Federal National Mortgage Association
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TABLE OF CONTENTS

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The information contained in this ROE is based on the books and records of the enterprise, statements made to the examiners by directors, officers, and employees, and information obtained from other sources the examiners believed to be reliable and presumed by the examiners to be correct. The examination is not an audit and should not be construed as such. Neither the examination nor the ROE relieves the directors of their responsibility for providing for adequate audits of the enterprise.

Examination Authority and Scope

This Report of Examination contains the results and conclusions of FHFA's 2008 annual examination of the Federal National Mortgage Association (called Fannie Mae, or the enterprise) performed under section 1317(a) of the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 as amended (12 USC § 4517(a)). FHFA's annual examination program assesses the enterprise's financial safety and soundness and overall risk management practices. The framework FHFA uses to report examination results and conclusions to the board of directors and Congress is known as GSEER, which stands for *Governance, Solvency, Earnings,* and *Enterprise Risk* (Enterprise Risk comprises credit, market, and operational risk management).

2008 Examination Scope

In 2008 we dedicated significant resources to analyzing the enterprise's levels and trends in asset quality and their impact on loan loss reserves, earnings and capital adequacy. Once the Director appointed FHFA as conservator, examination activities shifted to monitoring rapidly changing market conditions, management actions and their effect on the enterprise's risk profile and condition.

Other examination activities during 2008 assessed actions of the board of directors, quality of executive management, enterprise-wide risk management and audit functions, accounting estimates and their effect on capital, key model performance, loan delinquency and foreclosure management, counterparty exposure, liquidity and interest rate risk profiles and risk management practices, the internal control environment, and risks in information technology, data quality, and business continuity.

Rating

Fannie Mae's composite rating is *critical concerns*. Enterprises with critical safety and soundness concerns exhibit severe financial, nonfinancial, operational, or compliance weaknesses. Enterprises with this rating require more than normal supervision to ensure deficiencies are addressed. Definitions for all composite ratings can be found in FHFA's *Supervision Handbook*.

FHFA first assigned this rating at midyear, which led to appointment of FHFA as conservator. The appointment of FHFA as conservator, combined with Treasury financial support, Federal Reserve actions, and new management at the enterprise have stabilized the enterprise's condition. While the critical concerns rating at yearend reflects the fact that the enterprise is not capable of currently operating without government assistance, FHFA also acknowledges the strides the Fannie Mae board, management, and staff have made under conservatorship to help stabilize the enterprise and maintain its ongoing support of the secondary mortgage market.

Examination Conclusions

The enterprise exhibits critical safety and soundness concerns primarily due to the weak housing market, resulting in severe financial weaknesses which worsened to unprecedented levels during 2008. Risk management decisions that occurred before the conservatorship, coupled with continued financial market deterioration, led to net losses and eroded capital. Weakened earnings and market conditions led to difficulties in raising capital and issuing long-term debt, which contributed to the Director's decision to appoint FHFA as conservator.

In prior years, management expanded product eligibility to include nontraditional mortgage products, particularly Alt-A mortgages. These products have been the source of a disproportionate share of delinquencies, foreclosures, and credit-related expenses. Moreover, credit decisions failed to adequately assess borrower capacity and suitability. Certain decisions, including the underestimation of risk associated with these products, coupled with changes in the economy, led to escalating increases in delinquencies, foreclosures, credit-related expenses and losses, and $26 billion of mark-to-market losses in the private-label securities portfolio.

Market illiquidity, combined with aggressive board and management risk limits, significantly increased risks in market risk management. The fragile state of the enterprise long-term debt markets before the conservatorship revealed weaknesses in management's liquidity strategies, the volatile mortgage basis diminished the reliability of hedging decisions. Uncertain model results combined with aggressive limits and hedging strategies led to critical levels of interest rate risk relative to the enterprise's weak earnings and capital.

Operational risk increased during 2008, but FHFA acknowledges improvements to mitigate risk. The enterprise has certain manual controls that are a concern and the operational risk oversight function is incomplete. The business process mapping initiatives have not been consolidated, which limits the enterprise-wide perspective on internal controls. Remediation of issues relating to internal controls and information technology is continuing.

Accounting policies and estimates, which are inherently high risk given current market conditions, continue to be a significant supervisory concern. These areas include credit and guaranty loss reserves, securities valuation, and deferred tax assets. In this connection, some of management's decisions were insufficiently documented.

Financial Performance

Enormous net losses in 2008 resulted from a confluence of events: soaring mark-to-market losses, escalating credit-related expenses, and a large partial valuation allowance for deferred tax assets. The earnings outlook for 2009 is poor. Credit-related expenses and mark-to-market losses are influenced by market conditions that are expected to remain difficult during 2009. Continued poor financial performance could result in additional request for funds from the U.S. Treasury during 2009.

Asset Quality

During 2008, asset quality continued its precipitous decline begun in 2006. Underwriting decisions in prior years failed to fully assess borrower repayment capacity and suitability. Problems from credit losses and related expenses contributed to weakened earnings and a significantly weakened capital base. Specific credit problems were manifested in significant increases in delinquencies, foreclosures and credit expenses. Weakened counterparties, including mortgage insurers, servicers, and financial guarantors, significantly contributed to the impaired asset quality of the enterprise.

In early 2008, the credit risk models of the enterprise substantially under-predicted the housing market downturn and the resulting credit losses. During 2008, key credit applications in guaranty fee pricing and automated underwriting were substantially updated, improving performance. In addition, new models were developed to assist in loss mitigation and property disposition. Unfortunately, these improvements came too late, after hundreds of billions of dollars in risky loans had been acquired or guaranteed. While the credit models in place at the beginning of 2008 indicated that guaranty fees were insufficient to cover estimated credit risk, the more conservative models deployed later in the year sent a stronger message that returns had been inadequate.

The enterprise will continue to be challenged as it works with servicers in providing assistance to borrowers experiencing payment difficulties. Simultaneously, the enterprise must also manage and sell an increasing inventory of foreclosed properties while minimizing the negative impact to neighborhoods that foreclosure often pose. Prospects for future asset quality are poor in the short term, as declining economic factors continue to impair the financial capacity of borrowers and counterparties.

Internal Controls

Risks in internal controls, information technology, and the information management environments increased due to the enterprise's deteriorating financial condition and significant safety and soundness concerns as well as numerous organizational changes, and the uncertain markets. FHFA acknowledges significant investment and improvements, largely in information technology, to better identify, manage and mitigate risk. However, despite these improvements, the enterprise has certain manual controls that require automation. In addition, the operational risk oversight organization, which is not fully developed, needs to be completed. The scale and scope of remediation needed in internal controls and information technology is considerable, requiring multi-year plans to address the deficiencies. These internal and external challenges could delay or derail needed enhancements.

FHFA terminated the May 23, 2006 consent order based on the determination that the enterprise was in compliance with the terms of the order and had put in place methods for facilitating ongoing supervision of remediated items. However, progress in implementing the plan to build out one item -- the operational risk function as required by the Director of Supervision's contemporaneous letter dated May 6, 2008 letter ("the May 6 letter") -- is lagging.

Summary

The enterprise has (1) a new board and chief executive officer working with the conservator to restore the enterprise's long term viability; (2) depleted capital but a substantial backstop from the U.S. Treasury; (3) poor earnings from unprecedented credit expenses and declines in loan and securities prices; (4) high and increasing credit risk primarily from declining performance in the single family business line and concentrations in counterparties; (5) high market risk from aggressive interest rate risk limits and hedging strategies compounded by significant model risk; and (6) high operational risk that can be improved through additional automation of the control environment and a fully developed operational risk oversight function.

MATTERS REQUIRING ATTENTION

The following key matters highlighted in this report require strong management and board oversight:

Governance

- Work in cooperation with the conservator to continue to recruit and retain qualified senior executive officers to ensure that management is strengthened; ensure appropriate management succession planning and officer accountability.

- Adopt a reporting framework for management reporting to the board that, among other things, draws attention to internal and external conditions that threaten the achievement of approved corporate objectives.

Credit Risk

- Regularly discuss the allowance for loan losses (ALL) in board or audit committee meetings. A quarterly ALL report should be provided prior to meetings. The report package should include quantitative and qualitative summary information on levels and trends in the allowance, as well as information on the dollar impact of key judgments and decisions made by management.

