

Section I: Introduction

The 1990 Cranston-Gonzalez National Affordable Housing Act (NAHA) mandated that the Federal Housing Administration's (FHA's) Mutual Mortgage Insurance (MMI) Fund maintain a capital ratio of 2 percent from October 1, 2000 forward. The capital ratio is defined by NAHA as the ratio of the Fund's economic net worth to its unamortized insurance-in-force (IIF). NAHA also established the requirement for the MMI fund to undergo an annual independent actuarial review.

This review for fiscal year (FY) 2008 is reported in this document. The analysis estimated the economic value of the MMI Fund as well as the capital ratio to examine whether the Fund has met the capital standards set forth in NAHA. The analysis was based on the information provided by HUD, such as the historical performance of the existing MMI Fund loans, projected future economic conditions from Global Insight, Inc., loss-given-claim rates, and projected future mortgage originations.

A. Implementation of NAHA

Following the issuance of the FY 1989 Actuarial Review and the ensuing debate, Congress mandated various changes to the MMI Fund. The required revisions to the MMI Fund focused on four major issues: 1) the development of an actuarial standard of financial soundness, 2) modification of the minimum borrower downpayment requirement, 3) changes in the pricing of insurance premiums, and 4) revisions to policies regarding distributive shares.

The changes called for in the Act were specifically designed to remedy the financial difficulties encountered by the Fund during the 1980s. Each change was intended either to reduce the risks inherent in new books of business or to adjust premiums to more adequately compensate for the risks.

The NAHA legislation required that the Fund be operated on an actuarially sound basis by providing specific capital standards for the Fund and timeframes over which these standards should be met. It also defined the actuarial standard measure as the ratio of the Fund's capital, or economic net worth, to its unamortized IIF.

To further strengthen the capital position of the Fund, the NAHA legislation linked FHA's ability to pay distributive shares to the actuarial soundness of the entire MMI Fund (as defined in the legislation), rather than solely considering the performance of the loans endorsed during a particular year as had been done in years prior to 1990. This amendment sought to ensure that distributive share payments would not be made if the Fund did not achieve the capital standards

established by the legislation, or at the discretion of the Secretary of HUD. No distributive shares have been paid since the passage of NAHA even though the capital ratio continues to exceed the statutory minimum. In all our estimates of Fund performance, we have assumed continuation of the current HUD policy that no distributive shares will be paid.

B. FHA Policy Developments and Underwriting Changes

Since the mid-1990's, FHA has implemented several policy changes that affected the financial strength of the MMI Fund. Some of the major changes have included revised underwriting guidelines, changes to homeownership counseling requirements, implementation of automated underwriting systems, reduction of upfront mortgage insurance premiums and related changes, and most recently, increases in the maximum FHA mortgage loan limits and elimination of seller-financed downpayment assistance. Each of these developments is summarized below.

1. Revised Underwriting Guidelines and Other Policy Issues

In 1995, FHA introduced several changes in their underwriting guidelines to eliminate unnecessary barriers to homeownership, provide the flexibility to underwrite creditworthy non-traditional and underserved borrowers, and clarify certain underwriting requirements so that they are not applied in a discriminatory manner. Some of the changes were as follows:

- Instead of using the previous five-year period to determine the borrower's stable income, the revised policy allowed that if the income can be expected to continue for the first three years of the mortgage, it can be used in qualifying the borrower.
- Overtime and/or bonus income received for less than two years became acceptable, where the lender determines there are reasonable prospects of its continuance.
- Part-time income was recognized, where part-time income refers to income generated by jobs taken in addition to the normal, regular employment to supplement the borrower's income. The lender must determine that the continuance of this income is reliable and provide a strong explanation for including such income as effective income in qualifying the borrower.
- Only debts extending ten or more months are required to be included in the calculations of debt-to-income ratios. Childcare costs are no longer to be considered in the computation of the debt-to-income ratio, except for court-ordered or voluntary child support payments.

- Borrowers who have saved cash (not deposited in a depository institution) and are able to adequately demonstrate the ability to continue to do so are permitted to have this money included as an acceptable source of funds to close the mortgages. Borrowers who have demonstrated the capacity for monthly savings are permitted to use their current saving as an acceptable source of funds to close the mortgage (i.e., there is no requirement for borrowers to demonstrate additional borrower reserves after closing).
- HUD permits, under most circumstances, a Three Repository Merged Credit Report (TRMCR) rather than a more comprehensive Residential Mortgage Credit Report (RMCR). HUD also permits alternative underwriting with nontraditional means of establishing credit or credit worthiness through acceptance of Non-Traditional Mortgage Credit Report (NTMCR).

