Section II: Summary of Findings and Comparison with FY 2006 Actuarial Review

This section presents the economic value and capital ratios of the Fund for FY 2007 and provides an explanation of how the results of this year's Review compare with those of the FY 2006 Review.

A. The FY 2007 Actuarial Review

The FY 2007 Actuarial Review assessed the actuarial soundness of the MMI Fund as of the end of FY 2007 (September 30, 2007) in terms of whether the Fund has maintained at least the two percent capital ratio required by NAHA, and projected the status of the Fund through FY 2014. The objectives of our analysis included:

- evaluating the historical experience of the Fund, including loan termination experience due to claims and prepayments, and losses associated with those terminations;
- estimating future loan termination rates and their corresponding losses and projecting future cash flows of the existing Fund portfolio and future books of business; and
- determining the adequacy of current and future capital resources to meet estimated cash outflow requirements.

We conducted this review by estimating the economic relationships of historical loan performance using historical data provided by FHA, applying the appropriate policy parameters, and using forecasts of future macroeconomic conditions published by Global Insight, Inc.

The econometric and cash flow models are similar in most respects to those of the FY 2006 Review with some enhancements for this FY 2007 Review. The analysis utilizes loan-level data on the Fund's experience reported by HUD through May 2007. These models also incorporate a set of economic assumptions and forecasts for future years. To estimate future claim loss rates, the model applies the historical average claim loss severity rates that were realized during FY 2006 for each of the six FHA mortgage product types, whether a judicial process is used for foreclosure by the state where the collateral property is located, and whether downpayment assistance from non-profit organizations were received. (For descriptions of the individual models and assumptions, see Appendices A through D.) Our major findings are as follows:

- as of the end of FY 2007, the MMI Fund was projected to have an estimated economic value of **$21.277 billion** and an unamortized insurance-in-force of **$332.293 billion**;

- the FY 2007 book of business was projected to bring an estimated negative **$406 million** in present value to the economic value of the MMI Fund;

- the capital ratio was estimated to be **6.40 percent** as of September 30, 2007, and projected that this ratio will be **7.25 percent** as of September 30, 2014. Based on these estimates, we conclude that the Fund would continue to exceed the NAHA-mandated 2.00 percent capital ratio in the foreseeable future.

Our current projections indicate that the Fund's economic value will continue to increase in the future, rising by an average of 8.39 percent per year through FY 2014. With the expected slower prepayment rate of the existing books of business implied by the rising interest rate environment and FHA's projection of a lower endorsement volume of future books of business, the insurance in force (IIF) of the Fund would increase by an average rate of 6.48 percent per year through FY 2014. The economic value is expected to grow at a much faster rate than that of the IIF, causing the Fund's projected capital ratio to increase to 7.25 percent at the end of FY 2014. Exhibit II-1 provides estimates of the Fund's economic value, insurance in force and capital ratio through the end of FY 2014.

Exhibit II-1

Projected MMI Fund Performance for FYs 2007 to 2014
($ Millions)

Fiscal Year	Economic Value of the Fund[a]	Capital Ratio (%)	Volume of New Endorse-ments[b]	Insurance in Force[c]	Economic Value of Each New Book of Business	Investment Earnings on Fund Balances
2007	21,277	6.40	52,193	332,293	-406	
2008	22,748	6.67	50,149	341,012	390	1,082
2009	24,706	6.83	58,381	361,566	849	1,108
2010	26,796	6.86	65,658	390,544	892	1,199
2011	29,053	6.87	72,556	422,986	936	1,321
2012	31,492	6.91	77,773	455,984	985	1,454
2013	34,251	7.01	86,237	488,420	1,167	1,592
2014	37,405	7.25	92,439	515,698	1,410	1,744

[a] All values are as of the end of each fiscal year. The economic value for future years (FYs 2008 through 2014) is equal to the economic value of the Fund at the end of the previous year, plus the current year's interest earned on the previous fund balance, plus the economic value of the new book of business.
[b] Based on HUD August 2007 projection.
[c] Estimated based on the MMI Fund data extract as of May 31, 2007.