- Ensure the private-label securities policy is revised to address rating agency downgrades below investment grade to specifically address loss mitigation actions.

- Ensure that key vacancies are filled including the positions of credit risk oversight and single-family risk oversight.

Market Risk

- Revise the liquidity management plan for 2009, along with appropriate policies and procedures, to reflect current market conditions. The plans should recognize that under stress, Fannie Mae could not convert its high quality collateral to cash through repurchase agreements or sales.

- Revise the aggressive interest rate risk limits, particularly the convexity and volatility limits.

- Improve Fannie Mae's analytical capabilities to achieve comprehensive and effective risk measurement, management and reporting.

- Complete Fannie Mae's plan to securitize its $257 billion single family whole loan portfolio and its $108 billion multi-family loan portfolio.

Operational Risk

- Monitor progress of developing, documenting and implementing a robust operational risk oversight framework, which includes effective key risk indicators, trend analysis, an actionable operational risk profile, and a reliable data collection process. Ensure management's communication to the board adheres to operational risk oversight's charter requirements.

- Ensure sufficient staffing to allow for the frequent updating of key risk models, pricing models, and loss mitigation/property disposition models.

- Improve the controls over the loss forecasting process, and enhance the models used for loss reserving to make them more comprehensive and less reliant on management judgment.

Governance

Governance is rated *critical concerns*. This rating reflects the significant challenges faced by the new board of directors and management to address complex governance issues in the midst of significant industry upheaval. The board and management have demonstrated their willingness to address governance issues in a timely manner. However, the complexity of the issues and other complicating factors may impede or delay their efforts.

Board of Directors

The conservator issued orders in November and December 2008 that appointed a new board of directors, established five board committees, and described the board's authorities in conservatorship. The first meeting of the reconstituted Board of Directors occurred in January 2009. The chairman and chief executive officer have worked with the conservator and executive managers to stabilize the company and to implement corrective measures. However, the company's need to strengthen management, poor financial condition, and the prevailing economic environment pose major challenges to the board at this juncture.

The enterprise's long-term interests are served by a strong, stable, and deep management team. Consistent with the Conservator's delegation of authority to the board, FHFA is committed to working closely with the board to achieve that goal. In addition, given the company's crucial role in repairing and strengthening the mortgage finance industry, the board should oversee management's translation of formal and informal guidance provided by the FHFA into actionable business plans and implementation of those plans.

The board has successfully re-established the committee infrastructure and other processes necessary to fulfill the board's responsibilities, and has made substantial progress in a short period of time. The board should also continue to enhance its practices as appropriate to address the heightened demands of the current environment and company responsibilities.

Given the extreme demands on the board, it is important that management reporting practices draw attention to high-risk, high-impact matters that deserve board attention, and allow the board to make efficient use of its time. In addition, the board plays a crucial role in ensuring the full remediation of MRAs and known deficiencies. Specifically, management reporting should facilitate the board's monitoring of the status of management's efforts to remediate those matters.

Management

The enterprise faces significant challenges in its efforts to strengthen management and address increases in turnover and the substantial number of vacancies in key officer positions. During the prior 12 months, numerous incumbents resigned from key positions, including: chief executive officer, chief business officer, chief financial officer, general counsel, chief information officer, chief risk officer, executive vice president for capital markets, senior vice president for capital markets, senior vice president over the operational risk oversight group, senior vice president for single-family technology, and chief audit executive. While some of these changes were necessary responses to past management problems, turnover and vacancies on this scale create significant disruption in company processes and contribute to the uncertainties inherent in the company's condition.

After the conservatorship, the Board and management made significant progress in filling key positions. In early 2009, the enterprise selected candidates for general counsel, chief risk officer and the head of Operations and Technology. The chairman, chief executive officer and other company officers are considering revisions to committee structures, reporting lines and reporting practices that should further strengthen governance.

On May 6, 2008, the OFHEO Director terminated the May 23, 2006 consent order based on the determination that the enterprise was in compliance with the terms of the order and had put in place methods for facilitating ongoing supervision of remediated items of the order. The termination of the order represented a significant achievement by the enterprise in addressing the myriad weaknesses identified in the special examination. In a letter to the Fannie Mae chief executive officer issued concurrently with the Director's order terminating the consent order, the Director of the Office of Supervision provided supervisory guidance with regard to Consent Order issue 4.15 and the enterprise's operational risk oversight function. Specifically, the letter emphasized that the order required both a plan to build out the function within a three-year time horizon and the expeditious implementation of the plan. The letter also reminded the CEO that OFHEO had expressed supervisory concerns to management concerning their commitment to a sustained and expeditious implementation of the operational risk oversight plan. As of yearend 2008, FHFA and the enterprise's internal audit department independently concluded that management had not achieved the desired level of progress in implementing the plan.

Corporate policy and risk management practices should be revised as necessary to be consistent with guidance received from the conservator, and related company strategies.

The chairman and chief executive officer, and other company officers have been considering various organizational and committee structures, reporting lines, and reporting practices.

Enterprise Risk Management

New management continues to work on establishing an effective enterprise risk oversight function. In August 2008, the company's chief risk officer resigned, but management has recently selected a permanent chief risk officer. Additionally, FHFA is still assessing the realignment of the risk oversight function implemented during the end of 2008.

The market risk oversight group is ineffective. Management has not established a stable function with the appropriate infrastructure, and has been chronically understaffed. Operational risk oversight is ineffective, and has not developed as contemplated in the three-year plan submitted to the FHFA, and on which the FHFA relied, in part, to support the lifting of the 2006 consent order.

Internal Audit

The enterprise appointed a new senior vice president and chief audit executive in March 2008 who has extensive audit experience with financial institutions. During 2008, the Internal Audit department successfully completed the board-approved audit plan; reorganized the department; began reengineering the reporting framework to integrate control-related reporting; established constructive working relationships with the new CEO and other senior officers; and began advocating a variety of initiatives to address control-related shortcomings and increase accountability among company officers.

The FHFA Director, as conservator, issued an order in December 2008 appointing the audit committee of the board of directors, and on January 30, 2009, the audit committee approved a new charter. Under the revised charter, the audit committee will exercise the authorities previously exercised by the now defunct compliance committee and the technology and operations committee.

The audit department's resources appear to be adequate to fulfill its planned activities for 2009. However, FHFA is monitoring the effect of significant personnel changes resulting from the reorganization of the department during 2008. Approximately 75 percent of the audit staff has fewer than three years of experience auditing business activities at Fannie Mae, and approximately 30 percent of the audit staff has fewer than three years of overall audit experience. The company has arrangements with Ernst & Young to supplement its full-time staff as appropriate to ensure that audit teams have the skills necessary for any given audit. FHFA will be closely monitoring this issue in 2009.

Audit reporting is effective. The Internal Audit department adequately documents its findings and support and management's corrective action. The Internal Audit department is also leading an initiative to enhance reporting by integrating control-related deficiency reporting to incorporate control-related issues into a single set of reports.

Compliance

As noted above, the audit committee of the board of directors now exercises authority over compliance matters. FHFA's chief concern at the board level is with the committee's ability to rapidly develop its expertise over an expanded set of responsibilities, given that two of the four committee members are new to the board of directors.

The company's compliance program is functioning effectively. This opinion is based primarily on the Compliance & Ethics Division's contribution to company actions that resulted in OFHEO lifting the 2006 consent order and on the division's role in implementing the company's compliance program.

The division also executed the key elements of the company's compliance program, specifically: (1) risk identification and inherent risk assessment; (2) risk control assessment; (3) risk mitigation; and (4) monitoring and reporting. FHFA did not identify significant weaknesses in the division's compliance-related practices. However, FHFA did not conduct extensive field work in this area during 2008.

FHFA began a preliminary review in 2008 of the record prepared by the investigations unit of the division in conjunction with an allegation of retaliation and discrimination submitted by a former company employee. The purpose of the review was to evaluate a sample investigation performed by the company in response to such allegations and assess the quality of the investigation and of the related documentation. FHFA did not complete field work or issue findings by the end of the year but will complete this examination work in 2009.

