provide an effective means of communicating ongoing examination activities and observations.	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5

11. OEO's examinations are sufficiently flexible and are adjusted, as needed, to reflect changes in the condition or the environment.

    Optional Comments: (attach other pages as necessary)

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12. The examination strategy appropriately assesses key sources of risk; the quality of risk management; and the effectiveness of controls.

    Optional Comments: (attach other pages as necessary)

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13. OEO is accessible ensuring that communication is interactive, free-flowing, and continuous, precluding surprises.

    Optional Comments: (attach other pages as necessary)

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14. OEO's communications are meaningful, appropriately tailored to the audience, and professionally conducted.

    Optional Comments: (attach other pages as necessary)

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15. The worksheets used by OEO provide an effective means of communicating ongoing examination activities and observations.

    Optional Comments: (attach other pages as necessary)

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16. ***OPTIONAL:*** Please provide any additional comments you would like to offer to OFHEO.
(Attach additional pages, if necessary.)

OFHEO
Office of Examination and Oversight

Examination Guidance

Issuance Date: December 19, 2000 Doc. #: EG-00-01
Subject: Non-mortgage Liquidity Investments

To: All OFHEO Examining Personnel

OFHEO conducts its risk-based examination work in ten program areas. In one of these program areas, liquidity management, examiners assess the quality of measurements and monitoring mechanisms used along with an evaluation of the availability and costs associated with maintaining adequate liquidity. In its liquidity management examinations, OFHEO applies a series of safety and soundness standards to the Enterprises' activities, including their investments in non-mortgage liquidity assets. OFHEO's Director has determined it is appropriate to highlight for the Enterprises the safety and soundness standards being employed by OFHEO to evaluate their investment activities in non-mortgage liquidity assets.

Attached is the December 19, 2000 ***Director's Advisory*** covering non-mortgage liquidity investments at the Enterprises. The ***Examination Guidance*** incorporates the safety and soundness standards, concerning the prudential management of non-mortgage liquidity investment activities, into OFHEO' examination program.

The policy is attached.

G. Scott Calhoun
Chief Examiner
Office of Examination and Oversight

OFHEO

Director's Advisory

Policy Guidance

Issuance Date: December 19, 2000 Doc. #: PG-00-002

Subject: Non-mortgage Liquidity Investments

To: Chief Executive Officers of Fannie Mae and Freddie Mac and All OFHEO Personnel

Purpose:

Fannie Mae and Freddie Mac (the Enterprises) were chartered by Congress as government-sponsored enterprises with public missions. They perform an important role in the United States mortgage market by gathering funds and purchasing mortgages from mortgage originators and guaranteeing mortgage-backed securities. In chartering the Enterprises, Congress charged the Enterprises with: (1) providing stability to mortgage markets; (2) responding to the changing capital markets; (3) assisting the secondary markets including the support of these markets for affordable housing; and (4) promoting access to credit throughout the country by increasing liquidity and improving distribution of investment capital for residential mortgage finance. These functions require the Enterprises, as principals in the secondary mortgage market, to serve as bedrock in providing liquidity to the U.S. housing finance system.

For the Enterprises effectively to perform their public purposes, they must be financially sound and liquid. As the Enterprises' financial safety and soundness regulator, OFHEO conducts its regulatory programs to ensure these companies adhere to safety and soundness standards. In addition, OFHEO interprets this to include heightening the positive effect of market discipline on the Enterprises by encouraging quality disclosures, appropriate accounting standards, and state-of-the-art risk management further strengthens their safety and soundness. More specifically, OFHEO conducts comprehensive safety and soundness examinations and requires the Enterprises to adhere to regulatory capital requirements. In conducting its regulatory programs, OFHEO applies a series of safety and soundness standards to assess the Enterprises' liquidity management, including their investments in non-mortgage liquidity assets. It is appropriate to issue initial guidance that addresses the safety and soundness standards OFHEO uses to evaluate Enterprise investment activities in non-mortgage liquidity assets.