B. Change in the Estimated Strength of the Fund

Exhibit II-2 displays the components of the Fund's current economic value and capital ratio, with comparisons between values in the FY 2006 and the 2007 Reviews. The FY 2006 Review estimated that the Fund had $22.021 billion in economic value at the end of FY 2006 to cover future claim losses.

Exhibit II-2

Estimates of MMI Fund Economic Value as End of FY 2007 ($ Millions)		
Item	**End of FY 2006[a]**	**End of FY 2007**
Cash	$ 5,811	
Investments	22,004	
Properties and Mortgages	1,628	
Other Assets and Receivables	255	
Total Assets	$ 29,698	
Liabilities	5,476	
Total Capital Resources	$ 24,222	
Net Gain from Investments		1,214[b]
Net Insurance Income in FY 2007		(71)
Total Capital Resources		**25,365**
PV of Future Cash Flows on Outstanding Business		(3,952)
Special Loss Reserve for Damages from 2005 Hurricanes		(136)[c]
Economic Value	**$ 22,021**[d]	**21,277**
Unamortized Insurance-In-Force	323,028[d]	332,293
Current Capital Ratio	**6.82%**[d]	**6.40%**
Amortized Insurance-In-Force		305,449
Current Capital Ratio with Amortized Insurance-In-Force		**6.97%**

[a] Source: Audited Financial Statements for FY 2006.
[b] Estimated by assuming the total capital resources as of the end of FY 2006 earns a total investment return equal to 1-year Treasury Constant-Maturity Rate, which averaged 5.01 percent during FY 2007. (Source: Board of Governors of the Federal Reserve System).
[c] Estimated by HUD as of October 2007.
[d] From the FY 2006 Actuarial Review.

We estimated that the Fund had total capital resources of $25.365 billion at the end of FY 2007. The present value of future cash flows was -$3.952 billion. The special loss reserve for damages related to 2005 Hurricanes was -$136 million. Thus, as of the end of FY 2007, the Fund had $21.277 billion in economic value, which can be used to cover unanticipated future claim losses of the existing portfolio.

As seen in Exhibit II-2, the current economic value of the MMI Fund decreased by 3.38 percent from that of last year's Review, and the current Fund's capital ratio actually decreased by 6.16 percent from that of last year's Review. That is, the capital ratio decreased from 6.82 percent to 6.40 percent. This decrease is due mainly to the significant deterioration of the national housing market. The negative 2.14 percent national house price appreciation during FY 2007 significantly lowered the present value of future cash flows of all existing books. Exhibit II-3 compares the FY 2006 and FY 2007 Reviews by annual books of business to highlight how the value of each book has changed. It shows that the present value of future cash flows of all recent books of business declined from the FY 2006 projection. The deterioration is mainly due to the much worse-than-expected house price appreciation rate during FY 2007 and the adjusted future appreciation rates. Last year, Global Insight projected the national house price appreciation of 5.94 percent during the 2007 to 2008 two-year period. However, in their August 2007 forecast, Global Insight revised the projection of the appreciation rate during the same two-year period to be negative 3.28 percent. The negative appreciation rate causes many newly originated loans to fall into a negative equity position, leading to high claim rates. The current Review shows that the total present value of future cash flows on outstanding books of business has dropped from negative $1.44 billion to negative $2.62 billion.