Accounting

Accounting policies and estimates, which are inherently high risk, especially in the current market conditions, continue to be a significant supervisory concern. These areas are discussed below:

The enterprise has implemented Section 404 of the Sarbanes-Oxley Act. Deloitte & Touche, LLP, conducted an integrated audit. In this connection Deloitte was able to rely on some of the work done by the enterprise's internal audit unit.

In order to provide a minimum safety and soundness threshold, the application of GAAP and ensure consistency in approach between the two enterprises, FHFA issued standards for assessing OTTI on August 28, 2008. In its third quarter of 2008, the enterprise implemented the new standards contained in the guidance. .

The enterprise properly implemented FAS 159, *The Fair Value Option for Financial Assets and Financial Liabilities*. In April 2008, FHFA issued FVO guidance, *Standards for Enterprise Use of the Fair Value Option* to both enterprises. Our review found the enterprise fully implemented the guidance.

Our review of reserves for credit default and guarantee costs revealed the following:

- Accounting policies in this area are in accord with GAAP.

- Management has initiated steps to enhance the reserve analysis and reporting process, including improvements in the reporting regarding the impacts of management's assumptions and decisions and on the reserve calculation.

- Earlier in the year, weaknesses were noted in the process related to the calculation of reserves. Examples where a more conservative approach or enhanced documentation may have been warranted to meet an enhanced safety and soundness standard included the following: the amount of defaulted loans that could be put back to the originators on the basis of failures of representations and warranties and the amounts to be ultimately realized from mortgage insurance companies. Later in the year, documentation was improved.

- During 2008, FHFA noted large differences between GAAP-based reserves and other measures of credit loss. Differences between these measures should be expected because GAAP reserves are calculated on an "incurred loss to date" basis, while total future expected losses are calculated on an "entire life of the transaction" basis. FHFA believes that regular reconciliation of the GAAP reserves to other measures of expected credit loss will inform and enhance the GAAP reserve process, especially in this rapidly changing economic environment.

The enterprise first established a valuation allowance for the deferred tax assets (DTA) for the third quarter of 2008 of $21.4 billion, which is 82% of the $26 billion DTA, because it was not certain it would be able to earn sufficient future taxable income needed to realize the entire DTA.

The enterprise consulted with the Securities and Exchange Commission (SEC) to affirm the method it used to calculate the DTA valuation allowance because there is variation in practice across commercial enterprises. The SEC did not object to the enterprise's method. However, at the SEC's suggestion, Fannie Mae and Freddie Mac sent a joint letter to the Financial Accounting Standards Board (FASB) to request that FASB provide clarification of the accounting in this area for the benefit of users of financial statements.

A proposed change by FASB to FIN 46(R), *Consolidation of Variable Interest Entities*, would result in the consolidation of millions of off-balance sheet loans, currently in off-balance sheet trusts. Depending on the implementation date ultimately required by FASB, it may be difficult for the enterprise to implement the proposed amendments in a controlled manner to meet the effective date, which is presently expected to be January 1, 2010.

Solvency

The rating for capital is *suspended.* FHFA's Office of Capital Supervision formally classifies capital adequacy quarterly in accordance with Subtitle B of the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 and with the requirements set forth in FHFA's minimum and risk-based capital regulations. The enterprise is required by federal statute to meet both minimum and risk-based capital standards to be classified as adequately capitalized. Through the second quarter of 2008, Fannie Mae remained subject to an OFHEO-directed capital requirement from 2004 that was subsequently modified twice in 2008.

On September 6, 2008, the FHFA Director appointed FHFA conservator for the enterprise. Subsequently, the Director suspended capital classifications for the conservatorship period. The Director made this determination based on the fact that the purpose of the classifications—prompt corrective action—is moot during conservatorship, and because the capital, or GAAP net worth, position of the enterprise would be supported by the United States Treasury's Senior Preferred Stock Purchase Agreement.

The action to place the enterprise into conservatorship is supported by the Treasury agreement, which ensures the enterprise will maintain a positive net worth through Treasury's commitment to provide up to $200 billion of capital. The Treasury agreement required, as an initial consideration for Treasury's commitment, that each enterprise issue Treasury $1 billion and a warrant for 79.9 percent of common stock[1].

FHFA classified Fannie Mae as adequately capitalized for year-end 2007 and the first quarter of 2008. Fannie Mae issued $7.0 billion in preferred stock in December 2007 to bolster its surplus. Although Fannie Mae met all FHFA capital requirements for the second quarter 2008, the Director used his discretionary authority to classify Fannie Mae as undercapitalized for that quarter, citing concern about the sufficiency of capital given the continuing market downturn during July and August. Fannie Mae did complete an issuance of common, preferred, and mandatory convertible preferred stock totaling $7.4 billion in May 2008. However, credit losses resulted in rapid depletion of capital throughout the summer. The enterprise could not raise additional capital, which was a key factor in the decision by the Director to appoint FHFA as conservator for the enterprise.

FHFA did not classify Fannie Mae's capital for the third quarter 2008. Fannie Mae maintained positive GAAP net worth throughout the third quarter and so did not require a request for funds from the Treasury. Although GAAP net worth remained positive, it deteriorated significantly during the quarter when Fannie Mae recorded a negative deferred tax asset adjustment of $21.4 billion. A draw on the Treasury commitment of $15.2 billion was required to eliminate the negative balance of GAAP net worth at year end 2008, again owing to continuing significant credit losses and negative mark-to-market adjustments.

[1] A draw on the Treasury commitment effectively increases the liquidation preference up from the initial $1,000 per share on the 1 million shares of issued senior preferred stock.

FHFA noted improvements in Fannie Mae's capital planning and forecasting process in general during 2008: however, actual forecasts proved highly inaccurate because of unprecedented market conditions. Fannie Mae committed to implement prudent standards for income forecasting, coupled with enhanced credit and additional market stress scenarios. Additionally, it remains essential that the capital plan incorporate a discussion of the fair value of equity and progress on its economic capital model. Since the appointment of a conservator, Fannie Mae's efforts to further develop their economic capital model stalled, in part because of employee turnover.

Earnings

The rating for earnings is *critical concerns*. Fannie Mae reported a historic annual net loss of $58.7 billion.

Figure 1.

Fannie Mae Annual Earnings ($ billions)

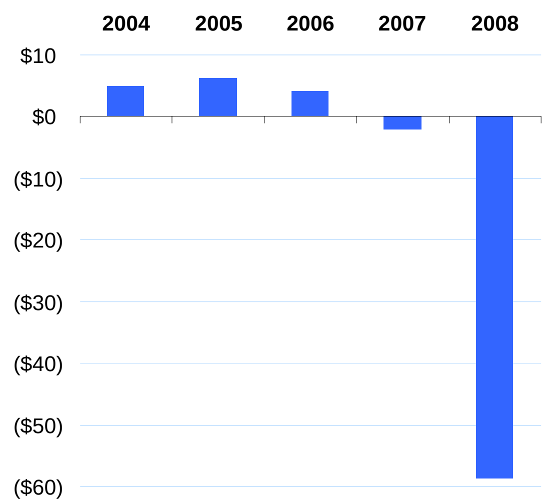
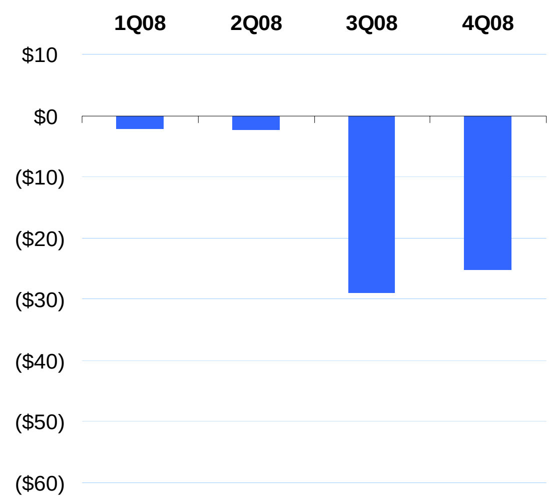


Figure 2.

