Section III: Current Status of the MMI Fund

As of the end of FY 2007, the MMI Fund had an estimated economic value of $21.277 billion. The corresponding economic value at the end of FY 2006 was $22.021 billion, so that the current economic value is 3.38 percent lower than it was at the end of FY 2006. Two main factors contributed to this reduction in economic value. First, the weakening housing market during FY 2007 and the forecasted slow house price growth rate continuing through most of FY 2008 caused claim rates realized in FY 2007 and forecasted for future years to be much higher than those previously estimated based on the June 2006 Global Insight economic forecasts. Second, the concentration in loans receiving gift letters from non-profit organizations did not decrease during FY 2007 as was projected in the FY 2006 Review. While the numerator of the capital ratio decreased, the denominator, IIF, increased from its FY 2006 value of $323.028 billion to $332.293 billion: an increase of 2.87%. The similar sizes of reduction in the economic value and the increase in IIF lead the capital ratio to decline slightly from its FY 2006 level of 6.82% to its FY 2007 value of 6.40%. This decline is a reduction of 42 basis points.

In this section, we present an analysis of the MMI Fund's current status. The analysis examines the situation of the Fund at the end of FY 2007 and the projected future performance for new books of business through 2014. This section describes the basic components of the Fund's economic value and how they are expected to change through FY 2014.

A. Estimating the Current Economic Value of the MMI Fund

According to the NAHA legislation, the economic value (or economic net worth) of the Fund is defined as the "cash available to the Fund, plus the net present value of all future cash inflows and outflows expected to result from the outstanding mortgages in the Fund." We base our estimate of this value on the level of capital resources projected to the end of FY 2007, plus the present value of expected future cash flows of the existing loan portfolio as estimated from our financial models.

The MMI Fund assets comprise cash, Treasury investments, properties and mortgages held by HUD, and other assets and receivables. Capital resources are the total assets net of the liabilities of the Fund. Due to the accelerated schedule required for delivery of this Actuarial Review, the actual amount of the capital resources as of the end of FY 2007 was not available at the time this Review was prepared. Hence, we had to project the end-of-FY 2007 capital resources based on the audited capital resources as of the beginning of the year, to which we added an estimate of the net cash flows occurring during the year.

The present value of expected future cash flows is calculated by a financial model that uses the most current information available to estimate future cash flows. Cash inflows include upfront premiums, annual premiums, and investment returns. Cash outflows include claim payments, premium refunds, administrative expenses, and distributive shares.[3] The cash flows included in these calculations cover those from the origination year to the year of the scheduled maturity, *e.g.*, 30 years for 30-year mortgages. The steps in calculating the current economic value and capital ratio of the MMI Fund are tabulated in Exhibit III-1.

1. Capital Resources

Capital resources are the net assets of the MMI Fund that, if necessary, could be converted into cash to meet Fund obligations. They are computed by subtracting total liabilities from total assets. The assets consist of cash, Treasury investments, properties and mortgages, other assets and miscellaneous receivables net of payables. Exhibit III-1 reports the audited MMI Fund's capital resources at the end of FY 2006 at $24.222 billion.

The next step in estimating the capital resources as of the end of FY 2007 is to estimate the sources and uses of funds generated by the MMI Fund portfolio. Two sources of cash flows are estimated: (1) the net gain/loss from investment of the capital resources available at the beginning of FY 2007, and (2) the net cash income from the mortgage insurance policies. The net total returns on the beginning capital resources was estimated to be $1.214 billion during FY 2007, assuming the capital resources realize an investment return of 5.01 percent.

Based on the econometric models and economic forecast, we estimated the cash flows that were generated during FY 2007 by the books of business from FY 1978 through FY 2007. These cash flows and any interest earned from reinvestment become part of the total assets of the Fund. Exhibit III-2 shows the results of this analysis. The net cash flow received during FY 2007 was estimated to be negative $71 million. The projected FY 2007 year-end capital resource is computed to be $25.365 billion.

[3] The administrative expense was discontinued since the FY 2002 Actuarial Review according to the federal credit reform requirement. The distributive share has been suspended since 1990. There is no indication that it would be resumed in the foreseeable future.