While these modifications enabled many additional households to become homeowners, the relaxation of the underwriting rules also lead to an increase in FHA claim rates.

Changes were made in 1998 to underwriting guidelines for adjustable rate mortgages (ARMs). The policy revisions addressed the high losses that FHA was experiencing. Based on FHA's study of ARM claim rates, it was deemed necessary to change the credit policy to maintain MMI Fund actuarial soundness. ARM borrowers now must qualify using a mortgage payment level based on the maximum second-year interest rate. This applies to all ARMs with loan-to-value (LTV) equal to or greater than 95 percent. Also, any form of temporary interest rate buydowns for ARMs is no longer acceptable.

2. Changes to Homeownership Counseling

Another focus of the 1998 revisions was homeownership counseling. Previously, first-time homebuyers receiving counseling were eligible for a reduced upfront FHA insurance premium. While FHA permitted funding for approved homeownership counseling programs, unacceptable practices were observed, such as borrowers simply being asked to complete homeownership workbooks without any additional interaction with the counseling program. The new rule required that the type of homeownership counseling obtained by the first-time homebuyer must be examined by FHA's quality assurance staff as part of its regular reviews of lenders. FHA required that counseling be delivered in a classroom setting, face-to-face or via electronic media, and involve 15 to 20 hours of instruction. The homebuyer counseling programs accepted by Freddie Mac or Fannie Mae also meet this requirement. When the upfront premium was reduced in 2001 for all FHA borrowers, there was no longer a separate discount for borrowers who went through homeownership counseling programs.

3. Automated Underwriting Systems

In 1998, FHA approved Freddie Mac's Loan Prospector (LP) for underwriting FHA-insured mortgages. At the same time, FHA made a substantial number of revisions to its credit policies and reduced documentation requirements for LP-assessed loans, as described in the LP User Guide. This was the first time that FHA incorporated an automatic underwriting system (AUS) in its insurance endorsement process. Fannie Mae's Desktop Underwriter (DU) and PMI Mortgage Services' pmiAURA were approved to underwrite FHA mortgages in 1999, followed soon after by Countrywide Funding Corporation's CLUES and JP Morgan-Chase's Zippy. Began May 2004, all of these AUSs apply FHA's Technology Open To Approved Lenders (TOTAL) mortgage scorecard to evaluate loan applications for possible automated approval for FHA insurance. More than two-thirds of loans submitted generally receive automated approval, eliminating the need for manual underwriting reviews. HUD changed its acceptance threshold in July 2008 and expects more than 80 percent of all future applicants to receive automated approval. HUD also notified lenders that all loans must be submitted through FHA's TOTAL scorecard.

4. Further Reduction in Upfront Mortgage Insurance Premiums

In 2000, in recognition of the continued financial strength and increase in the size of the MMI Fund, FHA revised its Upfront Mortgage Insurance Premium (UFMIP) policy for all loans closed on or after January 1, 2001. The new UFMIP is 1.50 percent for all borrowers. The eligibility period for UFMIP refunds was shortened to five years for loans endorsed prior to December 8, 2004, and eliminated for loans endorsed after that date, except for borrowers who refinance with a new FHA-insured mortgage. In the latter case, when the refund can be applied toward the UFMIP of the new FHA-insured loan, the refund eligibility expires after 3 years.

In the past, some FHA borrowers needed to pay annual mortgage insurance premiums throughout the life of the mortgage. The new rule specified that annual mortgage insurance premiums will be automatically canceled for all loans closed on or after January 1, 2001 under the following conditions:

- For mortgages with terms of more than 15 years, the annual mortgage insurance premiums will be canceled when the loan balance reaches 78 percent of the original house price. The mortgagor has to pay the annual mortgage insurance premium for at least five years.
- For mortgages with terms equal to or less than 15 years and having a loan-to-value ratio of 90 percent or greater, the annual mortgage insurance premiums will be canceled when

the loan balance reaches 78 percent of the original house price, regardless of the length of time the mortgagor has paid the annual mortgage premium.

- For mortgages with terms equal to or less than 15 years and a loan-to-value ratio based on the original house price of less than 90 percent, no annual mortgage insurance premium will be charged.

