



# Federal Housing Finance Agency

CONFIDENTIAL

August 26, 2008

Mr. Daniel Mudd  
Chief Executive Officer  
Federal National Mortgage Association  
3900 Wisconsin Avenue, NW  
Washington, DC 20016

Dear Mr. Mudd:

Fannie Mae's composite rating is "Critical Concern" previous quarter and stems from the continuing and mortgages and securities in the retained portfolio, solvency, and liquidity are negatively affected by the possibility of further impairments of private label seriousness of our concerns, some of the comments during the first and second quarters of this year, but

Management's decisions in the recent past to purchase products contributed to the Enterprise's continuing management and the Board of Directors made these revenue and meet housing goals, but many of these based on a flawed lending strategy predicated on mortgage documentation. When house prices and flaws of this strategy became manifest, particularly combination of "alternative" mortgage products and losses that are still rising. Models used to guide credit decisions are deficient and were developed based on borrowers of a different creditworthiness and a much healthier economic environment than the current severe environment in which we have been operating since these models were developed. In addition, management has not been sufficiently proactive in modifying liquidity and interest rate risk strategies, its interest rate risk limits, or the quality of its market risk oversight, which is essential to keeping the aggregate levels of risk at reasonable levels.

Key issues facing the Enterprise at this time include, but are not limited to:

- Credit losses and related expenses are high and forecasts show significant and continuing deterioration.
- Earnings are poor and deteriorating. Continued declines in earnings could result in impairment of deferred tax assets.

*This was an  
internal draft.*

*Final was*

*September 4, 2008*

*DePaul*



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Mr. Daniel Mudd  
President and Chief Executive Officer  
Federal National Mortgage Association  
3900 Wisconsin Avenue, NW  
Washington, DC 20016

Dear Mr. Mudd:

Fannie Mae's composite rating is "Critical Concerns." This rating reflects a downgrade from the previous quarter and stems from the continuing and significant deterioration in credit quality of mortgages and securities in the retained portfolio, as well as the guarantee business. Earnings, solvency, and liquidity are negatively affected by current and forecasted credit losses, as well as the possibility of further impairments of private label securities and deferred tax assets. Given the seriousness of our concerns, some of the comments in this letter reflect our observations not only during the first and second quarters of this year, but through the year to-date.

Management's decisions in the recent past to purchase or guarantee higher risk mortgage products contributed to the Enterprise's continuing deterioration of its financial condition. Senior management and the Board of Directors made these decisions to increase market share, raise revenue and meet housing goals, but many of these decisions were imprudent because they were based on a flawed lending strategy predicated on relaxed underwriting and "streamlined" mortgage documentation. When house prices nationwide crested and declined, the fundamental flaws of this strategy became manifest, particularly in areas such as California, where the combination of "alternative" mortgage products and severe house price declines have resulted in losses that are still rising. Models used to guide credit decisions are deficient and were developed based on borrowers of a different creditworthiness and a much healthier economic environment than the current severe environment in which we have been operating since these models were developed. In addition, management has not been sufficiently proactive in modifying liquidity and interest rate risk strategies, its interest rate risk limits, or the quality of its market risk oversight, which is essential to keeping the aggregate levels of risk at reasonable levels.

Key issues facing the Enterprise at this time include, but are not limited to:

- Credit losses and related expenses are high and forecasts show significant and continuing deterioration.
- Earnings are poor and deteriorating. Continued declines in earnings could result in impairment of deferred tax assets.

- Capital is declining, and there is limited potential to augment capital materially from external sources. This could lead to non-compliance with regulatory requirements.
- Liquidity is strained and options to increase overall liquidity from the private sector are severely limited. Fannie Mae's liquidity plan no longer works, due to its inability to repo mortgage-backed securities in meaningful volumes.
- The development and validation of some key models used to estimate prices, risk and to allocate economic capital are lagging due to long-standing deficiencies in staffing. Results from several key models are unreliable due to extraordinary external factors and the use of outdated assumptions.
- Interest rate risk, strategies, and limits are aggressive given the current capital situation and forecasted credit losses.
- Independent risk management for market risk is inadequately staffed, and reports used to monitor market risk are deficient.
- Operations are inefficient and manually intensive. The operational risk framework is not fully built-out.