Fannie Mae Quarterly Earnings ($ billions)

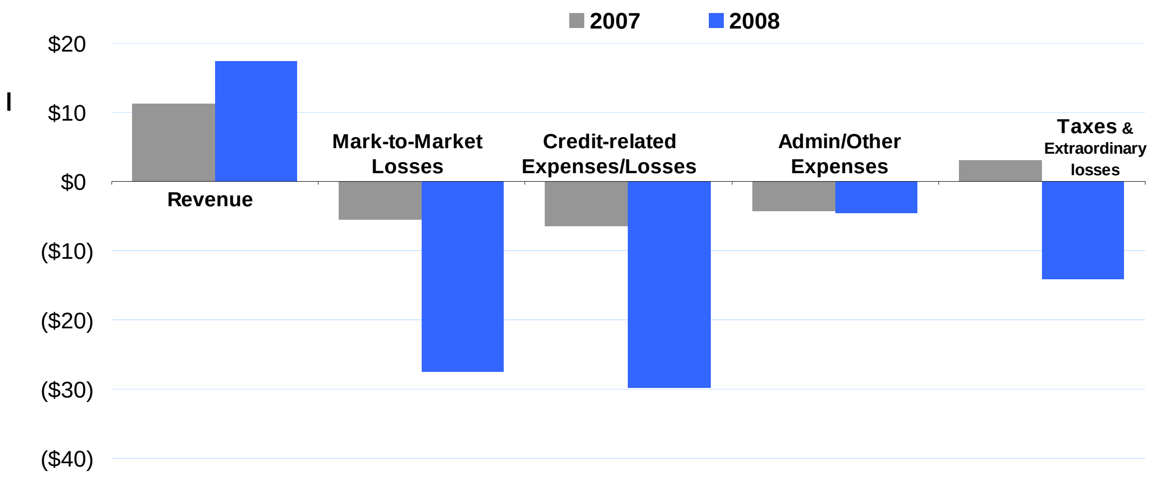


Financial results, which were poor in the first half of the year, dropped to unprecedented levels in the second half of the year, as the downturn in housing, mortgage, and credit markets accelerated. The plunging market adversely affected key market drivers, yielding high mark-to-market losses, credit-related expenses and losses[2], and impairments of deferred tax assets in 2008.

[2] Credit-related expenses and losses are defined as the sum of the provision for credit losses, foreclosed property expense and losses on certain guaranty contracts.

Figure 3.

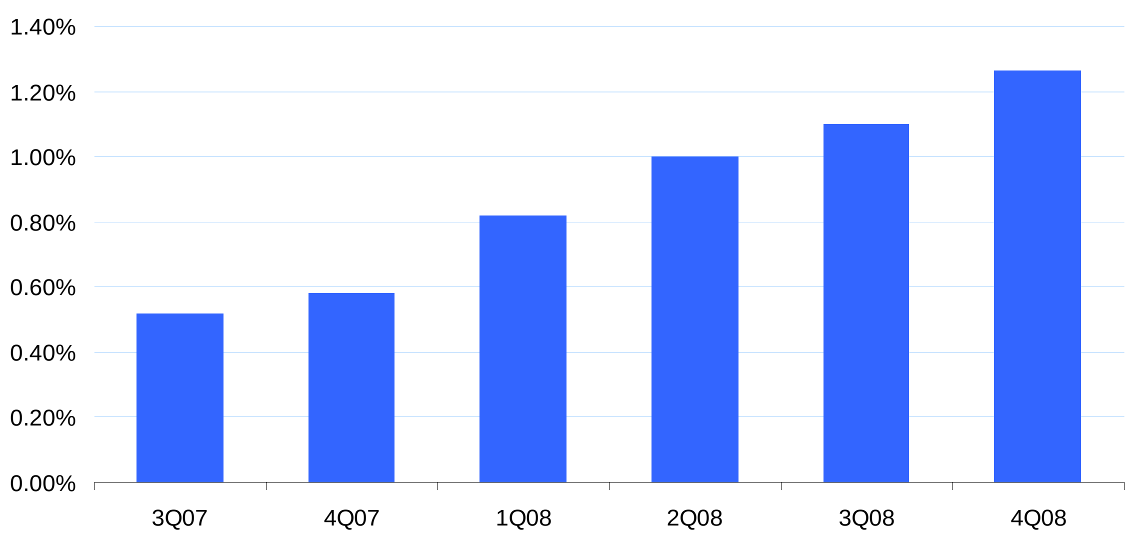
Fannie Mae Annual Earnings Detail ($ billions)



Revenue was a bright spot for earnings in 2008. Fannie Mae reported increases in revenue from both the investment portfolio business and the credit guarantee business.

Figure 4.

Fannie Mae Net Interest Yield



Net interest income increased to $8.8 billion from $4.6 billion in 2007. The disruption in credit markets that started in mid-2007 increased the cost of long-term funding and resulted in a shift to more short-term debt funding. Beginning in July 2008, extended market turmoil reduced demand for the enterprises' long-term debt and callable debt. As a result, Fannie Mae substantially increased its reliance on short-term debt funding. Greater reliance on short-term debt at lower borrowing rates decreased the average cost of debt and increased net interest yield during the year.

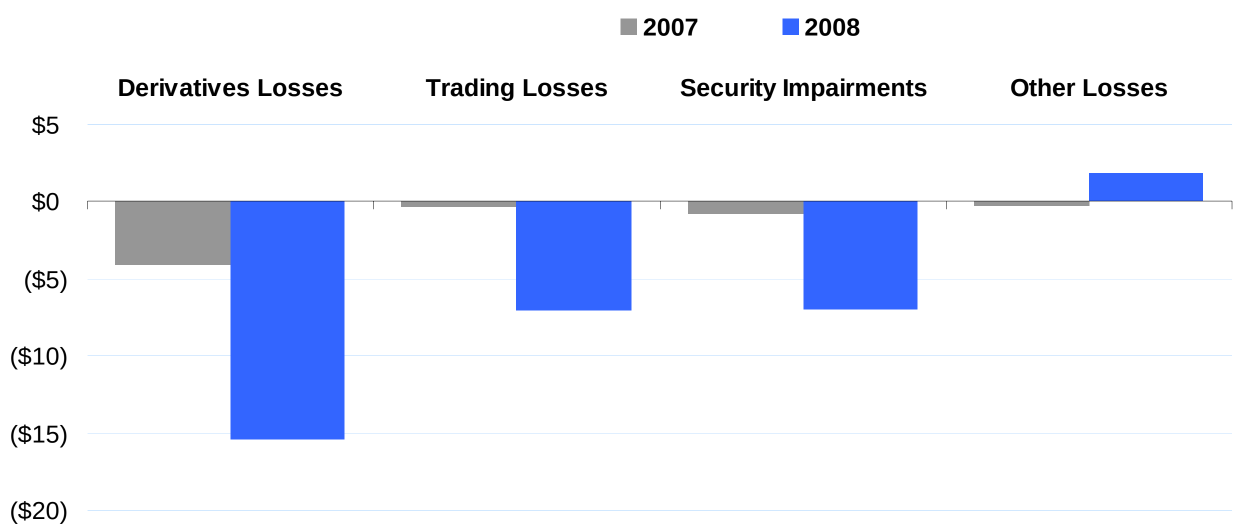
Guarantee fee income increased to $7.6 billion from $5.1 billion in 2007. Significant decreases in mortgage rates in the second half of the year increased expected prepayments and accelerated recognition of guarantee fee income.

Mark-to-market Losses

Mark-to-market losses rose in 2008 as market conditions impacted key drivers of losses. Fannie Mae incurred mark-to-market losses of $27.6 billion in earnings in 2008, compared to $5.6 billion of mark-to-market losses in 2007.

Figure 5.

Fannie Mae Mark-to-Market Losses Detail ($ billions)



Mark-to-market losses on derivatives, that are used to hedge mortgage investments, were substantial in the second half of the year, driven by historic declines in interest rates. Interest rates declined across the yield curve during the year after the Federal Reserve lowered the target for the federal funds rate and increased its direct purchases of debentures and mortgage-backed securities. Rates fell sharply in the fourth quarter as investors retreated to the safety of Treasury securities in the face of massive declines in major stock indices and dimming prospects for a rapid economic recovery.