Exhibit II-3

Present Value of Future Cash Flows by Book of Business, FY 2006 Review, FY 2007 Review, and Difference ($ Millions)			
Book of Business	**FY 2006 Review[a]**	**FY 2007 Review[b]**	**Difference[c]**
1978	0	0	0
1979	1	0	-1
1980	1	0	-1
1981	0	0	0
1982	0	0	0
1983	1	1	0
1984	0	0	0
1985	-1	-1	0
1986	-3	-1	2
1987	-4	-3	1
1988	-3	-2	1
1989	-4	-2	2
1990	-5	-3	2
1991	-6	-4	2
1992	-6	-4	2
1993	-10	-8	2
1994	-15	-12	3
1995	-11	-12	-1
1996	-27	-24	3
1997	-29	-27	2
1998	-54	-50	4
1999	-107	-96	11
2000	-118	-92	26
2001	-45	-57	-12
2002	-26	-86	-60
2003	256	25	-231
2004	-144	-262	-118
2005	-230	-547	-317
2006	-853	-1,355	-502
Total	-1,442	-2,622	-1,180

[a]Values as of the end of FY 2006
[b]Values as of the end of FY 2007
[c]Numbers do not add due to rounding for this and some subsequent Exhibits.

C. Changes from the FY 2006 Review to the FY 2007 Review

This section describes the sources of change in estimates between the FY 2006 Review and the FY 2007 Review for the FY 2007 economic value and the FY 2013 capital ratio. Separating out the effects of interrelated approaches and assumptions can be done only up to a certain degree of accuracy. The interrelationships among the approaches and assumptions prevent us from identifying and analyzing these as purely independent effects, since these are sometimes jointly determined. However, this section presents a reasonable allocation of all the changes from FY 2006 Review estimates, by source of change. The purpose of the decomposition is twofold. First, it describes the change in the economic value from FY 2006 to FY 2007. Second, it explains changes between the current estimate of the capital ratio in FY 2007 and the estimate for FY 2007 that was previously presented in the FY 2006 Review.

1. Change in Economic Value from FY 2006 to FY 2007

The FY 2006 Review estimated the economic value of the Fund as of the end of FY 2007 to be $23.127 billion, and the projected FY 2007 and FY 2013 capital ratios to be 6.90 and 6.73 percent, respectively. In this Review, we estimated the end-of-FY 2007 economic value for the MMI Fund of $21.277 billion, which represents a decrease of $744 million from the FY 2006 economic value reported in the FY 2006 Review. This 3.38 percent decrease in the estimated economic value of the MMI Fund is accompanied by an increase in the unamortized IIF of 2.87 percent and caused the estimated capital ratio to decrease by 0.42 percentage points, from 6.82 percent as of the end of FY 2006 to 6.40 percent as of the end of FY 2007.

2. Current Estimate of FY 2007 Economic Value Compared with the Estimate Presented in the FY 2006 Actuarial Review

The FY 2006 Review projected that the FY 2007 book of business and investment earnings on Fund balances would add $81 million and $1,025 million, respectively, to the economic value of the Fund, resulting in a projected FY 2007 economic value of $23.127 billion. With the updated MMI Fund data extract, we now estimate the value of the FY 2007 book to be a *negative* $406 million and the investment earnings in FY 2007 to be $1,214 million. This year's estimate of the FY 2007 economic value is $1,850 million lower than the economic value projected for FY 2007 in last year's Review, as shown in Exhibit II-4.

Exhibit II-4 also provides a summary of the decomposition of changes in the current economic value of the Fund and the capital ratio in FY 2013 from the FY 2006 and the FY 2007 Reviews. The net change is mainly driven by three factors: the change in the economic forecast from last year, the change in capital resources, and the enhancement of the econometric model to better model the impact of borrower credit scores. The worse-than-expected housing market slowdown in FY 2007 and FY 2008 makes the FY 2006 to FY 2008 the worst performing books in the past

20 years. The actual capital resource of the MMI Fund as of end of FY 2006 turned out to be higher than estimated in the FY 2006 Review. The updated estimate of the one-time special loss reserve for damages by 2005 hurricanes is less severe than the previous estimate. Enhancing the econometric model to incorporate loan-level borrower credit scores had a positive impact on the economic value. The following pages provide more detailed discussions of individual sources of change.