Further, it should be noted that the Secretary of HUD, who has general regulatory power over the Enterprises and who is required to make such rules and regulations as necessary to ensure that the purposes of the GSE's respective Charter Acts are accomplished, has issued an Advanced Notice of Proposed Rulemaking on possible substantive and/or procedural rules governing the GSEs' non-mortgage investment activities. Accordingly, the GSEs may be subject to regulations in this area through future HUD actions, in addition to this initial guidance.

Activities Covered:

The Enterprises must maintain sufficient liquidity to meet both known and unexpected payment demands on borrowings and mortgage securities, for operations and to purchase mortgage assets. Liquidity management is the process by which the Enterprises manage the use and availability of various funding sources to meet current and future needs. Liquidity must be closely managed on a daily basis.

The Enterprises manage liquidity through three primary channels: securitizations, issuance of debt and conversion of liquid assets into cash. It is through careful management within and among the three channels, that the Enterprises can effectively meet demands and remain safe and sound under all market conditions. This Guidance specifically addresses "non-mortgage liquidity investments" which are conducted within the liquidity channel whereby the Enterprises are able to convert their own assets into cash.

There are various types of investments that may be appropriate for non-mortgage liquidity holdings. Appropriate non-mortgage liquidity investments are characterized by both creditworthiness and low price volatility. Even though an investment may be creditworthy, if the holding is subject to undue price volatility (e.g. common stock), the investment is inappropriate for inclusion in the non-mortgage liquidity portfolio since the investment may not be readily converted into cash without substantial loss.

For the purposes of this Guidance, the types of assets listed below are generally considered to be appropriate non-mortgage liquidity investments. This list is subject to revision over time as new asset types are introduced and/or market activities change. The presence of an asset on the list does not mean that OFHEO will necessarily consider any and all Enterprise investments in these assets to be safe and sound, especially if they fail to meet appropriate credit quality, maturity and diversification objectives:

- Debt issued by the United States Treasury,
- Debt issued by U.S. Government Agencies,
- General obligation debt issued by states and municipal authorities,
- Revenue obligations issued by states and municipal authorities,
- Corporate debt instruments,
- Money market instruments,
- Non-mortgage asset-backed securities, and
- Reverse repurchase agreements.

This Guidance does not address investments in mortgage-backed securities, mortgage revenue bonds, or other investments secured by housing (including commercial mortgage-backed securities with a significant housing component) since these assets are not principally held for liquidity purposes. Also, upon implementation of FAS 133, this Guidance is not intended to address the use of derivative instruments. For activities not covered in this Guidance on non-mortgage liquidity investments, there should be no inferences drawn about OFHEO's views.

Standards for Non-mortgage Liquidity Investment Activities:

To ensure there are sufficient funds available to the mortgage market, the Enterprise must actively manage liquidity across all three channels. OFHEO assesses the safety and soundness of non-mortgage liquidity investment activities against five criteria. The five criteria are:

1. prudent investment policies and procedures that guide the Enterprise's process;
2. quality management information that ensures timely performance measures and governance data;
3. safe & sound investment holdings and investment culture;
4. quality controls and personnel administering and governing the process; and
5. independent testing of the process to assure compliance.

Details about each of the criteria are set out below.

(1) Prudent investment policies and procedures that guide the Enterprise's process:
The Enterprise must have a comprehensive written investment policy that clearly expresses the goals for the non-mortgage liquidity investment activities. The Board of Directors and management must evaluate the effectiveness of non-mortgage liquidity investments in meeting the goals set out in the policy; and management must evaluate activities against the procedures and limitations in the policy. At a minimum, the policy should cover:

- the purpose of the non-mortgage liquidity investment holdings;
- the institutional goal(s) for the non-mortgage liquidity investment holdings;
- the authorized instruments and activities;
- the internal control standards;
- the limits structure;
- the performance standards and measures; and
- the reporting requirements.