Management has made significant progress in such areas as the development of accounting policies and the production of financial statements. Evidence of sustainable processes in these areas led to the removal of the Consent Order earlier this year. Management has also made significant efforts to better coordinate loss mitigation activities across the Enterprise in order to stem the tide of surging credit losses. However, further declines in house prices, especially in geographic locales where borrowers were most highly leveraged, could result in credit losses such that regulatory capital thresholds will be breached. Fannie Mae also remains significantly exposed to the health of key counterparties, especially mortgage insurers, bond guarantors and key seller/servicers. Thus, overall risk remains a critical concern.

The discussion below reflects the order of FHFA's new "GSEER" risk classification system.

### **Governance**

Governance is rated "Significant Concerns."

FHFA has significant supervisory concerns over management's failure to implement an effective market risk oversight (MRO) function under the authority of the Chief Risk Officer. MRO is impaired in performing its function due to protracted vacancies in senior positions and to an inadequate number of personnel. The temporary transfer of the former SVP for Operational Risk to lead MRO on an interim basis does not solve the company's long-term need for a robust, fully-populated MRO function. Moreover, the failure to maintain an effective MRO function during this period of tumult in the housing finance and capital markets sectors not only exposes the company to increased governance risk, it also constitutes an unsafe and unsound practice.

### Accounting

FHFA has limited but continuous concerns relating to accounting policy at the Enterprise, based upon our analysis, findings, and observations so far this year. This concern is exacerbated by the fact that the economic environment in which the Enterprise operates has continued to deteriorate. The incidence of mortgage loan-related delinquencies and foreclosures has increased, and the Enterprise's large investments in mortgage-related securities have continued their decline in value.

The amount by which the lifetime expected losses related to credit exposures exceeds the GAAP credit loss reserves has increased. In response to increasing questions and concerns in this area of accounting, FHFA has begun an examination of the reserving process, focusing on critical areas such as high risk products; the setting of the loss emergence period; establishment of appropriate risk "buckets" for the expected default rate calculation; the basis of collateral values used in the calculations of loss severity; and comparability between the Enterprises.

We are also focused on the appropriate recognition of losses through "other than temporary impairment" (OTTI) of investment securities. In this regard, we have concerns regarding the relaxation by the Enterprise of previously stated policies. We are also concerned about inconsistency between the Enterprises with respect to OTTI analysis. FHFA drafted a supervisory position on the assessment and recognition of OTTI, which would establish a baseline set of assumptions for OTTI assessment with respect to subprime and Alt-A private label securities. We believe that the implementation of this guidance would result in an increase in OTTI recognized by the Enterprise.

In addition to the areas of concern mentioned above, there are two emerging areas of change in GAAP that have statutory capital implications. The first is comprised of two related FASB projects, the expected changes to FAS 140 and FIN 46(R). These projects are important not only due to their potential impact on FHFA's statutory capital requirements, but for the possibility of operational risk during the transition to a new accounting model. The second area is the renewed use of hedge accounting. FHFA is monitoring this program in two respects: properly qualifying for the hedge accounting treatment under FAS 133, so that past non-qualification issues are not repeated; and more closely aligning GAAP net income with true economic results.

### **Solvency**

Solvency is rated "Critical Concerns."

Fannie Mae was classified as "adequately capitalized" for the first quarter 2008. A capital raise of \$7.4 billion in May 2008 and the effect of lowering the FHFA-directed requirement in both March and May 2008 have been partially offset by the continued high credit loss provisions. Moreover, future capital adequacy is a serious concern in light of the questionable ability of the Enterprise to raise a material amount of capital in a deteriorating economic environment.

Factors impacting the Solvency rating include, but are not limited to:



- The continued high exposure from both market and credit-related risks place pressure on the capital base of Fannie Mae, further eroding capital as losses continue.
- Current and projected earnings capacity remains insufficient to grow the capital base through normal operations.
- Capital projections, while continuing to reflect surpluses, have been repeatedly recast downward, raising concerns over capital adequacy in 2009 under a severe stress scenario.
- Recent auctions indicate that the “agency” debt markets, particularly for long-term issues, are fragile.
- Fannie Mae’s success in raising \$7.4 billion in new equity during May 2008 reflected positively on its ability to access the markets. However, given the current uncertainty in the markets and regulatory changes, the capacity to raise additional capital in the future is extremely questionable.
- Capital planning efforts have continued to evolve somewhat, including improvements in credit risk modeling. The importance of continued planning and stressing of projections is critical given the uncertainty of forecasted income and credit losses.
- According to the June 30, 2008 10-Q, the fair value of shareholder’s equity was only \$12.5 billion, which was \$28.8 billion less than the GAAP carrying value. The fair value of stockholder’s equity decreased by \$23.3 billion during the first six months of 2008.