Exhibit II-4

Summary of Changes in MMI Fund Estimated Economic Value Between FY 2006 and FY 2007 ($ Millions)				
	Change in FY 2007 Economic Value	FY 2007 Economic Value	Change in FY 2013 Capital Ratio (%)	Corresponding FY 2013 Capital Ratio[b] (%)
FY 2006 Economic Value Presented in the FY 2006 Review		22,021[a]		
FY 2007 Economic Value Presented in the FY 2006 Review, Excluding the FY 2007 Book of Business:	$1,025	23,046		
Plus: Forecasted Value of FY 2007 Book of Business Presented in the FY 2006 Review	$81			
Equals: FY 2007 Economic Value Presented in the FY 2006 Actuarial Review		**$23,127**		**6.73%**
Plus: a. Update Actual Origination Volume in the FY 2006	- $1	$23,126	- 0.01%	6.72%
Plus: b. Updated Special Loss Reserve for Damages from 2005 Hurricanes in the FY 2006	$505	$23,631	0.15%	6.87%
Plus: c. Update Actual Termination Rates and Net Income during FY 2006	$156	$23,787	0.04%	6.91%
Plus: d. Switch to the FY 2007 Econometric Model	$472	$24,259	0.35%	7.26%
Plus: e. Update to Global Insights August 2007 Economic Forecasts	- $3,172	$21,087	- 0.85%	6.41%
Plus: f. Update Demand Forecasts and Composition of Future Books	$145	$21,232	0.63%	7.04%
Plus: g. Change in Loss Severity Assumptions	$45	$21,277	-0.03%	7.01%
Equals: Estimate of FY 2007 Economic Value	$-1,850	$21,277	0.28%	7.01%

[a] Economic value as the end of FY 2006.
[b] The 2013 capital ratios are presented so they can be directly compared with those projected in the FY 2006 Review

3. Decomposition of the Differences in Economic Value and Capital Ratio of the Current Review versus the FY 2006 Review

We first identified the change in the estimated status of the Fund by adjusting for the actual FY 2006 origination volume and for the FY 2006 actual conditional prepayment and claim rates and other net cash flows. Then we decomposed the change in the estimated status of the fund that resulted from econometric model enhancements made in the current FY 2007 Review and from the new economic and origination volume forecasts. Finally, the loss severity rates are further differentiated by the state judicial foreclosure regulation of the collateral housing. Exhibit II-4 summarizes the effects of the individual sources of changes on the Fund's economic value at the end of FY 2007 and the capital ratio at the end of FY 2013.

a. Updated Origination Volume of FY 2006

The first component of change depicted in Exhibit II-4 is with respect to the updated origination volume for FY 2006. The actual realized origination volume of the FY 2006 book is 3.1 percent less than the forecasted volume reported in the FY 2006 Review. With the smaller size of the estimated initial economic value of the FY 2007 book, this change caused a trivial reduction of $1 million in the FY 2007 economic value.

b. Updated Special Loss Reserve for Damages from 2005 Hurricanes

The second element of change described in Exhibit II-4 is the adjustment of updated estimate of the special loss reserve for damages related to 2005 hurricanes. As of the end of FY 2006, HUD estimated that the one-time 2005 hurricane loss reserve was about $613 million. This estimate was updated to be about $136 million when using the data in October 2007. This updated estimation leads to less expected loss and cause the FY 2007 economic value to increase by $505 million. This additional amount causes the projected capital ratio for FY 2013 to increase by 0.15 percentage points.