The policy should clearly document the purpose for non-mortgage liquidity investment holdings. Management should install a series of procedures and controls that produce behaviors and performance that are consistent with the defined purpose for the non-mortgage liquidity investment activities.

The policy should establish the primary goals for the non-mortgage liquidity investment activities. For an Enterprise, some primary goals should be to augment liquidity and to generate a rate of return that is reasonable in light of the purpose of such investments. The emphasis placed on individual goals may vary based upon institutional differences. However, non-mortgage liquidity investments made with a goal of maximizing earnings or maximizing arbitrage opportunities would be inconsistent with this Guidance for the maintenance of an Enterprise's liquidity portfolio.

The policy should clearly define the authorized investment vehicles and establish guidelines for the introduction of new types of investment vehicles.

The Enterprise's procedures should include a framework of controls that provide an appropriate separation of duties and responsibilities. There should be responsibility assigned for an independent review of non-mortgage liquidity investments by a designated unit, such as audit or an independent risk oversight group.

The Enterprise should adopt a limit structure to promote diversification in the non-mortgage liquidity investment portfolio and emphasizes strategies for risk mitigation. Additionally, there should be limits for the aggregate size of the non-mortgage liquidity investment portfolio.

The Enterprise should adopt measures to evaluate performance against the policy and its objectives.

The Enterprise should adopt internal reporting requirements that quantify performance, document exceptions, and serve as a basis for communicating information about activities involving non-mortgage liquidity assets.

The Enterprise should periodically evaluate the adequacy and content of its public disclosure for non-mortgage investment liquidity activities.

(2) Quality management information that ensures timely performance measures and governance data:

The Enterprise must maintain systems that adequately identify, measure and report the nature and level of exposure associated with their non-mortgage liquidity investments. Management must remain appropriately informed about the activity in non-mortgage liquidity investments. Also, the Board of Directors should periodically be provided a summary of non-mortgage liquidity investment activities. At a minimum, management's reports to the Board should:

- summarize non-mortgage investment activity since the last report;
- identify and explain any material changes or trends in the non-mortgage liquidity investment portfolio risk and returns; and
- report and explain exceptions to the policy or risk guidelines for liquidity investments.

Meaningful changes in portfolio volume and spreads from period to period should be identified and explained to the Board in terms of why they occurred (e.g., changes in portfolio composition, changes in funding costs, etc.). In overseeing the day-to-day management of non-mortgage liquidity investment activities, management should consider the discrete risks associated with the non-mortgage liquidity investment portfolio as well as the exposure of this portfolio within the context of risks across the entire Enterprise. This includes assessing the non-mortgage liquidity investment portfolio's sensitivity to changes in interest rates, expressed in terms of net interest income sensitivity and portfolio value sensitivity.

(3) Safe & sound investment holdings:
The Enterprise should implement and enforce policies and/or procedures for non-mortgage liquidity investments. Management should establish limits and procedures in a manner that is consistent with the Board's sanctioned goals and risk appetite. Certain risk-limits for non-mortgage liquidity investments may be expressed in terms of how they affect the Enterprise's overall risk-profile, such as those pertaining to interest-rate sensitivity. Other risk limits may be more appropriately expressed in terms of individual portfolios and instruments. In addition, limits restricting the size-range and scope of the non-mortgage liquidity investment activities should be established.

The limits and procedures should delineate the acceptable investment instruments, acceptable markets, acceptable counterparties, along with unacceptable investment or portfolio activities. The Enterprise should maintain sufficient documentation to demonstrate due diligence in adhering to policies, procedures, limits and guidelines.