## **Earnings**

Earnings are rated “Critical Concerns.”

Earnings in the first half of 2008 have been adversely affected by escalating credit-related expenses, substantial fair value losses on the trading portfolio and derivatives, and security impairments, which together have caused substantial net losses, negative returns to shareholders and substantial erosion of retained earnings.

Forecasts of future earnings and capital continue to be revised downward as forecasts of credit-related expenses continue to rise substantially. The speed with which earnings forecasts have changed and the severity of downward revisions of the forecasts over relatively short periods highlights the uncertainty surrounding these forecasts, as well as the vulnerability of earnings and capital to credit exposure.

Notwithstanding the dominance of credit-related expenses in earnings forecasts, future earnings are also exposed to fair value losses from spread widening of private-label securities in the trading portfolio, as well as security impairments. Our critical concerns relating to earnings include the following:

- Fannie Mae accumulated net losses to common shareholders in the first half of 2008 of \$5.1 billion.

- Retained earnings shrank by \$5.6 billion in the first half of 2008.
- The pre-tax loss of \$7.9 billion in the first half of 2008 exceeds the full year 2007 pre-tax loss of \$5.1 billion.
- The provision for credit losses (excluding repurchases on delinquent loans out of trusts) at \$7.1 billion for the first half of 2008 is more than double the full year 2007 amount of \$3.2 billion.
- The Enterprise's base-case earnings forecast indicates substantial pressure on solvency and on capital, which may fall below regulatory requirements if the environment does not improve dramatically in the near-term. Indeed, the Enterprise's own forecasted earnings in a more stressful scenario indicate that the ability to meet regulatory capital requirements may be at risk in the short term if there is prolonged continuing deterioration in house prices.
- Further losses could result in impairments to deferred tax assets.

### **Credit Risk Management**

Credit risk is rated "Critical Concerns."

The "Critical Concerns" rating reflects a downgrade from Significant Concerns in the first quarter of 2008, and is due to continued and significant deteriorating single-family performance indicators, rapidly growing credit losses, declining financial capacity of mortgage insurers and financial guarantors, financial weakness of significant servicers, and market pressures that are expected to stress Enterprise performance, including earnings and capital, through 2008 and thereafter. Moreover, the level of model uncertainty has grown because of the current unprecedented credit conditions and declining house prices. Significant concerns also remain regarding deteriorating performance of collateral underlying private-label securities owned by Fannie Mae.

#### Single Family

The quantity of risk is high as evidenced by rapidly rising levels of credit losses and significant adverse changes in performance indicators. Delinquencies, real estate owned (REO), and credit losses have risen dramatically during this year. The loan loss reserve as of June 30, 2008 was \$7.45 billion, and has increased by \$4.8 billion during the first half of 2008. This increase signifies the Enterprise's acknowledgement and expectation of rapidly deteriorating credit conditions. Current market conditions continue to put stress on credit performance, including continued declines in house price appreciation, increasing levels of unsold housing supply, and a cycle of adjustable-rate mortgage resets that are expected to peak in 2010.

Credit losses (including charge-offs, net of recoveries, and foreclosed property expense, but not including SOP 03-3 and HomeSaver Advance fair value losses) were \$2.1 billion in the first six months of 2008, compared to \$0.5 billion in the first six months of 2007. Including the effects of SOP 03-3 and HomeSaver Advance fair value losses would have increased credit losses by \$0.9 billion during the first half of 2008. Furthermore, overall economic loss severity is continuing to trend upward; as of May 31, 2008, overall economic loss severity was 15.5%.

