

**Section I: Introduction**

The 1990 Cranston-Gonzalez National Affordable Housing Act (NAHA), enacted in 1990, mandated that the Federal Housing Administration's (FHA's) Mutual Mortgage Insurance (MMI) Fund maintain a capital ratio of 2.00 percent starting from October 1, 2000. As defined by NAHA, the definition of the capital ratio is the ratio of the Fund's capital or 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.

The purpose of the annual actuarial review is to assess the actuarial soundness of the Fund. The analysis will estimate the economic value of the MMI Fund as well as the capital ratio to see if the Fund has met the capital standards set forth in NAHA. The analysis is based on the information provided by HUD, such as historical performance of the existing MMI Fund loans, projected future economic conditions, loss given claim rates, and projected mortgage originations.

**A. Implementation of NAHA**

Following the issuance of the fiscal year (FY) 1989 Actuarial Review and the ensuing debate, Congress mandated various changes to the MMI Fund as part of the 1990 Cranston-Gonzalez Act. 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 minimum equity requirements, 3) changes in the pricing of insurance premiums, and 4) revisions to policies regarding distributive shares.

The provisions of NAHA regarding the MMI Fund have had a significant impact on the performance of the current and future books of business. The changes called for in the Act were specifically designed to remedy the past financial difficulties encountered by the Fund. Each change was intended to either reduce the risks inherent in the additional books of business or to adjust premiums to more adequately compensate for these risks.

The NAHA legislation required that the Fund be operated on an actuarially sound basis by providing specific capital standards for the Fund and time frames in which these standards should be met. It also defined the actuarial standard as a ratio of the Fund's capital or economic net worth to its unamortized insurance-in-force.

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 was done in the past. 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. In all our estimates of Fund performance, we have assumed that no distributive shares will be paid. We make this assumption because it is consistent with current FHA policy.

## **B. FHA Policy Developments and Underwriting Changes**

During the past ten years, FHA implemented several policy changes. Some of the major changes include revised underwriting guidelines and other policy issues, underwriting adjustable rate mortgages and homeownership counseling, usage of automated underwriting system, reduction of upfront mortgage insurance premium and related changes, and increases in FHA single-family maximum mortgage limits. Each of these developments is summarized below.

### **1. Revised Underwriting Guidelines and Other Policy Issues**

In 1995, FHA undertook several changes in the underwriting guidelines and policy issues. The purpose of the revisions was 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 last five years to determine the borrower's income stability, the revised policy required that income be expected to continue for the first three years of the mortgage for it to be used in qualifying the borrower.
- Overtime and/or bonus income received for less than two years is acceptable where the lender determines that there are reasonable prospects of its continuance.
- The recognition of part-time income, where part-time income refers to 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.
- FHA requires only debts extending ten or more months to be included in the 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 at home and are able to adequately demonstrate the ability to do so are permitted to have this money included as an acceptable source of funds to close the mortgages.
- HUD permits, under most circumstances, a "three repository merged credit report" (TRMCR) rather than a Residential Mortgage Credit Report (RMCR).

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

## **2. Underwriting Adjustable Rate Mortgages and Homeownership Counseling**

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

Another focus of the revisions was on homeownership counseling. In the past, FHA had offered homeownership counseling for the benefit of the borrowers. However, unacceptable practices such as borrowers simply being asked to complete homeownership workbooks without any additional interaction with the counseling program were observed. The new rule requires 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 the lenders. FHA required that counseling be delivered in a classroom setting, face-to-face, or via electronic media and that the counseling program would involve 15 to 20 hours of instruction. Other counseling programs accepted by either Freddie Mac or Fannie Mae also qualify under this requirement.

## **3. Automated Underwriting Systems**

In 1998, FHA announced that it approved Freddie Mac's Loan Prospector (LP) for the use in 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's Guide. This is the first time that FHA incorporated automatic underwriting systems (AUSs) in its loan approval process. A year later, in 1999, Fannie Mae's Desktop Underwriter (DU) and PMI Mortgage Services' pmiAURA automated underwriting systems were also approved to underwrite FHA mortgages.

## **4. Further Reduction in Upfront Mortgage Insurance Premiums**

In 2000, in recognition of the continued strength and increase in the MMI Fund, FHA revised its Upfront Mortgage Insurance Premiums (UFMIP) policy for all loans closed on or after January 1, 2001. The new UFMIP is 1.50 percent and the borrower does not have to be a first-time homebuyer or to have received homeownership counseling. The UFMIP refund schedule has also been shortened to a five year time period.

In the past, some FHA borrowers needed to pay annual mortgage insurance premiums throughout the life of the mortgage. The new rule specifies 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-to-value ratio reaches 78 percent. The mortgagor has to pay the annual mortgage insurance premiums for at least five years.
- For mortgages with terms equal or less than 15 years and a loan-to-value ratio of 90 percent or greater, the annual mortgage insurance premiums will be canceled when the loan-to-value ratio reaches 78 percent, regardless of the length of time the mortgagor has paid the annual mortgage premiums.
- For mortgages with terms equal to or less than 15 years and a loan-to-value ratio of 89.9 percent and less, the annual mortgage insurance premiums will not be charged.