At a minimum, limits should be established and reviewed annually, for:

Credit threshold guidelines: Credit quality is a compelling factor for liquidity investments. Since liquidity investments should be able to be readily converted into cash without substantial exposure to losses, investments should be insulated from price vulnerabilities that are associated with creditworthiness. The most effective means of insulating against price exposure from credit quality concerns is to invest in high-quality instruments and the debt obligations of high-quality issuers. The Enterprise should establish thresholds identifying the minimum credit standards of any security eligible for purchase. Where these standards involve credit ratings, the ratings should come from a nationally recognized rating organization. Procedures should be included that determine the steps to be taken by management if an instrument's credit rating falls below the minimum threshold before maturity.

Maturity guidelines: Because the maturity of an investment significantly affects its exposure to credit risk and price volatility, longer maturity instruments have limited suitability as liquidity investments. The Enterprise should establish the maximum maturity allowable for non-mortgage liquidity investments. It would be appropriate to have different maturity limits for certain types of instruments. For example, management may wish to establish shorter maturity limits for fixed-coupon instruments than for adjustable-rate securities. Management may have different maturity limits for bullet securities and amortizing structures. It would be appropriate to establish a maturity matrix based upon an instrument's credit rating at the time of purchase.

Diversification and concentration guidelines*:* Credit concentrations can increase credit risk. Accordingly, the Enterprise should establish guidelines that limit investments in the securities of any single issuer. Such limits may be established as a percentage limit (e.g., as a percentage of capital) or as an absolute dollar amount. To enhance portfolio liquidity, there should also be a limit on the percentage of any particular issue held by the Enterprise.

(4) Quality controls and personnel administering and governing the process:
The Enterprise should maintain a comprehensive set of controls to enforce the appropriate separation of duties and responsibilities. These controls should translate into clear procedures for routine operations. At a minimum, the internal control program for non-mortgage liquidity investment activities should include procedures for the following: portfolio valuation, personnel, settlement, physical control and documentation, conflict of interest, and accounting.

Portfolio valuation procedures should require pricing that is independent of the investment portfolio managers. Pricing securities provides an indication of the market depth and liquidity for individual instruments, and is an important process for providing data to the risk management function, particularly within a framework of estimating market value sensitivity. Pricing is particularly important for securities that are classified as "available-for-sale" for accounting purposes.

Personnel guidelines should require competent and experienced staff be responsible for conducting transactions and managing the non-mortgage investment portfolio. There should be clear guidance regarding the roles and responsibilities of individuals involved with the non-mortgage liquidity portfolio.

Procedures should cover standard **settlement practices** for the various types of non-mortgage liquidity investments in the Enterprise's portfolio. Inadequate understanding of standard settlement practices, coupled with poor internal controls, could result in unnecessary costs or losses.

Procedures covering **control and documentation** should be comprehensive and consistent with the evolving better practices in the marketplace. The procedures should include, for example, standards for: processing and controlling purchased instruments, safeguarding investment documentation and reviewing trade tickets and confirmations.

Conflict of interest guidelines should govern all Enterprise personnel authorized to purchase or sell non-mortgage liquidity investments. These guidelines should ensure that all directors, officers and employees act in the Enterprise's best interest. Conflict of interest guidelines should address employee relationships with authorized broker/dealers. Guidelines should also address personnel accepting gifts and travel expenses from broker/dealers.

Accounting practices should be evaluated to determine the level of compliance with GAAP standards.

(5) Independent testing and review of the process to assure compliance:
An independent review of non-mortgage liquidity investment activities should be conducted periodically to ensure:

- the accuracy and integrity of information provided to the Board, management and other oversight bodies;
- the adherence to policy, procedures, limits and guidelines;
- the timeliness, accuracy and usefulness of non-mortgage investment reports;
- the adequacy of personnel resources and capabilities; and
- the non-mortgage liquidity investment activities remain appropriate in the context of the marketplace and the external environment.

This review may be conducted by a risk oversight unit or internal audit department, or any party that is independent of the routine risk-taking decisions and should be commensurate with the level of review of other primary Enterprise activities. Independent review findings for non-mortgage liquidity investments should be reported to the Board directly or through one of its committees. The Board should consider the independent review when reaffirming policies, and should address any issues raised.