Exhibit III-1

Estimates of MMI Fund Economic Value for FYs 2006 and 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 an 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.

Exhibit III-2

Net Cash Flow During FY 2007 by Origination Fiscal Year and Mortgage Type[a] ($ Millions)

Fiscal Year	FRM 30	FRM 15	ARM	SR 30	SR 15	SR ARM	Total
1978	0						0
1979	0						0
1980	0						0
1981	0						0
1982	0						0
1983	0						0
1984	0			0			0
1985	0		0	0			0
1986	-1		0	0			-1
1987	-2		0	0		0	-2
1988	-1		0	0		0	-1
1989	-2		0	0			-2
1990	-2		0	0			-2
1991	-3		0	0		0	-3
1992	-2	0	0	0	0	0	-3
1993	-3	0	0	-2	0	0	-6
1994	-5	0	-1	-3	0	0	-9
1995	-7	0	-1	0	0	0	-8
1996	-13	0	-2	-1	0	0	-16
1997	-16	0	-4	0	0	0	-20
1998	-27	0	-3	-3	0	0	-34
1999	-49	0	-3	-6	0	-1	-58
2000	-56	0	-8	-1	0	-1	-66
2001	-69	0	-3	-2	0	-1	-75
2002	-98	-1	-13	-2	-1	-6	-121
2003	-145	-2	-19	18	-1	-13	-162
2004	-205	-2	-39	-1	0	-18	-265
2005	-140	-4	-29	5	0	-11	-179
2006	33	-2	1	7	0	-1	38
2007[b]	841	11	20	49	3	1	924
Total	27	-2	-105	57	2	-50	-71

[a] See Section IV for description of loans included in each loan type category

[b] Based on forecasted volume and composition distribution between the second quarter of FY 2006 and the first quarter of FY 2007.

2. Present Value of Future Cash Flows

The present value of future cash flows of the MMI Fund is aggregated from separate estimates of the present value of future cash flows from each book of business and for each of the six major mortgage product types. Exhibit III-3 shows the present values of future cash flows of the mortgage product types from the FY 1978 through the FY 2007 books of business. The present values are computed from the projected cash flows occurring during FY 2008 and future years. This exhibit is offered to facilitate comparison among books of business and mortgage types according to cash flows that would not have been realized as of the end of FY 2007. From Exhibit III-3, the total present value of future cash flow is a negative $3.952 billion dollars. Compared to the same number estimated in the FY 2006 Review, this amount deteriorated by $2.512 billion. This is a consequence of lower-than-expected house price growth rates realized in FY 2007 and projected for FY 2008. The projected negative house price growth rate during FY 2007 and FY 2008 suggests that most mortgages originated during the past 2 years with high initial loan to value ratios will probably lead to negative equity positions and higher claim rates for their borrowers. Together with the high concentration of loans with gift letters from non-profit organizations, the FY 2006 and FY 2007 books may turn out to be the worst books of the past 20 years. Exhibit III-3 indicates that, if the economy follows the pattern of the Global Insight August 2007 forecast, both the FY 2006 and FY 2007 books will experience negative cash flows, amounting to over negative $1.3 billion for each book over their remaining lives. In fact, the overall economic values of these two books of business are negative, meaning that insurance premium income is insufficient to cover the claim losses.