5. FHA's Single-Family Loan Limits

In early January 2008, HUD announced that FHA's single-family national loan limit ceiling and floor for 2008 would remain unchanged at their 2007 levels.¹ The maximum insurable single-family loan size in low-cost areas (the "Floor") was \$200,160 and the maximum insurable amount in high cost areas (the "Ceiling") was \$362,790.² The nationwide mortgage floors for low-cost areas were \$256,248, \$309,744, and \$384,936 for two-, three-, and four-unit mortgage loans, respectively, and the respective statutory ceilings for high-cost areas were \$464,449, \$561,411, and \$697,696.

In early March 2008, FHA announced higher temporary loan limits to meet the requirements of the Economic Stimulus Act of 2008. FHA's single-family national loan limit ceiling and floor for 2008 were revised to \$729,750 and \$271,050 respectively. The nationwide mortgage floors for low-cost areas are \$347,000, \$419,400, and \$521,250 for two-, three-, and four-unit mortgage loans, respectively, and the respective statutory ceilings for high-cost areas are \$934,200, \$1,129,250, and \$1,403,400. These loan limit increases are effective for mortgages endorsed for FHA insurance on or after March 6, 2008 and remain in effect for mortgages receiving credit approval on or before December 31, 2008.

In July 2008, the passage of Housing and Economic Recovery Act (HERA) of 2008, including FHA Modernization Act of 2008 set the FHA loan limit at 110 percent of area median home price with a ceiling of 150 percent of the GSE conforming loan limit, or \$625,000, and a floor of 65 percent of GSE conforming loan, effective January 1, 2009.³

¹ Mortgagee Letter 2008-02, January 18, 2008.

² The new loan limit is still subject to the 95 percent of area median house price rule, thus continuing to cause the FHA population to consist primarily of below-median-priced homes.

³ The bill was passed by the United States Congress on July 24, 2008 and signed by President George W. Bush on July 30, 2008.

C. Current and Future Market Environment

1. Interest Rates

According to Federal Reserve Board statistics, the one-year constant-maturity Treasury yield declined from 4.96 percent in July 2007 to 2.28 percent in July 2008. Similarly, the ten-year Treasury yield declined from 5.00 percent in July 2007 to 4.01 percent in July 2008. Mortgage interest rates also decreased by about 27 basis points over this period. The average conventional 30-year fixed-rate mortgage commitment rate posted by Freddie Mac declined slightly from 6.70 percent to 6.43 percent between July 2007 and July 2008. The realized rates were ultimately much lower than those forecast by Global Insight, Inc. in August 2007 and applied in last year's Review.

Based on this market-wide trend, Global Insight, Inc. has forecasted Treasury and mortgage rates to steadily decline through the first and second quarters of FY 2009. After that, rates start to rise steadily up to the third quarter of FY 2010 and stabilize at 4.84, 5.44, and 7.12 percent for the 1-year Treasury, 10-year Treasury, and 30-year mortgage rates, respectively. During the period FY 2009 to FY 2014, the interest rates forecasted by Global Insight, Inc. are generally lower than those forecasted a year ago. The lower realized and forecasted rate environment leads to higher prepayment rates for FHA-insured loans.

2. House Price Growth Rate

Projections of future national average home price growth rates are obtained from the Global Insight, Inc. July 2008 long-range forecast. According to this forecast, the realized annual national average house price growth rate during FY 2008 is a *negative* 9.14 percent, compared to the *negative* 1.17 percent projected by Global Insight, Inc. in August 2007 and applied in last year's Review. Under the current forecast, the most severe four-quarter rate reaches a *negative* 10.56 percent ending the first quarter of FY 2009. The housing market deterioration is forecasted to continue throughout FY 2010 with a *negative* 1.14 percent growth rate at the national level. Such a pessimistic forecast of the national housing market implies a dramatic increase in the claim rates of FHA-insured loans from FY 2008 through FY 2010. Furthermore, loans originated in late 2007 through 2008 will experience immediate price declines, putting many borrowers into negative equity positions. The lifetime claim rates of these loans are thus projected to be substantially higher than in any of the previous books since 1990. On the other hand, the projected future house price growth rates after the third quarter of 2012 are slightly higher than last year's forecast and have smaller intra-year seasonal fluctuations. This tends to reduce claims and losses in the later years, but not by nearly enough to offset the consequences of the pessimistic near-term forecast. The change in the view of the future housing market from last year has a large adverse impact on this year's results.