Disclosure of Non-mortgage Liquidity Investment Activities:

Sound risk management practices include thorough disclosures about the Enterprise's risks and further regulators' efforts to increase financial transparency for regulated financial companies. Quality disclosures about risks and risk management can be an effective deterrent to excessive risk-taking. Three essential elements needed to promote market discipline for non-mortgage liquidity investments are (1) type of issuer and security, (2) maturity, and (3) credit quality or rating. Accordingly, quality disclosure for a portfolio of non-mortgage liquidity investments should include a detailed categorization of the portfolio with respect to each of these elements and cross-categorization, so that (for example) the quantity of any longer-maturity, lower-credit-quality assets is clearly identified. Information about fair values; yields; and narrative discussions of objectives, risk management policies, and controls can also promote transparency of risk and should be included. Such disclosures should be made quarterly, and they should be made using average balances so that average risks can be assessed – not just the risks on a given date. Over the next few quarters, OFHEO will discuss more specifically with the Enterprise how these disclosures will meet the expectations expressed in this guidance. Attached is an example of a disclosure format that may be used by the Enterprise. However, the

Enterprise may disclose the risks in its non-mortgage liquidity investment activities, consistent with the expectations expressed in this guidance, using a format of its choice.

Summary:

This Guidance sets forth OFHEO's process for evaluating the safety and soundness of liquidity non-mortgage investment activities. OFHEO remains committed to ensuring the Enterprises remain financially sound, have appropriate control environments, and engage only in financially sound business and investment activities. OFHEO's examiners have been instructed to incorporate this evaluation process into their ongoing safety and soundness examinations. Examiners will evaluate and test the Enterprise's non-mortgage liquidity investment processes and activities to ensure they are in compliance with this guidance.

Dated: ________________

____
Armando Falcon, Jr.
Director
Office of Federal Housing
Enterprise Oversight

Attachment

Sample Disclosure Form

Amortized Cost, By Rating Category

	AAA	AA	A	Below BBB
Non-Mortgage Investments				
Fed funds sold				
US Treasury securities				
US Agency securities				
Repurchase agreements				
Auction rate preferred stock				
Asset-backed securities				
Fixed-rate				
Adjustable-rate				
Commercial paper				
Corporate notes and bonds				
State and municipal obligations				
Other investments				
Total Non-Mortgage Investments				

Non-Mortgage Investments				
Due within one year				
Due after one year through five years				
Due after five years through ten years				
Due after ten years				
Asset-backed securities (1)				
Total Non-Mortgage Investments				

(1) Contractual maturities of asset-backed securities may not represent their expected lives as obligations underlying these securities may be prepaid at any time without penalty.

*Or equivalent

Sample Disclosure Form

	Amortized Cost	Fair Value	Yield	Wgtd Avg Maturity
Non-Mortgage Investments				
Fed funds sold				
US Treasury securities				
US Agency securities				
Repurchase agreements				
Auction rate preferred stock				
Asset-backed securities				
Fixed-rate				
Adjustable-rate				
Commercial paper				
Corporate notes and bonds				
State and municipal obligations				
Other investments				
Total Non-Mortgage Investments				

Non-Mortgage Investments				
Due within one year				
Due after one year through five years				
Due after five years through ten years				
Due after ten years				
Asset-backed securities (1)				
Total Non-Mortgage Investments				

(1) Contractual maturities of asset-backed securities may not represent their expected lives as obligations underlying these securities may be prepaid at any time without penalty.

OFHEO
Office of Examination and Oversight

Examination Guidance

Issuance Date: February 12, 2001 Doc. #: EG-2001-01
Subject: Examining for "Model Exposure"

To: All OFHEO Examining Personnel

The Office of Examination and Oversight (OEO) is committed to an effective, efficient, and transparent Examination Program. A critical component of OFHEO's risk-based examination and oversight process includes the ongoing review and assessment of its program. We have concluded the Examination Program would benefit from greater transparency in our approach for examining for "Model Exposure".