Significant declines in house price appreciation and rising levels of housing supply continue to pressure serious delinquency (SDQ) rates, and levels of REO. As of June 30, 2008, the SDQ rate was 1.36%, a significant rise from 0.98% as of December 31, 2007. Alt-A mortgages have emerged as a significant contributor to the rise in the SDQ rate. Although management continues to develop new loss mitigation initiatives such as the HomeSaver Advance, only 41% of first lien mortgage loans associated with HomeSaver Advances made through the end of May 2008 were current as of June 30, 2008.

Another negative indicator is the REO run-off rate, which continues to decline as REO inflows exceed dispositions. At March 2008 there were 43,167 properties in REO inventory, an increase of 39%, versus 26,294 one year earlier, an increase of 39%. An estimated 117,000 REO properties will be acquired in 2008, with nearly 185,000 properties expected in 2009. Top REO acquisition states include California, Georgia, Florida, and certain auto-belt states.

The acquisition profile in 2008 has improved as a result of credit tightening and pricing increases effective in March 2008 and June 2008. However, early performance of the 2008 vintage is tracking to 2007 and has not shown a track record of improvement.

The level of model risk for credit pricing has grown as uncertainty surrounding credit conditions and future home prices has increased. This model risk has resulted in increased uncertainty in the pricing of acquisitions in the credit guarantee business lines. In addition, the prepayment models in the CreditWorks application are almost a year old and predict substantially faster prepayments than are currently observed, which may lead to an understatement of modeled guarantee fees. The result is greater uncertainty in the accuracy of g-fee pricing. Prepayment issues are having and will continue to have a significant effect on credit risk models. To the extent that prepayment model updates are not coordinated and done in quick succession vis-à-vis the major product types and within the same VN version release, the credit risk models cannot incorporate changes that exist on the capital markets side of the business.

#### Housing and Community Development (HCD)

HCD contributes positively to profitability, but only after considering the positive effect of low-income housing tax credits. The level of Watchlist assets remains high but has shown improvement from the fourth quarter of 2007. Despite the heightened level of Watchlist assets and low debt-service coverage ratios, the level of serious delinquencies and credit losses remain nominal. This low level of delinquencies contrasts with the heightened level of underperforming Watchlist assets; however, HCD management indicates that project owners are funding cash deficiencies. Market fundamentals indicate that multifamily properties continue to improve in value with sustained low cap rates and very low vacancy levels that are expected continue well into 2009. HCD continues to build-out its risk management infrastructure.

#### Enterprise Counterparties

The rating agencies have downgraded most mortgage insurers and many of the financial guarantors. Four MIs were downgraded to below the AA- trigger level and Triad is in runoff mode. As a result of the downgrades, PMI, Radian, MGIC and Triad have provided the Enterprise with capital preservation and retention plans for review. The Enterprise is concerned that the MIs may not have sufficient capital and reserves to meet their commitments of first loss coverage. The eroding financial condition of the MIs may also negatively affect the Enterprise's

ability to continue to purchase product in accordance with charter guidelines. Declining levels of reserves and capital at the MIs could result in reduced levels of business reflecting an inability or reluctance by the MIs to underwrite and insure product with LTVs greater than 80%. Certain MIs remain out of alignment with DU 7.0 in certain lower FICO, higher LTV segments. While the Enterprise is responding to these downgrades with closer monitoring and protection of exposures where possible, the risk remains evident.

CRO increased its surveillance of the MIs and financial guarantors through increased reporting requirements that have provided more granular portfolio data. This has allowed Fannie Mae to develop stress models to better evaluate their claims-paying abilities. CRO's capital modeling indicates estimated capital shortfalls (current capital plus premiums, less stress losses) as follows: MGIC \$1.3 billion; Radian \$1.3 billion; PMI \$1.4 billion; and Triad \$0.3 billion. The models have provided a improved view of each MI. However, the MI industry is so concentrated that the current market illiquidity and house price depreciation raise substantial concerns.

In addition, some seller/servicers are encountering financial and operational difficulties that require the Enterprise to respond quickly to minimize their exposures. Fortunately, the BoA acquisition of Countrywide Financial prevented the Enterprise from recognizing potentially significant losses. The Enterprise also took measures to protect their exposure prior to the failure of IndyMac. FHFA remains concerned regarding exposure to other counterparties, including WAMU and RESCAP. However, we note that management is working with WAMU to move its P&I payments to trust accounts for the benefit of the Fannie Mae.