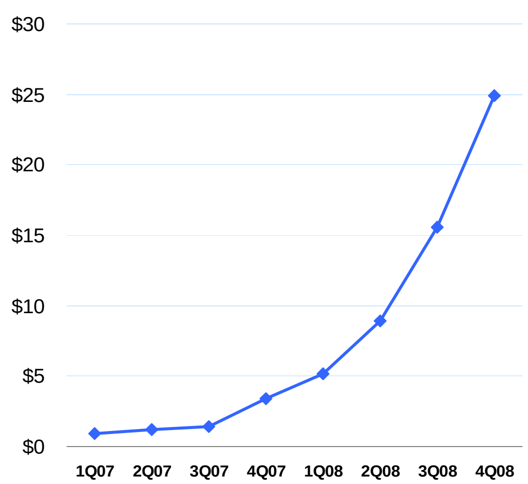
Market values of private-label mortgage-backed securities held by the enterprise plummeted during the year. Consequently, Fannie Mae incurred substantial trading losses and other-than-temporary impairments on securities. Declining security market valuations also drove a substantial increase in unrealized losses on available-for-sale securities, reported in shareholders' equity but not in earnings. Realized and unrealized losses on non-agency securities totaled $26.3 billion in 2008.

Credit-Related Expenses and Losses

Increasing unemployment rates and declining house prices contributed to higher delinquency and default rates on mortgages, and increased the severity of credit losses. Accordingly, Fannie Mae substantially increased its loan loss reserves during the year to reflect higher expectations of credit losses.

Figure 6.

Fannie Mae Loan Loss Reserve ($ billions)



The market downturn resulted in more properties entering foreclosure, which increased foreclosure-related expenses. Credit losses from purchases of delinquent loans increased as the prices of these loans declined.

These factors led to higher credit-related expenses and losses compared to the previous year. Fannie Mae reported credit-related expenses and losses in earnings of $29.8 billion in 2008 compared to $6.4 billion in 2007.

Provision for Federal Income Taxes

In 2007, Fannie Mae recorded a benefit for federal income taxes, which increased earnings. But in 2008, Fannie Mae incurred substantial provisions for federal income because it established a partial valuation allowance for deferred tax assets during the third quarter of 2008.

The decision to establish the valuation allowance to reduce deferred tax assets was based on management's conclusion that Fannie Mae was not likely to generate sufficient future taxable income to realize the full amount of its deferred tax assets. Fannie Mae recognized a valuation allowance of $21.4 billion representing the portion of deferred tax assets deemed unrealizable. Fannie Mae also discontinued recognizing tax benefits related to increases in deferred tax assets for losses incurred in earnings. Consequently, the enterprise reported a provision for federal income taxes of $13.7 billion in 2008, as compared to an income tax benefit of $3.1 billion in 2007.

Summary

In 2008, net losses and higher unrealized losses on available-for-sale securities depleted shareholders' equity and led Fannie Mae to request $15.2 billion from the Treasury Senior Preferred Stock Purchase Agreement.

Enterprise Risk - Credit Risk Management

Credit risk is rated *critical concerns*. This rating is based on rapidly declining credit performance, primarily in the single-family business line. The declining performance affected earnings and capital through increasing credit expenses, including large additions to the loan loss reserve, severely weakening the enterprise.

Much of the enterprise's recent credit losses are the result of higher risk lending through the increased acquisition of nontraditional products, particularly Alt-A mortgages. Prudent underwriting and eligibility standards were not in place for these products, and consequently a disproportionate amount of delinquencies, foreclosures, and losses come from these products. Like many other mortgage investors, in hindsight Fannie Mae did not anticipate the substantial and sustained nationwide decline in house prices and the realized lack of creditworthiness of many recent homebuyers. During 2008, both before and after the conservatorship, Fannie Mae took steps to strengthen its underwriting standards to respond to the market.

Counterparty risk is increasing because of the problems faced by mortgage insurers, servicers, and loan originators. Mortgage insurers and financial guarantors experienced rating downgrades and capital erosion that places the viability of many of these companies in jeopardy. In addition, many seller/servicers also experienced capital, liquidity, and operational issues that increase counterparty risk. Several loan originators were financially weak and merged. However, this has resulted in even fewer and larger mortgage originators, which has increased concentration risk for Fannie Mae.

Credit risk management has been responsive to the current crisis, but the effects of their actions are not yet measurable nor proven sustainable. Credit risk management created avenues for borrowers needing assistance, tightened credit underwriting for new acquisitions, and ceased the acquisition of higher-risk mortgage products. Counterparty risk management diligently identifies exposures from counterparties and takes appropriate actions to protect Fannie Mae's interest. Similarly, management in Housing and Community Development has been responsive to the deterioration in the multifamily business line.

Single-Family Credit

Several performance indicators reflect the significant deterioration of the single-family business line in 2008, consistent with the decline of the mortgage market generally. The following metrics compare yearend 2008 to yearend 2007:

- Serious delinquency rate increased from 1.0 percent to 2.4 percent.
- Real estate owned (REO) inventory increased from 33,729 properties to 63,538 properties.
- Economic loss[3] severity rate increased from 17.2 percent to 19.3 percent.
- Credit losses increased from $1.3 billion to $6.6 billion.
- Single-family loan loss reserve increased from $3.3 billion to $24.6 billion.

A significant portion of the delinquent mortgages is credit enhanced, but the companies providing the enhancement are experiencing financial difficulties and one company is in runoff mode. Enterprise management stress analysis reflects the potential likelihood that not all mortgage insurers will be able to pay all claims in the out years.

The potential for further impact to earnings is high as the large inventory of foreclosed assets coupled with house price depreciation makes liquidation difficult without incurring additional losses. There is potential for additional significant increases to REO because the enterprise placed a moratorium on foreclosures in late 2008. On the other hand, recent initiatives aimed at foreclosure prevention, combined with the moratorium, may reduce losses.

[3] Economic loss is unpaid balance + interest – receipts + disbursements

Management in the single-family business line, along with credit risk oversight, implemented prudential underwriting standards and other actions that were responsive to the declining performance in the book of business, including the following:

- Tightened underwriting standards including higher minimum credit scores and higher loan-to-value ratios for some products.
- Increased net worth requirements for sellers and servicers.
- Curtailed the acquisition of higher-risk products including Alt-A and subprime.
- Rolled out *Desktop Underwriter 7.0* in May 2008 to update the DU risk assessment process and incorporate several underwriting changes.
- Established credit risk limits for sub-book populations that have high model uncertainty.
- Changed pricing, including loan level pricing adjustments and an adverse market delivery charge.
- Doubled the number of loan files reviewed in quality assurance.
- Increased staffing and contractor assistance in the back-end functions.

The single-family business continues to address rising delinquencies, losses, foreclosures, and counterparty issues. Single-family management devised programs to assist troubled borrowers such as the Home Saver Advance (HSA) program. HSA is showing a high redefault rate on the early offerings. Performance on the February through April offerings shows a redefault rate of almost 70%, which calls into question the program's assumption that borrowers have the capacity to make payments going forward. The enterprise initially did not provide funding distribution instructions to servicers, so some delinquencies did not cure.

Management is responding to the increase in problem mortgages and the economic downturn by increasing the loan loss reserve against the single-family book of business. In 2008, the increase in the loan loss reserve for single-family was approximately $22 billion for an ending reserve of approximately $25 billion. In addition, management is aggressive in developing and promoting loss mitigation strategies aimed at helping troubled borrowers and reducing credit losses. FHFA notes the leadership Fannie Mae demonstrated late in the year in assisting with the development and implementation of the Streamlined Modification Program. More recently, Fannie Mae has played a very constructive role in the development of the Home Affordable Modification Program.

Counterparty Credit

Counterparty credit risk is high and increasing. Several counterparties including mortgage insurers, financial guarantors, and seller/servicers are facing tremendous volumes of potential claims because of the downturn in single-family credit.

The mortgage insurance (MI) industry is troubled. Fannie Mae's projected losses for the MI industry are $47 billion based on an extremely stressed environment. However, recent cash flow and capital models reflect industry solvency for the next five years. Regardless of model results, the largest MIs may soon breach risk-to-capital ratios mandated by their state regulators, which could prompt the regulators to take enforcement action such as placing the MI in runoff mode. There is little likelihood of raising capital in this environment, but the MIs requested TARP funding from the Treasury Department. Other challenges facing the MIs include the following:

- The rating agencies downgraded all major MIs. At December 31, 2008, all major MIs were rated between A+ and BBB+.
- One MI, Triad, is in runoff mode.
- Using internally created analytical models, counterparty risk oversight identified potential capital shortfalls for almost all MIs and requested capital restoration plans from them.
- Management anticipates losses for 2009 as the “at risk” insured exposures continue to increase as home prices decline further and the domestic economy moves through the recession.
- Of Fannie Mae’s $118.7 billion in risk-in-force coverage from MIs, the potential exposure is approximately $22 billion.