When assessing the quality of risk management, OFHEO's examiners routinely evaluate the quality of the tools and processes used by the Enterprises, as well as the quality of the personnel who use the tools, execute the processes and implement Enterprise practices. This Examiner Guidance provides general instruction for OFHEO's examiners who evaluate the Enterprises' use of automated models and other sophisticated quantitative (mathematical) techniques in their selection and management of risk. In addition, this Guidance addresses issues related to the Enterprises' "model exposure", including the sources and consequences of model exposure, and the control of model exposure through validation of quantitative methods and methodologies. By following the examination approach outlined in this Guidance, OFHEO's examiners will be positioned to opine on both the quality of the Enterprises' computer models and quantitative techniques, as well as the control environment that surrounds these tools.

The examination activities described in this Guidance are consistent with and complement OFHEO's Examination Program that is described in Chapter 2 of the *Examination Handbook*. This Guidance provides expanded direction to examiners for their use in assessing the risk framework associated with each of the examination program areas.

Attachment

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G. Scott Calhoun
Chief Examiner

Examining for “Model Exposure”

Purpose

Routinely, examiners evaluate the quality of the tools used by management in tandem with an evaluation of the quality of personnel and processes when evaluating the overall quality of risk management. This issuance provides general guidance for OFHEO’s examiners who evaluate the Enterprises’ computer models and other quantitative techniques to select and manage risks. In addition, this document addresses issues related to the Enterprises’ “model exposure”, including the sources and consequences of model exposure, and controlling model exposure through validation of quantitative methods. Through the approach outlined, OFHEO’s examiners will be positioned to opine on the quality of the Enterprises’ models, along with the control environment that surrounds these tools.

Background

The Enterprises, like many other financial institutions, use a variety of computer models and quantitative techniques to deliver and price products and services, as well as manage their portfolios of risk. Computer models are vital tools needed by the Enterprises to process the vast amounts of information at their disposal. These models can provide analytically rigorous measurements of risks and are intended to aid management in objectively measuring risk, controlling risk, pricing financial instruments, and improving business decisions. Models are used for a wide variety of activities, including asset/liability management, assessing borrower creditworthiness, measuring performance, evaluating and selecting risks and transactions, forecasting future earnings, estimating values of financial instruments, managing capital allocations, assessing hedging strategies, and evaluating business opportunities.

While computer models and mathematical techniques are designed to be effective management tools, undue reliance on them for business decision-making and risk management introduces “model exposure”. While models can provide for methodical and rigorous analyses, a flaw or material error can result in unexpected, unintended, or misstated risk. In recent years, high-profile cases have been reported where faulty modeling has had adverse financial impacts on several financial firms. These examples serve to highlight the need for rigorous controls and management oversight when models are used to provide information for management’s decision-making and risk-taking.

In response to these cases, regulators now stress the importance of model reliability – not just when the models are introduced, but as long as the models are used. Financial regulators highlight the need to periodically review and validate the data, methodologies, and assumptions used in quantitative models. Financial regulators are also concerned with over-reliance on any single risk measure or quantitative tool. The regulators appropriately stress that while the quantitative side of risk management is improving rapidly, effective risk management involves a blend of qualitative and quantitative information. In other words, models and quantitative techniques should complement the "human factor", which incorporates experience and an intuitive understanding of markets, human behavior, and the environment.

Sources & Consequences of Model Exposure

Model exposure is the risk that poor business decisions will result from a model that is: flawed in its logical operations; incorrectly applied; or inappropriately applied. For purposes of this Guidance, a model is considered to have three components:

- A set of information or data inputs (e.g. financial positions, customer information, market conditions, historic information, etc.);
- Computer programs that employ mathematical and logical operations to process information to produce quantitative estimates; and
- A reporting system that allows management to incorporate these quantitative estimates into the decision-making process.