Finally, notional derivative instrument balances grew from \$886.5 billion as of December 31, 2007 to \$1,141.9 billion as of June 30, 2008, thus intrinsically increasing risk from derivatives counterparties. Although derivative positions are generally well collateralized, the cost of replacing hedge positions could be high in the event of a counterparty failure.

### **Market Risk Management**

Market risk is rated "Significant Concerns."

The overall program for Market Risk is rated "Significant Concern." The subordinate risk rating for funding and liquidity is "Critical Concern" while the subordinate ratings for interest rate risk and portfolio management are "Significant Concern."

### **Retained Mortgage Portfolios**

During the second quarter of 2008, Fannie Mae's retained portfolio grew \$27 billion in mortgage-related assets due to attractive option adjusted spreads, although this growth was limited by capital constraints arising from credit concerns and FAS 133 hedge accounting capacity issues. Fannie Mae continues to hold a large credit and liquidity exposure in non-agency securities (\$117.3 billion, including subprime private-label securities (PLS) wrapped by a Fannie Mae guarantee). This non-agency book continues to experience spread widening, credit downgrades and impairments.



- At June 30, 2008, the sub-prime and Alt-A non-agency portfolio had an outstanding balance of about \$48.8 billion categorized as ‘available-for-sale’ (not including subprime PLS wrapped by Fannie Mae of about \$13 billion) with an estimated fair value loss of about \$7.9 billion. During the second quarter Fannie Mae impaired about \$500 million of these securities (all subprime).
- Fannie Mae’s subprime PLS portfolio had \$21.1 billion of rating agency downgrades. About \$4.6 billion of the PLS portfolio is currently rated below investment grade. As of June 30, 2008, none of the Alt-A PLS had been downgraded, nor had any of the downgraded bonds been sold.
- Fannie Mae has improved certain risk management processes. One significant improvement in Capital Market Strategy was the implementation of the initial version of the PLS database and automated report generator. In addition, CRO now has the ability to independently run the Deal Analytics Application.

### Liquidity

Deteriorating market confidence in the stock prices of Fannie Mae and Freddie Mac, along with worsening market liquidity for “agency” bullet and callable debt critically increased pressure on Fannie Mae’s liquidity risk management program. This lack of market confidence resulted in proposals from the Department of Treasury to “backstop” the Enterprises that were announced on July 13, 2008 and incorporated in legislation. In addition, Fannie Mae’s planned ability to convert unencumbered collateral to cash and to successfully sell LIP assets during periods of extreme market illiquidity was challenged during July, as management did not want to signal a liquidity crisis to the market by selling long-term LIP assets or entering into term-repo transactions. Fannie Mae’s liquidity plan is no longer effective in ensuring acceptable levels of liquidity, due to its inability to repo mortgage-backed securities in meaningful volumes.

- At June 30, 2008, Fannie Mae had about \$325 billion of debt maturing over the next year, including \$130 billion of debt maturing in the third quarter of 2008. The June 30, 2008 liquidity portfolio balance was \$72 billion and the agency MBS (post-haircut) was about \$205 billion.
- Fannie Mae owns approximately \$245 billion of single-family whole loans that it cannot securitize in a well-controlled, automated manner, which impedes its ability to use these assets for liquidity purposes.

### Interest Rate Risk

High market risk sensitivity and an aggressive risk limit appetite make the quantity of risk at Fannie Mae high. Confidence in the quality of interest rate risk metrics suffers when current market information is not included in interest rate risk estimates on a timely basis. Model risk issues have also undermined the reliability of interest rate risk management metrics at the Enterprise as prepayment models estimates differ significantly from actual (and much slower) prepayments. Finally, governance issues relating to the Office of the Chief Risk Officer, particularly relating to Market Risk Oversight (MRO), further undermine the quality of interest

rate risk management processes, because MRO resources are not commensurate with the aggressive interest rate risk limits.