The condition of the MIs hinder the mortgage market recovery because of their financial position and their changes to underwriting standards that limit coverage based on credit scores, collateral value, property type, and other factors. Consequently, some borrowers were unable to refinance high-cost or unsuitable mortgages because of the decline in home prices and the Charter Act requirements for Fannie Mae. FHFA’s recent approval of Fannie Mae’s proposed refinance program will in part alleviate this problem. The condition of the MIs also may limit their support for new home purchases.

Uncertainty exists with the financial guarantors reflecting capital adequacy and substantial performance volatility associated with their concentrated exposure to structured assets and stressed mortgage risk. Accordingly, Fannie Mae wrote down their guaranteed portfolio reflecting reduced dependence on the guarantee provided by this segment of the insurance industry.

Many seller/servicers are facing operational challenges including staffing levels to handle increasing volume, and they lack sufficient liquidity and capital reserves to support continued operations and claims paying ability. Several large seller/servicers received funding from the TARP to boost capital levels. However, institutional failures and mergers, such as IndyMac and Washington Mutual, raise concern over outstanding representation and warrant claims and the ability of Fannie Mae to collect on these claims.

Counterparty risk oversight is taking action to better identify counterparty exposure. RiskNet, a risk measurement database, quantifies the outstanding exposure to counterparties by using a conservative approach to risk measurement. Specifically, some risks are measured using notional amounts and some are measured using Fannie Mae’s stress loss replacement model known as potential future exposure.

To control exposure from servicers holding outstanding principal and interest payments, Fannie Mae requires weak servicers to transmit the payments daily to an account held at a third party in Fannie Mae’s name. Moreover, the National Underwriting Center increased the number of mortgages it reviews and is more diligent in requesting repurchases from seller/servicers. A collections policy is in draft form to address aging repurchase requests from becoming excessive.

Bank of America, with the acquisition of Countrywide Financial Corporation, is Fannie Mae’s largest seller/servicer (approximately 27% of the book of business), yet Fannie Mae does not have a consolidated business plan to govern this or any other large relationship. FHFA noted this deficiency in the examination of the Countrywide Financial Corporation relationship. The need for business plans governing large relationships is more critical as concentrations to single parties are increasing because of institutional failures and mergers, and the overall strength of several seller/servicers is declining. Counterparty risk management recognizes the large concentrations occurring in the market and is working towards improved concentration management.

Multifamily Credit

Housing and Community Development (HCD) is experiencing the effects of the national economic downturn as reflected in its performance indicators. While the acquisition profile for HCD is good, the business faces challenges in pricing, the use of Low Income Housing Tax Credits (LIHTC), and acquisitions. Challenges facing HCD include the following:

- The serious delinquency rate more than doubled last year to 0.3 percent.

- Watchlist assets for multifamily debt totaled $19.5 billion compared to $13.3 billion at the end of 2007.

- The change in the grading system led to the identification of $7.5 billion in criticized assets versus $5.6 billion in 2007.

- Actual multifamily debt losses at year-end were $46 million versus $32 million projected, but compare unfavorably to $9 million at year-end 2007.

- Watchlist assets with Debt Service Coverage Ratios (DSCR) below 1.0X were at $6.7 billion compared to $6.3 billion at the end of 2007.

- Foreclosed property inventory was 29 ($134 million UPB) at the end of 2008 compared to 9 ($47 million) at the end of 2007.

Management is responding to the increase in problem credits and the economic downturn by increasing the loan loss reserve against the HCD book of business. In 2008, the increase in the loan loss reserve for HCD was $49 million for an ending reserve of $131.1 million.

HCD continues to strengthen its risk management function. Personnel changes and additions strengthened risk management, internal controls, technology, and financial oversight. However, additional improvement is necessary to address deficiencies and inefficiencies in risk identification, measurement, and management. Data and systems deficiencies prevent Fannie Mae from having a strong risk management framework; reporting lacks granularity and accuracy to identify and control the risk. Risk reporting to senior management is still untimely. While management recognized the deficiencies and implemented several sound measures to address the concerns, it is premature to evaluate the sustainability and effectiveness of management's efforts.

The disruption in the single-family market affects the current credit environment for multifamily housing. Lenders continue to tighten credit for commercial properties including multifamily housing. Moreover, there is pressure on available multifamily housing as single-family homeowners displaced by foreclosures seek rental housing. HCD is addressing changing market conditions by developing new or expanding existing products. The division is controlling the risk by ensuring borrowers have sufficient repayment capacity and equity in their projects. While pricing structures are meant to compensate Fannie Mae for the risk incurred, prices often are higher than the competition and put Fannie Mae at a competitive disadvantage. Management is challenged to manage and price increasing credit risk while continuing to provide liquidity to the market.

Private-Label Securities

With respect to private-label securities, mark-to-market losses in 2008 in the non-agency securities portfolio of more than $26 billion (including AOCI, trading, and an impairment expense of $6.1 billion) and continued home price depreciation of the collateral underlying the private-label securities portfolio are the primary sources of our concerns.

A combination of continued unprecedented spread widening in mortgage assets along with deteriorating performance in nontraditional, potentially riskier products, including subprime, Alt-A, Option-ARM and commercial mortgage-backed securities, resulted in significant mark-to-market losses. Most of these securities losses were recorded in the stockholders equity portion of the balance sheet (*i.e.*, accumulated other comprehensive income). Mark-to-market losses on the private-label securities in the trading portfolio and other than temporary impairment losses exceeding $26 billion were recognized in earnings.

In 2008, Fannie Mae only sold several hundred million of its private-label securities portfolio and did not create a policy or strategy to unwind this position as prices and performance deteriorated. The deteriorating performance resulted in $19.4 billion of these securities, which were almost entirely rated AAA at purchase, to be downgraded below investment grade and the entire private-label securities portfolio to have a cumulative other than temporary impairment of $6.9 billion at year end 2008. As another measure of poor bond performance, Fannie Mae's private-label securities with original ratings below AAA (purchased as part of a pilot program) have lost over 90 percent of their value since their purchase. Any management policy to mitigate losses should include appropriate escalation procedures.

Enterprise Risk - Market Risk Management

Market risk is rated critical concerns. This rating is based on the following: (1) the continued fragile state of the agency long-term debt market; (2) the extreme volatility of the mortgage basis; (3) the unprecedented risk arising from Fannie Mae's market risk models that diminished the reliability of its interest rate risk estimates (a problem throughout the industry); and (4) weaknesses in a significant number of risk management practices.

Liquidity and Funding Risks

The continued fragile state of the agency debt market and the lack of an effective liquidity policy that reflects current market realities drive our concerns. Liquidity and funding risks remain high and continue to represent a critical risk to Fannie Mae as the market for Fannie Mae bullet and callable long-term debt deteriorated during 2008 through late November. Market access to long term debt was virtually closed until after the Federal Reserve's announcement in late November that it would purchase up to $100 billion of agency debt securities, which improved the tone of the agency debt market in December 2008.

As a result, Fannie Mae is more exposed to discount note roll-over risk with short-term debt representing a greater portion of the debt funding mix. The ratio of short-term debt to total debt has increased, ending 2008 at 47 percent, significantly above management's preferred level of 40 percent. In addition, Fannie Mae stopped efficiently exercising in-the-money options on callable debt during the third quarter of 2008 because of the uncertainty of issuing long-term debt to replace it.

If Fannie Mae could not issue debt and borrow in the secondary market through mortgage repo, the enterprise would be reliant upon the Treasury Department for its GSE credit facility to provide secured funding in an emergency. This facility is scheduled to end at year-end 2009. The enterprise has tested some of the operations for this facility. However, management cannot completely evaluate the facility operations until a draw from the Treasury Department is effectuated.

The following management practices are matters requiring attention:

- Fannie Mae needs to revise its liquidity management plan for 2009, along with appropriate policies and procedures, to reflect current market conditions. Under stress, Fannie Mae could not convert its high quality collateral to cash through repurchase agreements or sales.