Material errors or flaws can inadvertently arise in any of these three components. For example:

- Input information can be missing or in error;
- The computer program or the mathematical logic can be flawed;
- Even if the information inputs and computer programming are reliable, there may be mistakes in the reports (output); or decision-makers can misinterpret the model's output or conclusions.

The ways in which model errors can lead to poor decision-making varies. However, some common examples of model exposure are:

- *Misestimate of Risk*: A model can either overstate or understate the level and nature of risk associated with particular transactions, portfolio of financial instruments, or line of business. If a model overstates risk, the decision-maker may forego a profitable business opportunity. If a model understates risk, a decision-maker may make an unprofitable transaction or unknowingly expose the company to inappropriate risks.
- *Poor Risk Selection*: Faulty models can lead to poor portfolio choices and risk selection. For example, inaccurate data or programming errors can cause a credit-scoring model to incorrectly rank potential borrower's creditworthiness. The cumulative effect of such an error may have adverse consequences on the portfolio's profitability and the goal of fulfilling legitimate credit needs.
- *Misallocation of Capital*: Since capital allocation depends on complex risk and return measures, model errors can lead to an inappropriate allocation of the capital resources across lines of business and portfolios of risk.

- *Inappropriate Drivers for Organizational Behaviors*: The drivers of organizational behavior may be inappropriately influenced by errors in measurement and reporting. If there is flawed information, an organization may find its individual decisions and transactions to be in conflict with its defined goals and objectives.

Controlling Model Exposure

Controlling model exposure, commonly referred to as "model validation," requires minimizing errors in each of the three model components. Model validation is necessary to ensure the accuracy and reliability of model inputs, computational processes, and the model estimates generated.

Implementing a model can be a substantial, systems-intensive procedure. Beyond the information technology challenges, we expect each GSE to have a company-wide standard that protects the Enterprises from relying on flawed models. At a minimum, the standard should define the process or principles employed across the organization to ensure that models are "valid" and surrounded by the appropriate control environment. Standards for the control environment should outline:

- the controls assuring the quality of data inputs;
- the controls assuring the logical operations and mathematical computations maintained in the code; and
- the controls assuring that risk measurement reporting is accurate and the related systems are sound.

Accordingly, management should ensure the following:

- An independent, formal vetting and validation process is present to approve models (including modifications), the quality of assumptions and the integrity of the data sources. Independence is defined as the meaningful involvement of qualified individuals who are not directly involved in the discrete risk-taking decisions for which the model is being used, and whose compensation is not directly related to what the particular model is estimating.
- The model's methodologies (data sources, formulas, parameter selection, etc.) are protected and documented. The documentation should include a description of the transactions and circumstances in which the model may be appropriately used
- An independent review is periodically conducted to verify the completeness of data capture, correctness of model inputs, and the accuracy of results from the mathematical and logical operations. The periodic reviews need to be conducted by parties with the appropriate level of expertise to add credibility to the assessment.
- The GSEs should implement precautions to ensure that the loss of a few key personnel does not impair their ability to operate or maintain the reliability of the models and maintain the appropriate elements of independence.

Audit is expected, at a minimum, to play a baseline role in assuring models are reliable and operating within an appropriate control environment. In addition to testing for internal controls and checking for independence, audit should verify that the model inputs are consistent with general ledger and counterparty information, and that reasonable procedures and controls are in place to derive third party data used to run models. Audit should perform sufficient verification work to attest that computer programs are coded correctly and that the underlying mathematical and logical operations are consistent with the documented standards and methodologies.

When practicable, it is desirable to supplement internal processes and audit reviews with independent peer reviews by modeling professionals. Independent peer reviews are particularly useful for addressing the validity of the model's mathematical and logical operations, and the clarity of reports used to communicate model estimates to management.