- Fannie Mae's quantity of market risk exposure remains high. As of July 1, 2008, the 10-day value at risk for duration, convexity and volatility was \$800 million. In addition, a 10 basis point volatility shock results in a \$710 million change in the portfolio's pre-tax market value of equity.
- Significant interest rate risk measurement errors were evident in the March 2008 monthly summary, which disclosed an initial loss estimate of \$1.1 billion for a 50 basis point shock. However, the subsequent estimate for the March 31, 2008 10-Q was a \$2.2 billion loss for the same 50 basis point shock. The primary reasons for the measurement error were widening spreads on PLS and whole loans, as well as higher callable debt prices. Management should ensure that interest rate risk metrics are based upon more timely and accurate prices and that pricing methodologies are applied on a reasonable and consistent basis.
- Fannie Mae expects to update its conventional fixed rate prepayment models in the third quarter of 2008 with an estimated increase in duration of about \$15 billion in 5-year equivalents. Additionally, Fannie Mae has not yet decided to remove the spread duration component of its PLS portfolio from its net duration position. Effectively, this extends Fannie Mae's duration, yet this spread duration cannot be hedged with swaps.

### **Operational Risk**

Operational risk is rated "Significant Concerns."

#### Information Technology

The risks associated with completing IT strategic planning and governance improvements, while also meeting critical IT project timelines including planned disaster recovery and business resilience enhancements, are being managed effectively. Technology continues to successfully manage a number of high profile and critical single family and capital markets application development projects. However, the risk associated with Summit Debt and Derivatives and Servicer and Investor Reporting (SIR) project delays coupled with the operational risk associated with the de-commissioning of the Restatement Operations Center (ROC) and complexity of the Urbana disaster recovery implementation highlight the challenges facing Technology in successfully completing critical projects within existing time, budget, and resource constraints given the current business environment.

#### Data Quality

Leveraging the data quality initiatives supporting timely financial reporting and improved portfolio management analytics, Fannie Mae has developed a data strategy tightly integrating data architecture and data management objectives with the goal of reducing the number and complexity of data warehouses. In addition, Enterprise Technology is establishing enterprise-wide business data practices, tools, and data quality performance metrics consistent with

emerging technology standards. An enterprise-wide data governance forum has been implemented to drive best practices in data management and data. The data strategy is part of a multi-year plan to reduce cost and technical complexity by re-engineering or replacing legacy applications and re-designing business processes end-to-end.

### Internal Controls

While business processes and internal controls are manually intensive and key person dependencies remain, Enterprise Operations, the ORO and the business units continue to improve the internal control environment through a myriad of projects and programs that are completed or currently in progress. In the second quarter of 2008, through the enhanced processes, there were no material weaknesses in their internal controls over financial reporting. The significant deficiency that materialized in the preparation of the 2007 10-K filing has been remediated, but validation is pending. The SOX error rate remains less than 5%, which is consistent with SOX compliant firms. Current processes have proven effective in assisting Fannie Mae in its third consecutive timely filing of financial statements.

### Operational Risk Oversight

In the second quarter of 2008, the Chief Risk Office (CRO) announced significant personnel and organizational changes for the operational risk oversight function. While it is premature to conclude whether these changes are positive or negative, the changes are a concern, as the ORO (Operational Risk Office) only recently established its infrastructure and a fundamental program for risk identification, measurement, mitigation, monitoring and reporting. The Enterprise substantially met all commitments for the first year of its three-year operational risk oversight plan, but significant milestones remain to build or to refine the ORO program through 2009. While the new SVP of the ORO has adequate experience and background, concerns exist that a strategy change or delays will adversely affect the implementation of a robust operational risk oversight function.

### Model risk

Model risk is rated "Significant Concerns." The quantity of model risk is high and increasing. The level is generally high because Fannie Mae utilizes complex models to measure the risk of very large portfolios and to assess risk-adjusted returns on a significant volume of acquisitions. Increasing the level of model risk is the unprecedented environment in which the company will be operating for the foreseeable future. Models are less dependable and require adjustment when the economic environment is outside of historical experience. Models are estimated using selected historical experience as a guide. When circumstances are such that no historical experience can provide insight for model builders, models are very unlikely to produce accurate projections. Such circumstances put a premium on the Enterprise's ability to rapidly and accurately devise models based on more realistic assumptions about the future.

The level of model risk for credit pricing remains high as uncertainty surrounding credit conditions and future home prices continues. The inability of market risk models to capture the liquidity-based disruptions in MBS and funding spreads increases the uncertainty surrounding market risk limits and corresponding hedging strategies. Projections of negative earnings mean that model results have immediate impacts on increasingly constrained capital. This model risk

has resulted in increased uncertainty in the pricing of acquisitions in both the credit guarantee and retained portfolio business lines, as well as in estimates of portfolio credit and market risk measurement. As such, the long-term risk to earnings has increased, thereby expanding the need for risk-based capital to cover the additional model risk.