c. Updated Actual Mortgage Termination Experience

The third element of change delineated in Exhibit II-4 is the impact of updated conditional prepayment and claim experience actually realized during the FY 2006 exposure year. The unexpected dip in interest rates during late 2006 and the early months of 2007 increased the prepayment rate relative to last year's projection. More significantly, the actual house price appreciation rate during the late FY 2006 and early FY 2007 was much worse than was forecast in June 2006, leading to higher claim rates for all newer books of business. Both factors lead to a rapid decline in the IIF of the most recently originated loans. Therefore, the smaller size of the insurance in force implies lower annual insurance premium income, but it also reduces the risk

for these books from possible future claims. The adjustment for actual mortgage termination experience and investment income causes the FY 2007 economic value to increase by 156 million and the capital ratio in the FY 2013 to increase by 0.04 percentage points.

d. Change in Econometric Models

To conduct this year's Review, we followed last year's econometric and discounted cash flow models, with some changes in model specification. (For descriptions of the changes in model specification assumptions, see Appendices A and B.) The main enhancement of the econometric model was to improve the incorporation of borrower credit history information at the loan-level. By using borrower information at the individual loan level, the model is more sensitive and can better differentiate loans that have the same product type, origination year, loan size and initial LTV, but have different borrower scores. Modeling at the loan level also provided better control for potential bias due to choice-based sampling of historical credit scores. The estimation results confirm that credit history is among the most influential factors explaining the claim probability among individual FHA-insured mortgages and is also a significant factor in explaining prepayment behavior. These improvements will also enhance the utility of the econometric models in supporting FHA's risk-based pricing initiatives. Risk-based pricing is a key component of FHA reforms included in the President's proposed FY 2007 Budget. Due to the improved measurement of the correlation between borrower credit scores and other risk characteristics, econometric model changes caused the economic value of FY 2006 to increase by $472 million and the capital ratio of FY 2013 to rise by 0.35 percentage points.

e. Changes in Economic Environment

Despite the flat yield curve observed in July 2007, the Global Insight August 2007 forecast projects the three key interest rates used in this Review to rise much faster in the short and intermediate terms than was forecasted a year ago. All rates decline thereafter to a lower long-term stable level after 2013. With lower long-term future interest rates, the prepayment rates of FY 2010 and future books of business are expected to be much higher than were estimated in the FY 2006 Review. The higher prepayment rate, together with lower expected origination volume of these future books, causes the insurance in force to be lower, and leads to a higher capital ratio.

The housing recession experienced during the past several quarters increased the risk of the existing books of business, particularly in terms of increasing the probability of experiencing negative equity. According to the Global Insight forecast, the annual house price growth rates are projected to be negative 2.14 in FY 2007, and negative 1.17 percent in FY 2008. Due to this severe housing market slowdown, the performances of the newer books of business, especially those of FYs 2006, 2007 and 2008, are expected to be much weaker than that of the older books. The weaker housing market forecasts indicate that many newly originated loans rapidly fall into

a negative equity position, thereby resulting in higher projected claim rates relative to what were estimated in the FY 2006 Review. Exhibit II-4 shows that the economic value for FY 2007 decreased by $3,172 million due to the change in economic forecasts.

f. Changes Due to Forecast of Demand Volume and Composition of Future Books

This part depicts the changes in economic value for FY 2007 due to changes in the assumptions of the FHA forecasted volumes of future books of business, the composition among products, and loans with gift letters from non-profit organizations.

First, relative to the FY 2006 Review, the volumes of future books of business forecasted by FHA are lower this year. Based on FHA's August 2007 forecast, annual origination volumes will grow at a much slower rate during the next seven years. The decrease in the size of new books of business will lead to a smaller economic value and a lower IIF for FY 2013.