- Fannie Mae cannot securitize its $256 billion single family whole loan portfolio, although it expects to be able to securitize a substantial portion of its portfolio during the first or second quarter of 2009. During the first quarter of 2009, Fannie Mae conducted a successful pilot test of its ability to securitize its existing whole loan portfolio.

- At the end of 2008, Fannie Mae had about $19 billion of illiquid assets in its liquidity portfolio. These corporate bonds and asset backed securities are in a trading account. Fannie Mae has sold $1.8 billion of these relatively illiquid securities since conservatorship; this demonstration of liquidity mitigates some of our concern.

- Coordination between senior managers of both Capital Markets and Housing and Community Development business units failed to identify significant contingent obligations (*i.e.*, variable rate demand bonds) that impacted potential net cash needs. Capital Markets reporting showed about $7 billion in contingent obligations when HCD had actually provided more than $14 billion. This reporting error was corrected in 2008, but effective communication is still a concern.

- During 2008, MRO did not have sufficient resources to fully oversee liquidity risk and cash management. In the first quarter of 2009, MRO hired a new director for liquidity risk oversight.

Interest Rate Risk Management

Issues in interest rate risk management stem from unprecedented volatility in the mortgage markets during 2008, a resulting high degree of model uncertainty arising from Fannie Mae's term structure, current coupon and prepayment models that impeded accurate risk measurement and certain ineffective management practices, such as aggressive risk limits and unreliable risk management reports**.**

During 2008 severe credit, market, and liquidity events critically impeded Fannie Mae's modeling and hedging capabilities. Additionally, the highly volatile mortgage basis had a profound impact on duration and volatility, making modeling results less reliable and hedging decisions less effective. Nevertheless, Fannie Mae's market risk position was excessive in relation to earnings and capital. In addition, despite aggressive risk limits, Fannie Mae exceeded these limits eleven times during 2008. However, post-conservatorship the capital markets management team became more conservative and lowered its volatility exposure by purchasing a significant amount of long dated swaptions.

The following management practices are matters requiring attention:

- Given Fannie Mae's capital and earnings for 2008, the interest rate risk limits were aggressive, particularly convexity and volatility limits. Immediately after conservatorship, the enterprise began evaluating use of third party proprietary risk analytics and management practices.

- Despite improvements to proprietary risk management systems, Fannie Mae's analytical capabilities continue to fall short of that needed for a comprehensive and effective risk measurement, management and reporting. For example, Fannie Mae does not decompose or report its daily market risk profit and loss attribution with sufficient granularity in terms of duration, convexity, or volatility. A second example is that Fannie Mae does not calculate its daily risk metrics based on security level data. A third example is the lack of explicit swap/mortgage basis methodology incorporated into its risk management processes; although, recently management began an initiative to create sub-portfolio profit and loss accountability that will begin to address this issue.

- Fannie Mae must improve market risk oversight (MRO). Fannie Mae's MRO resources are not sufficient for the aggressive interest rate risk limits and the increasingly challenging market conditions. MRO lacks sufficient technical capacity to properly oversee the Capital Market unit's activities.

- MRO must be responsible for risk metric reporting and generate risk reports to ensure compliance with market risk limits. These reports must provide adequate information to the Chief Risk Officer, executive committee and board to effectively monitor all components of market risk, including daily profit and loss attribution.

- The extremes of the market environment in 2008 gave rise to calibration issues in the Modal DT term structure model, which led to an $800 million difference in volatility exposure for a 10 basis point increase in volatility. A second example occurred earlier in 2008 when Fannie Mae migrated from one term structure model, Modal DT, to a replacement term structure model, Happy Modal, only to revert back to Modal DT when unreasonable volatility risk metrics were produced by the Happy Modal model.

- Fannie Mae uses over-the-counter derivative products and has substantial and increasing counterparty exposure. Fannie Mae must create a strategy to reduce derivative counterparty exposure and periodically identify opportunities to reduce counterparty exposure by unwinding or otherwise eliminating existing positions. Fannie Mae should explore the use of exchanges and/or central clearing houses for interest rate swaps and swaptions. In addition, market volatility led to several instances where Fannie Mae could not execute swaps transactions necessary to rebalance its position.

- Fannie Mae did not effectively address duration estimation concerns arising from its $58 billion private-label securities portfolio, which impeded its ability to hedge duration and volatility.

Portfolio Management

The ability to manage the investment portfolio was adversely impacted for a number of reasons. A combination of funding pressures, a U.S. Treasury-imposed debt ceiling and, in some cases, illiquid derivatives markets significantly limited retained portfolio growth post-conservatorship, limiting portfolio growth to $25 billion.

The following management practices are matters requiring attention:

- The accounting treatment, market illiquidity and lack of an ability to securitize its whole loan portfolio impedes Fannie Mae's ability to actively manage a significant portion, more than 40 percent, of its retained portfolio for risk, return and liquidity purposes.

- The $42 billion reverse mortgage portfolio has liquidity, modeling, and reputational risks, but the credit risk is mitigated by an FHA guaranty. In addition, Fannie Mae owns 90% of the market share and is the marginal buyer in this market. As a result, Fannie Mae should explore the possibility of securitizing the reverse mortgage portfolio, for example, as Ginnie Mae has.

Enterprise Risk - Operational Risk Management

Operational risk management is rated *significant concerns*. The deteriorating financial condition of the enterprise, significant safety and soundness concerns, numerous organizational changes, and the uncertain market increases risk to the information technology, internal control, and information management environments. While overall risk increased, FHFA acknowledges significant investment and achievements, largely in information technology, to better identify, manage and mitigate risk. Despite enhancements, the enterprise relies on manual controls in some areas, and the scale and scope of information technology and internal control remediation that remains is considerable.

Information Technology

Information technology (IT) divisions successfully implemented a number of high profile and critical business unit application development projects including Servicer and Investor Reporting, Debt and Derivatives end-to-end, Single Family GA/GO, securitizing loans held over month-end in the portfolio, improving processing efficiency, expanding functionality and reducing complexity. Technology infrastructure and governance projects included the successful implementation of server virtualization, increasing capacity using 34 physical servers supporting 277 virtual machines. The System Development Life Cycle (SDLC), incorporating new standards for problem, incident, configuration, and change management and introduced the infrastructure development lifecycle complementing the SDLC. The Technology risk control self-assessment process was enhanced, incorporating third party service provider assessments and information security application testing and the Identity and Access Management system, replacing legacy access management components supporting critical processing platforms, incorporating role-based access management that improved automated internal controls.

Legacy applications and IT infrastructure continued to provide stable performance. No major operational incidents or IT outages occurred in 2008, and system availability across the major platforms and networks were consistently rated excellent. Operational effectiveness continued to be monitored through monthly reporting. There were no material weaknesses or significant deficiencies that were identified in IT as of December 31, 2008. However, the enterprise identified twenty open IT SOX deficiencies pertaining to financial reporting applications, end-user computing applications, and general computing controls. All were determined to present low risk of financial misstatement, and thirteen have been remediated pending testing in 2009 with the remaining seven in remediation.

Disaster recovery and incident management is well controlled with recovery plans addressing redundant data, systems, and locations. Critical business unit resiliency planning and testing weaknesses noted in the Business Continuity Planning internal audit report are being addressed appropriately. Management is remediating technology issues raised in internal audit reports for the Credit Loss Management, National Property Disposition Center, and Real Estate Owned (REO) programs. These reports indicated that current systems cannot fully support business processes needed to address the increasing volume of mortgage delinquencies and foreclosures, but the completion of remediation is targeted by the end of the first quarter of 2009.

Significant Technology organization and staffing changes occurred in 2008 pre- and post-conservatorship. The departure of the CIO and six senior technology officers post-conservatorship, as well as significant budget and staff reductions across several Technology divisions, resulted in the creation of the Business and Development Technology Division, re-aligning the application development teams and risk management and governance functions. Additionally, the enterprise engaged a consultant to assess the operations and technology environment and cost structure was initiated in the fourth quarter of 2008 to identify opportunities to improve the efficiency and effectiveness of Technology and Enterprise Operations. The consultant's recommendations, including consideration of combining operations and technology under a single operating and governance structure, are currently being evaluated and scheduled to be presented to the board in 2009.