CRO and BA&D have improved risk management and oversight in the past year. The BA&D model controls group continues to provide project management, model controls and documentation, CMP compliance efforts, and strategic planning for the function. However, the model performance tracking function in this group has still not fully been addressed. CRO still has not permanently filled the SVP for Market and Model Risk Oversight position. Though David Sykes has led a sound model validation function, the level of model risk exposure has increased significantly, so that the need for leadership in this area is critical. BA&D currently has approximately 17 open positions, of which 14 are currently being actively recruited. The recruitment process for these positions has been intensified so that it involves more senior management involvement and monitoring.

#### Credit Risk Models

BA&D has lost critical staff members due to the early retirement program. New hires for various positions have less experience in key roles than the staff they may replace. BA&D's Strategic Initiative has been approved, providing more staff resources for modeling efforts. The most critical result of resource constraints is the delay in updating the Single Family CreditWorks (SFCW) models, although much progress has been made. Many of the models in the CreditWorks application have been updated this year, and the incorporation of current market data has become timelier. But key issues remain with respect to modeling capital requirements and house price projections for this application.

Challenging credit conditions make it vital that credit losses can be adequately estimated and controlled. The current version of the Single Family Loss Forecast Model has not been independently validated, and its structure has not been updated for several years. Algorithms used for decision making at the back end of the credit life cycle, such as Loss Mitigation models, short sale models, and REO pricing models, have begun to be updated. But their development still seriously lags that of front end models, such as those used for pricing and underwriting. Loss mitigation models based on experimental data may help to mitigate credit losses, but it will take several months to produce such data, before it can be used to build decision models.

The version of Desktop Underwriter used for most of this year was calibrated with data from cohorts of loans originated before 1996. The deployment of a new DU model in June 2008 with much more current data is an important accomplishment.

#### Market Risk Models

Mortgage market turmoil has resulted in a significant increase in the model risk within market risk models. Prepay models are challenged by the sudden deterioration in mortgage credit markets and falling home prices. Further, the Current Coupon model is challenged by the current dislocation of the mortgage spread to swap rates. As of July 14, 2008 the model under predicts the spot coupon by 36 bp. The model has been substantially under predicting since late last year. While the model is reset to the actual market current coupon daily, the size of the residual and the assumption of mean reversion results in the possibility of double-digit error within a few months. The increased uncertainty of the current coupon spread requires continued



evaluation by management of current market conditions and the effects of the model projections and potential model error on mortgage valuations and risk metrics.

CMS and BA&D Research monitor model performance and have produced model sensitivity analysis of the impact on prepays to Home Price and Current Coupon stresses. These indicate significant sensitivity to the Current Coupon model. Capital Markets Strategy has estimated a sensitivity of current coupon at \$500 million in 5-year swap equivalents for each basis point increase in the mortgage spread. There is less sensitivity to the Home Price model.

Fannie Mae's 30-year fixed-rate mortgage prepayments are now closer to actuals than most dealer estimates. Capital Markets Strategy has indicated that the move to the new 30-year prepay model added roughly \$13- to \$14 billion in 5-year swap equivalents to the portfolio risk position (\$63 billion in duration dollars).

While model risk remains high, there has been significant progress in improving model risk management processes. This progress is expected to continue in four respects. Progress has been made to assess, independently validate and enhance models, and in the formulation and funding of a Strategic Initiative for 2008 to significantly enhance BA&D's capabilities that may lead to improved turnaround time for model development. However, certain factors may cause progress to slow, thus causing market model risk to increase over the next year. Fannie does face greater mortgage credit risk, which may continue to increase the demands on credit modeling. This is occurring at a time when key modeling staff is leaving and may be very difficult to replace, so staffing to meet the challenges may be difficult. In addition to these challenges in credit risk modeling, market risk models have been challenged by the unprecedented behavior of spreads in capital markets, and the absence of earnings creates the likelihood that inherent errors in model results lead to immediate effects on Fannie Mae's capital.

Please contact me if you have any questions regarding this letter.