## 5. Increase in FHA's Single-Family Loan Limits

In late December 2003, HUD announced that it would raise FHA's single-family loan limit. The new mortgage limits ("the floor") will be \$160,176 and the new ceilings for high cost areas are \$290,319.<sup>1</sup> The nationwide mortgage limits are \$205,032, \$247,824, and \$307,992 for two, three, and four-units mortgage loans. The statutory ceilings of two, three, and four-unit mortgage loans for high cost areas are \$371,621, \$449,181, and \$558,236, respectively. The increase in loan limit is the result of increases in Fannie Mae and Freddie Mac conforming mortgage loan limits. This change was effective starting January 1, 2004.

## C. Current and Future Market Environment

### 1. Interest Rates

The interest rates on Treasury securities increased through FY 2004 from their FY 2003 level. The one-year Treasury rate increased from 1.09 percent on June 30, 2003 to 2.09 percent on June 30, 2004. The ten-year rate increased from 3.54 percent on June 30, 2003 to 4.62 percent on June 30, 2004. Mortgage interest rates also increased sharply. The average conventional 30-year fixed-rate mortgage commitment rates posted by Freddie Mac increased from 5.51 percent to 6.13 percent between the second quarter of 2003 and the second quarter of 2004.

Consistent with this rising trend, Global Insight, Inc. also forecasted interest rates to rise rapidly during the next few years. By the end of the projection period of this review, FY 2011, the one-

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<sup>1</sup>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 of below-median-priced homes.

year Treasury rate is expected to rise to a stable level of 5.40 percent. Due to the observed rate increases during the last year, the MMI Fund origination volume during FY 2004 is now estimated to be 20.9 percent lower than was forecasted by the FY 2003 review. With the rising interest rate trend expected to continue over the next few years, future origination volume would remain lower. The smaller origination volume for new books will lead to slower growth in the insurance in force of the MMI Fund. On the other hand, the associated slower prepayment rates in FRMs make the insurance in force of the existing portfolio decrease slower, leaving more loans subject to claim risk for a longer time period. As for ARMs, rising interest rates mean higher payment levels in the next few years. Should borrower incomes not increase as rapidly as the mortgage payments, more ability-to-pay-related claims could be observed.

## **2. House Price Growth Rate**

On September 1, 2004, the Office of Housing Enterprises Oversight (OFHEO) announced that U.S. home prices increased an average 9.36 percent from the second quarter of 2003 through the second quarter of 2004. This is the largest four-quarter increase in housing value since 1979. The long-run forecasts used in estimating the Fund's future economic value are consistent with current economic conditions, but with expectation that the growth rate will rapidly decline. These economic projections are obtained from the Global Insight August 2004 long-range forecast. Generally, annual growth rates in house prices are projected to stay high for the remainder of FY 2004, but start to drop quickly to below 3 percent by the end of FY 2005, and remain low throughout FY 2006 and the beginning of FY 2007 before gradually rising back to about a stable 4.25 percent growth rate by FY 2014. The slower growth rate in housing prices implies a deceleration of economic growth for the year 2005 to 2010. This represents a temporary recession in the housing market and affects the strength of the MMI Fund in the projected future.

Section II presents these forecasts in greater detail and Section V provides an analysis of the fund's sensitivity to changes in specific economic variables.

## **D. 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. and the assumption that FHA does not change its refund and premium policies. To the extent these or other assumptions are not accurate, the actual results will vary, perhaps significantly, from our current projections.

Furthermore, our analysis is based on an extract of FHA's database that was obtained at the end of March 2004 as well as one with updated data covering the total claim cases observed as of end of July 2004. 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 not correspond exactly with other published analyses that rely on FHA data compiled at a different time or obtained from other data sources.

**E. Structure of this Report**

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

**II. Summary of Findings and Comparison with FY 2003 Actuarial Review** - presents the Fund's estimated economic value, capital ratio, and insurance-in-force for FY 2004 through FY 2011. This section also provides a reconciliation and explanation of the major differences between the FY 2003 Review and the FY 2004 Review.

**III. Current Status of the Fund** - presents the estimated economic value and capital ratio for the Fund for the end of FY 2004 and provides an analysis of the performance of the books of business from FY 1975 through FY 2004.

**IV. Characteristics of the FY 2004 Book of Business** - describes the FY 2004 book of business and compares the risk characteristics of the current book to previous books.

**V. MMI Fund Sensitivities** - presents sensitivity analyses of the MMI Fund using alternative economic assumptions and loan characteristics.

**VI. Summary of Methodology** - presents an overview of the econometric and cash flow models used for the review.

**VII. Considerations and Limitations** – describes the main assumptions and the limitations of the data and models relevant to the results presented in this review.

**VIII. Conclusions** - provides a summary of the report's results and the conclusions that can be drawn from those results.

**Appendix A. Econometric Analysis of Mortgages** - provides a technical description of our econometric model 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 Simulation** – explains the algorithms in deriving the data for simulating future mortgage performance from raw data.

**Appendix D. Economic Forecasts** – describes the forecast of future economic factors that affect the performance of the Fund and the alternative economic scenarios associated with various sensitivity analyses.

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