3. Mortgage Demand

FHA's market share increased during FY 2008, reversing the downward trend since FY 2002. The market share dropped significantly following FY 2002 as the subprime mortgage market expanded. The MMI Fund origination volume during FY 2008 estimated by FHA is about three times that forecasted in the FY 2007 Review. The FHA's market share is estimated to be about 8 percent of the entire market in FY 2008.

HUD projects that the endorsement volume will increase to over \$300 billion by FY 2010 and continue to increase going forward. This volume is more than double the highest annual volume observed prior to FY 2008. The larger origination volume for new books of business will lead to faster growth in IIF. Meanwhile, the slow prepayment rates of FRMs cause the IIF of the existing portfolio to decrease more slowly, exposing more loans to claim risk for a longer time period. In the case of ARMs, rising interest rates mean higher monthly payment levels over the next few years. If borrower income does not increase as rapidly as mortgage payments, more ability-to-pay related defaults could occur. When compounded by falling house prices, the claim rates of ARM loans are projected to rise considerably. However, the most recent data also show that the ARM share of FHA originations has declined substantially, from 11.52 percent in FY 2005 to only 0.79 percent in FY 2008. As a result, even if the claim rates of ARMs rise substantially, the impact on the MMI portfolio is likely to be limited.

4. Implications of Recent Problems in the Subprime Mortgage Market

The recent developments in the U.S. subprime and Alt-A mortgage markets have had serious consequences for financial markets in the U.S. and across the world. Many of the initial problems in the subprime market are attributable to the special characteristics of subprime mortgage contracts, differences in underwriting standards for subprime mortgages, a prevalence of higher-risk borrowers with impaired credit, and borrowers less willing or able to verify their income and employment. Many of the subprime mortgages were securitized and these securities sold to investors in the U.S. and across the world. As long as house prices continued to increase, this system worked. But when house prices began to decline and defaults on these mortgages started to increase, this translated into a very negative impact on the prices of these securities. The fall in the prices of these securities had a strong negative impact on other financial markets and on credit conditions in general. The deterioration of the housing price market triggered a severe downturn in other financial markets whose full implications are yet to be seen.

Although the financing of subprime loans has been substantially discontinued, the fallout continues to have far-reaching and profound consequences for credit markets, mortgage markets and housing finance. The market for conventional mortgages has tightened considerably. Many lenders and mortgage providers have experienced financial difficulties and have scaled back their

lending activities. Private mortgage insurers have experienced high claim rates on their subprime and Alt-A exposures, and have had their credit ratings reduced. Fannie Mae and Freddie Mac have both experienced substantial financial losses and are presently subject to management and reorganization by the Federal government to help stabilize the housing market. Under these conditions, the volume of FHA business has increased and is projected to continue to increase, and this Review reflects an FY 2008 volume of about three times higher than applied in last year's Review. At the same time, house prices have declined significantly and are projected to continue declining over the next two years.

Although FHA did not participate directly in the subprime or the Alt-A markets, the consequences of the collapse of these markets has had a significant impact on key determinants of FHA's risk exposure. These impacts are incorporated in the assumptions used in this Review, especially in assumptions concerning the volume and composition of new business and the projection of future house price changes.

D. High Concentration of Loans with Downpayment Assistance in Recent Books

The share of FHA-insured loans receiving downpayment assistance from non-profit organizations remained high during this past year. Non-profit-organization-assisted mortgages now represent over twenty percent of the entire FY 2005, FY 2006, and FY 2007 books of business. Although the concentration declined for loans endorsed for insurance in FY 2008, it remains over fifteen percent. FHA guidelines allow a borrower to use outright gifts of cash as downpayment assistance. Eligible gift sources include: relatives, employers or labor unions, tax-exempt charitable organizations, governmental agencies, public entities that have programs to provide homeownership assistance to low- and moderate-income families or first-time homebuyers, or close friends with a clearly defined and documented interest in the borrower. A 2005 report by the Government Accountability Office (GAO) documented that many downpayment gifts provided by non-profit organizations were contributed by the home sellers involved in the specific transactions, possibly financed by inflated house values.⁴ The FY 2005 Review documented that loans with gift assistance, especially from non-profit organizations, experienced higher-than-average claim rates. On May 22, 2006, the Internal Revenue Service (IRS) issued a ruling that non-profit organizations that fund downpayment assistance programs with contributions from the property sellers will no longer meet the legal requirements for tax-exempt status.⁵ However, high volumes of these loans were still endorsed following the IRS announcement. The passage of HERA on July 30, 2008 terminates seller-financed downpayment assistance effective October 1, 2008.