Second, during the last few years, there was a rapid reduction in FHA's endorsement of high-LTV loans and ARMs. As will be shown in Section IV, loans with less than 3 percent downpayment had declined from about 55 percent in FY 2005 to about 42 percent in FY 2007. Partially due to the higher volume in fully underwritten cash-out refinance mortgages, larger portions of the two newest books of business are shifted to having more than 5 percent downpayments. The reduced concentration in high-LTV loans helped improve the quality of the FY 2006, FY 2007, and future books of business. Traditionally, ARM loans appear to be safer, realizing lower claim rates during a normal economy. The stressed house price forecast in this year's Review revealed that ARMs are vulnerable to economic downturns. The claim rates of the FY 2006 to FY 2008 ARMs and streamline refinance ARMs rise sharply in response to the projected negative house price appreciation rates in FYs 2007 and 2008. In FY 2005, FHA's ARM share was about 11.52 percent. The ARM share dropped to 2.86 percent in FY 2006 and below 2 percent during the first three quarters in FY 2007. The ARM share assumption for the future books of business in this Review is also adjusted downward, reflecting this trend. The lower concentration in ARM products for this Review considerably reduced the impact of the poorer performance of the ARMs on the portfolio due to the housing downturn.

Finally, in May 2006, the IRS published a ruling disallowing tax-exempt non-profit organizations from receiving contributions from home sellers and passing them along to homebuyers as downpayment gifts. Under this ruling, all institutions involved in this activity will lose their tax-exempt status. Without the tax-exempt status, these organizations will no longer be eligible as a source of downpayment gift funds for FHA-insured loans. On October 1, 2007, HUD issued a ruling on GAO's Federal Register that prohibits the endorsement of loans that receive contributions from any party that is financially related to the seller of the collateral housing. The rule will become effective after October 31, 2007. In view of these two rulings intended to eliminate these high-claim-rate loans, we assume that complete elimination of these

non-profit gift loans will occur over the next year. By FY 2009, there will be zero seller-related non-profit organization downpayment-assisted loans endorsed by the MMI Fund. This assumption of the accelerated elimination of these high loss loans tends to improve the performance of new books of business. The validity of this particular assumption depends on how effective these two rulings are enforced. It is important to review it when the new endorsement information becomes available.

Combing the above three effects, the joint net change of the economic value of the FY 2007 is increased by $145 million and the capital ratio in the FY 2013 is also increased by 0.63 percentage points.

g. Change Due to Loss Severity Assumption

In the FY 2006 Review, we applied the average loss rates of loans claimed between FY 2005 and FY 2006 by product types and the source of downpayment assistance. The updated data showed that the loss rate during FY 2006 was higher than the previous two years. With an extended housing recession projected by Global Insight for the next two years, we believe the loss severity rates will at least remain high for the foreseeable future. As a result, the loss severity rates used in the FY 2007 Review are based on the level of the FY 2006 experience, the highest single-year loss severity rates during recent history. In addition to disaggregating the loss rate by product type and non-profit gift letter, the loss rate is disaggregated further to differentiate among loans subject to different state foreclosure laws. Traditionally, judicial foreclosure states tend to experience higher loss severity rates than in other states, even for otherwise comparable loans. The loss severity rates assumed in this year's Review are differentiated by product type, the source of downpayment assistance, and whether the state imposes a judicial foreclosure. Exhibit II-5 summarizes the loss rates applied in this Review.

Exhibit II-5

Average Loss Severity Rates of Claimed Loans by Claim Year								
High-Risk Gift Loans	**Judicial Fore-closure**	**Mortgage Product Type**						
		1	**2**	**3**	**4**	**5**	**6**	**Weighted Average**
no	No	36.00%	39.11%	31.48%	31.27%	31.39%	32.42%	39.05%
	Yes	47.40%	61.42%	42.01%	42.79%	51.10%	42.75%	
yes	No	37.49%	39.15%	33.84%				
	Yes	47.97%	43.05%	45.97%				

The refined loss rates have a positive impact on FY 2007 economic value of $45 million. On the other hand, the corresponding capital ratio for FY 2013 was reduced by 0.03 percentage points. Although the assumed loss rates yield a weighted average of 39.05 percent in FY 2006, higher than the loss rates assumed in previous reviews, the more precise differentiation among states with different foreclosure processes actually lead to smaller future claim losses of the MMI Fund portfolio.