Technology has maintained an effective internal control environment while continuing to make progress on multi-year plans for remediating and replacing legacy applications, reduce complexity, and improve IT planning and governance functions. The ability to fund and successfully manage these initiatives, while also implementing anticipated Accenture recommendations will be challenging within a deteriorating market environment.

Data Quality

Although Fannie Mae made some progress in 2007 to improve data quality measurement by leveraging its successes in returning to timely financial reporting, additional works remains to be done in this area. The new data management strategy and corresponding data architecture, which both are critical to improving data quality, suffered inadequate funding. In addition, resources were diverted away from the data governance program, a vital component of quality data, as other projects became higher priorities. Staff reductions and numerous reorganizations also hampered progress. In late December 2008, Fannie Mae terminated the senior vice president for Enterprise Data, who served as the data quality program's primary champion. The company realigned Enterprise Data into the Technology organization in 2008 and in early 2009 consolidated this function under the newly formed Application Shared Services department as a key area of strategic and tactical focus. Policies and standards were approved in 2009; however, FHFA has not yet reviewed these documents for review. Only when processes can be integrated into well-designed applications within an evolving, robust and flexible architecture will efforts move from mitigation to remediation.

Internal Controls

Risks to the internal control environment have increased with the deteriorating financial condition of the enterprise, the uncertain market, significant safety and soundness concerns, lower employee morale, and multiple organizational changes. Certain business processes and internal controls remain manually intensive. Enterprise Operations has reduced the level of key person dependence, but the concern still exists at the manager level. Internal controls are largely detective, rather than preventive. Business process mapping exists, but the efforts have not been consolidated to provide a complete enterprise-wide view on internal controls.

Despite the deficiencies in the internal control environment, enterprise operations, information technology, the business units continue to improve internal controls**.** Some projects are completed, such as the remediation to Material Weaknesses and Significant Deficiencies; others are currently in progress, such as reporting and the consolidation of business process mapping. Despite the recent market and internal challenges, Fannie Mae continues to comply with Sarbanes-Oxley Act requirements and manage timely financial reporting. The enterprise's Sarbanes-Oxley error rate is less than five percent, which is consistent with other compliant firms.

Operational Risk Oversight

Significant work remains to develop or to implement a robust operational risk oversight (ORO) function**.** Without these essential elements, the control environment is uncertain. Initiatives in development or in process include:

- Completing risk control self assessments,
- Identifying effective key risk indicators,
- Trend analysis,
- Developing an actionable operational risk profile to include both qualitative and quantitative analysis, and
- Refining data collection processes and scenario analysis for economic capital.

In mid-2008, management announced significant personnel and organizational changes to the operational risk oversight function. This marks the third leadership change to the executive management of ORO in four years. Then, the new senior vice president proposed enhancements to the original three-year plan, which FHFA supported, but the new strategy will delay the implementation of an actionable operational risk oversight program. The ORO office established its infrastructure and a fundamental program for risk identification, measurement, mitigation, monitoring, and reporting only in the last year. Key second year goals for risk identification, metrics and reporting are incomplete. There is no documentation to summarize the current state of operational risk. According to its Charter, the ORO office should report to the board quarterly, but through 2008, the group reported to the board only once.

The ORO program's development and full implementation is a multi-year plan, and results are unproven. To enhance the original program design and the enterprise's assessment of operational risk, the ORO is partnering with Lean Six Sigma, Sarbanes-Oxley results, Information Technology, Internal Audit and Compliance. If achieved, the ORO program should provide a more comprehensive and process-centric view of the enterprise's operational risk and become a tool for business process evaluation or reengineering. However, since the announcement of the integration plans six months ago, progress is noted but limited. There is no documentation to formalize the new plan, and no timelines were provided for when the program would be fully implemented.

Model Risk and Management

At the start of 2008 many of Fannie Mae's key credit models, such as its automated underwriting and guarantee fee pricing applications, were outdated and tended to understate credit risk. During the course of the year, management made substantial progress to update and improve these models. Unfortunately, these improvements came too late, after the enterprise had bought or guaranteed hundreds of billions of dollars in risky loans.

Prepayment and interest rate models posed significant model risk during the year as the historical data on which these models were built could not include prior performance periods comparable to the unprecedented conditions in the housing and mortgage markets now being experienced. During the year, Fannie Mae updated key prepayment models several times to attempt to capture shifting borrower behavior. These models performed reasonably well and outperformed some dealer benchmark models in the last half of the year. However, the models continue to produce faster than actual prepayment estimates for particular products, highlighting potential issues that need to be researched and addressed.

- Risk measures for the private-label securities Fannie Mae owns are unreliable, in part due to difficulties in estimating prepayments for subprime and Alt-A products, but primarily because of extreme liquidity and credit concerns, along with fundamental shifts in the basic behavior of these borrowers. The problem is magnified by the substantial discount at which these securities are valued.

- Market dislocations challenged interest rate models throughout the year. The Current Coupon model, which forecasts the market rate on a 30-year fixed rate mortgage, under-predicted actual market current coupons during the year, exacerbating the uncertainty in prepayment estimates and resulting in uncertain risk measures. Fannie Mae is working on improving the Current Coupon equation.

- Fannie Mae's new term structure model was introduced in early 2008, but began to exhibit unstable results in the third quarter of 2008 due to unprecedented credit and market risk events . The model was removed from production while staff attempts to develop a solution. This problem underscores the need for a rigorous model vetting process, which as discussed with Fannie Mae management. A less complex version of the term structure model was reintroduced into production.

- Historically low short-term rates late in 2008 challenged the term structure model currently in use. The method in which the model was implemented for production is partly responsible for the recent performance issues.

The credit crisis has highlighted the importance of frequently reevaluating credit valuation models, including their prepayment, default, loss severity, and loss forecasting elements. At the start of the year, credit models throughout the industry and at the enterprise substantially under-predicted credit losses. Model developers have substantially updated key credit models in the last year, including *Credit Works,* the guarantee fee pricing application, as well as the model used for forecasting single-family credit losses. For example, over 2008 model-generated guarantee fee prices increased by about 20 percent, and expected losses by about 40 percent for high quality conventional loans. While some of this change is due to increasingly adverse market conditions, much of the change is the result of changes in the guarantee fee models. The downturn in the housing market has also spurred an effort to construct loss mitigation and property disposition models. Fannie Mae will need to maintain adequate staff to develop models that can assist in managing the dramatic increase in delinquencies and foreclosures seen in the current credit crisis. Credit-related modeling challenges include the following:

- Credit Works was updated five times during 2008, with enhancements to prepayment, default, severity, and house price distribution models. For example, the model developers updated the Loss Severity Model used in Credit Works which now includes loans liquidated through 2006. The previous model, in use for the first half of 2008, used data through 2002.

- The Desktop Underwriter application for automated underwriting was substantially outdated at the start of 2008. In May of 2008 it was updated, and now includes data on loan performance through 2006. The previous model used performance data through 2000.

- During 2008, model developers deployed new loss mitigation valuation and short sales models to business users. Other models for loss mitigation and property disposition are in progress.

- In the fourth quarter of 2008 Fannie Mae implemented a new GA/GO Fair Value application. However, models used for Fair Value financial reporting and the ones used for guaranty fee pricing still are not aligned. New models were first deployed for pricing but implemented in the Fair Value process several months later. .

- The process for establishing loan loss reserves, while GAAP compliant, is cumbersome, and the omission of key credit risk drivers from the model necessitates large additional add-ons and adjustments based on management judgment.

- Similarly, the single-family credit loss forecasting process is cumbersome and for much of 2008 relied on outdated core models. Controls over this model are weak and need to be strengthened.

Controls and Governance

The enterprise risk office's (ERO) responsibility for model risk oversight is not sufficiently comprehensive, focusing too narrowly on independent model validation, while not adequately covering other aspects of model risk management. Fannie Mae has made good progress on independent credit model performance tracking, but this process is not yet fully mature.

- ERO does not evaluate model performance on an ongoing basis. It does so only when models are assessed, which may be annually or even less frequently.

- When an issue arises concerning model development or controls, as occurred with the term structure model, ERO does not have formal responsibility to investigate to ensure model risk management processes are adequate.

- Though the performance of key credit models is now regularly tracked, Fannie Mae has not established a formal and comprehensive process for evaluating model performance relative to performance thresholds.