⁴ "Mortgage Finance Additional Action Needed to Manage Risks of FHA-Insured Loans with Downpayment Assistance," Government Accountability Office, November 2005.

⁵ Internal Revenue Bulletin: 2006-21, Internal Revenue Service.

For the base-case scenario of this Review, we have assumed that loans receiving seller-financed downpayments are eliminated effective in FY 2009 and in all future years. The fall off in seller-financed downpayment assistance in FY 2009 and later years has a significant effect in reducing losses on future FHA loans. In one of the sensitivity analyses presented in Section V of this report, we contrast the base-case scenario with an alternative scenario showing the status of the MMI Fund if endorsement of these high-claim-rate loans were to continue.

E. Recently Announced New Plans and Initiatives

In early September, 2007, HUD announced *FHASecure* initiative, a temporary program designed to provide refinancing opportunities to homeowners and to increase liquidity in the mortgage market.⁶ Under this program non-FHA ARM borrowers who are delinquent on their current mortgage payments as a result of the reset of their interest rate will be permitted to refinance into an FHA-insured mortgage. As this Review is being prepared, FHA has thus far served less than 4,000 delinquent borrowers under this initiative.

In May 2008, *FHASecure* was expanded, with effective date of July 14, 2008, to enable a wider range of borrowers to qualify to refinance to FHA-insured loans if they had acceptable payment histories prior to the reset of their interest rate. All conventional-to-FHA rate and term refinances are now considered part of the *FHASecure*, regardless of whether the borrower is delinquent or current. Cash-out refinance transactions are not acceptable under this program.⁷ The eligibility criteria for delinquent borrowers and new subordinate financing under this initiative are temporary and scheduled to expire on December 31, 2008.

F. Data Sources and Future Projections

The estimates presented in this Review require projections of events more than 30 years into the future. These projections are dependent upon a number of assumptions, including economic forecasts by Global Insight, Inc., future book volume and composition projection by HUD, and the assumption that FHA does not change its refund and premium policies. Since these assumptions are estimates, the actual outcomes may vary, perhaps significantly, from our current projections.

We based our analysis on FHA historical prepayment and claim data through March 31, 2008 and endorsement composition and volume through additional data extracts by July 31, 2008. While we have reviewed the integrity and consistency of these data and believe them to be reliable, we have not audited them for accuracy. The information contained in this Review may

⁶ See Mortgage Letter 2007-11, September 4, 2007

⁷ See Mortgage Letter 2008-13, May 7, 2008

not correspond exactly with other published analyses that rely on FHA data compiled at a different time or obtained from other data sources.

G. Structure of this Report

The remainder of this report is divided into the following sections:

Section II. Summary of Findings and Comparison with FY 2007 Actuarial Review – presents the Fund's estimated economic value, capital ratio, and insurance-in-force for FY 2008 through FY 2015. This section also provides a reconciliation and explanation of the major differences between the FY 2007 and the FY 2008 Reviews concerning the key variables.

Section III. Current Status of the Fund – presents the estimated economic value and capital ratio for the Fund at the end of FY 2008 and provides an analysis of the performance of the FY 1979 through FY 2008 books of business.

Section IV. Characteristics of the FY 2008 Book of Business – describes the FY 2008 book of business and compares the risk characteristics of the current book to those of previous books.

Section V. MMI Fund Sensitivities – presents sensitivity analyses of the MMI Fund using alternative economic and actuarial assumptions.

Section VI. Summary of Methodology – presents an overview of the econometric and cash flow models used in the Review.

Section VII. Qualifications and Limitations – describes the main assumptions and the limitations of the data and models relevant to the results presented in this Review.

Section VIII. Conclusions – provides a summary of the report's results and the conclusions we draw from those results.

Appendix A. Econometric Analysis of Mortgages – provides a technical description of our econometric models for individual mortgage product types.

Appendix B. Cash Flow Analysis – provides a technical description of our cash flow model.

Appendix C. Data for Loan Performance Simulations – explains the procedures used to transform the raw data into the data used to simulate future mortgage and MMI Fund performance.

Appendix D. Economic Forecasts – describes the forecast of future economic factors that affect the performance of the Fund and the alternative economic scenarios underlying the selected sensitivity analyses.

Appendix E. Econometric Results – presents claim and prepayment rates estimated from the econometric model.

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