OFHEO's Examination Approach

Sound risk management is vital to the prudent operation of the Enterprises' businesses, and is grounded in good risk measurement. Examiners should remember, however, that there are no sophisticated analytics that can replace experience and sound professional judgement when selecting and managing risks. Therefore, the Enterprises' computer models and quantitative techniques should be viewed as tools that support, but do not supplant, management's decisions and judgements when selecting and managing risks. Excessive reliance upon these tools that is not supported by human judgement or an appropriate control framework is considered imprudent.

In evaluating safety and soundness exposure to models, OFHEO has structured its evaluations to complement the routine examination work conducted in accordance with the program detailed in this *Examination Handbook*. When reviewing computer models and quantitative techniques, examiners are directed to evaluate the quality of the Enterprise's control environment that surrounds the models and the quality of model validation in each of the three components discussed in this *Examination Guidance* consistent with the purpose and use of the model. Examiners must consider if models reliably and adequately support management's identification, monitoring, and evaluation of risk. When conducting a review of models, examiners will consider the questions in this section of the guidance, as appropriate.

General Questions:

- Does management maintain an inventory of the substantive models used in financial and risk-taking decisions?

- Does the model identify and measure the relevant risks? What risks were identified?

- Does the validation process reconcile the stated or desired level of risk with the actual risk resulting? What are the results of this reconciliation?

- Are the models and data inputs appropriately selected?

<u>Questions Covering the **Data Input Component**:</u>

- Is there a rigorous process for ensuring and validating quality data inputs? What were the results of this validation process?

- How is this process tested?

- With what frequency will this process be tested?

- How are the approved processes for data input protected?

- What is the quality control process? What were the results from the quality control process?

<u>Questions Concerning the **Mathematical and Logical Operations Component**:</u>

- What are the mathematical and logical operations for this model operation?

- How were the mathematical and logical operations of the model validated? What were the results of this validation?

- How, by whom, and under what circumstances can the mathematical and logical operations be tweaked or changed? When these mathematical and logical operations are tweaked or changed, what is the requirement for re-testing or re-validation?

- Is there a defined frequency for when the mathematical and logical operations of the model are routinely rechecked?

- Do the mathematical and logical operations of the model seem reasonable?

  - Are the mathematical and logical operations likely to generate conservative results?
  - Are the mathematical and logical operations likely to generate aggressive results?
  - Are the mathematical and logical operations adequately documented?

- What are the major assumptions used in the model? Are they adequately documented and appropriately supported?

- How do the mathematical and logical operations of the model, and the assumptions driving the model compare with generally accepted methodologies and/or market conventions?

  - If not, can the Enterprise provide sound support and analysis for these differences?
  - If not, what is the nature and magnitude of the variance in the output as a result of these differences?

- Where there are differences, do these differences affect the reliability of the results as they are being used for decision-making? If yes, describe the nature of the differences.

Questions Covering the **Reporting Component**:

- How are the model outputs incorporated into management and decision-making tools? How does management assure itself that the metrics being incorporated result in reliable information for decision-making?

- Are the outputs being appropriately characterized in management reports?

- Does the presentation of the outputs create any bias in the decision-making process?

- Does incorporating the model outputs enhance management's ability to prudently manage risk and make business decisions?

- When changes in data inputs or mathematical and logical operations alter the outputs, how are decision-makers informed and educated about the change?

- What are the quality control processes, and how are outputs reviewed to detect any potential problems resulting from bad data and faulty assumptions?

Summary Questions:

- Is this model a reliable tool for use in management's decisions to select and price risk?

- Is this model a reliable tool for use in monitoring and managing risk?

Summary

The purpose of this Examination Guidance is to instruct OFHEO's examiners on the process for use in evaluating model exposure. The process details an assessment framework that ensures the Enterprise has an appropriate control environment and conducts sufficient testing and validation to rely upon the results of its automated tools and quantitative techniques. Examiners will couple these assessments with the assessments generated through the other examination areas to determine the alignment of these risk management tools with the human judgements and business practices of the Enterprise.