Exhibit III-3

Present Value of Future Cash Flows as of the End of FY 2007[a] by Origination Fiscal Year & Mortgage Type ($ Millions)							
Fiscal Year	**FRM 30**	**FRM 15**	**ARM**	**SR 30**	**SR 15**	**SR ARM**	**Total**
1978	0						0
1979	0						0
1980	0						0
1981	0						0
1982	0						0
1983	1						1
1984	0			0			0
1985	-1		0	0			-1
1986	-1		0	0			-1
1987	-2		0	0		0	-3
1988	-2		0	0		0	-2
1989	-2		0	0			-2
1990	-3		0	0			-3
1991	-3		0	0		0	-4
1992	-3		-1	0		0	-4
1993	-4	0	-1	-3	0	0	-8
1994	-7	0	-2	-4	0	0	-12
1995	-9	0	-2	0	0	0	-12
1996	-20	0	-3	-1	0	0	-24
1997	-21	0	-6	0	0	0	-27
1998	-43	0	-4	-3	0	0	-50
1999	-84	0	-4	-7	0	0	-96
2000	-80	0	-11	-1	0	0	-92
2001	-57	-1	-4	6	0	0	-57
2002	-72	-1	-24	17	0	-5	-86
2003	-67	-5	-37	149	-2	-14	25
2004	-211	-5	-77	60	-1	-27	-262
2005	-382	-10	-141	16	0	-31	-547
2006	-1,226	-22	-82	-19	0	-6	-1,355
2007	-1,206	-28	-71	-22	0	-3	-1,331
Total	-3,505	-71	-469	185	-4	-87	-3,952

[a] Based on forecasted volume and composition distribution between the second quarter of FY 2006 and the first quarter of FY 2007.

3. Amortization of Current Books of Business

In order to calculate the MMI Fund capital ratio, we also need to estimate unamortized IIF. It is also instructive to consider the capital ratio based on amortized IIF, on which basis the Government Accountability Office (GAO) estimated the MMI Fund capital ratio in the early 1990s. At any given time, the dollar value that is actually at risk is the amortized IIF. Exhibit III-4 shows the total volume of new mortgage originations for all types of mortgages for each year's book of business, and the unamortized IIF and the amortized IIF, as of the end of FY 2007.

As can be inferred from Exhibit III-4, the FY 2007 book of business constitutes approximately 15.5 percent of the Fund's total unamortized IIF. The FY 2003 book of business contributed the largest portion of mortgage endorsement volume. Mortgage endorsements dropped significantly following FY 2003. The five most recent books together represent over 73 percent of the total unamortized IIF of the current MMI Fund. Since the FY 2003 book of business, which has the highest outstanding volume, has already entered its projected peak claim period, the overall claim rate of the MMI Fund is likely to remain relatively stable over the next few years.

Exhibit III-4

Endorsements and Insurance-in-Force of the MMI Fund As of End of FY 2007 (in $ Millions)			
Book of Business[a]	**Mortgage Endorsements**	**Unamortized Insurance in Force[b]**	**Amortized Insurance in Force[b]**
1978	10,028	267	15
1979	15,660	460	64
1980	14,875	242	56
1981	10,266	82	27
1982	7,317	19	9
1983	26,819	158	77
1984	15,931	347	195
1985	24,086	605	368
1986	57,747	2228	1,328
1987	70,230	3626	2,192
1988	37,433	1,602	1,056
1989	39,764	1,452	1,016
1990	47,127	1,550	1,121
1991	44,067	1,442	1,071
1992	45,093	1,884	1,405
1993	73,799	4,186	2,782
1994	79,692	6,217	4,148
1995	41,534	1,952	1,528
1996	61,696	3,423	2,724
1997	65,469	3,464	2,882
1998	88,593	6,932	5,855
1999	110,067	11,367	9,765
2000	86,804	5,200	4,689
2001	119,889	10,864	9,919
2002	128,891	20,736	19,012
2003	150,580	57,868	53,516
2004	92,894	46,787	44,097
2005	57,698	40,827	39,287
2006	50,105	45,055	44,151
2007	52,193[c]	51,451	51,094
Total	1,726,349	332,293	305,449

[a] End of year insurance-in-force

[b] Based on May 31, 2007 data extract from HUD and the performance of outstanding loans projected by the econometric model for the last two quarters of fiscal year 2007

[c] Based on the FHA August 2007 projection.

B. Projected Future Economic Values and Capital Ratios

In this section both the future economic values and the capital ratios of the Fund are projected, based on HUD's forecast of endorsement volumes and the cash flow projections based on the econometric and cash flow models. The initial economic values of individual future books of business are first projected, and then applied in estimating the economic values and capital ratios of the entire MMI Fund.

1. Present Values of Future Books

The present values of future books discounted to the end of each corresponding future fiscal year (through FY 2014) are tabulated in Exhibit III-5. Notice that these values are greater than the projections from the FY 2006 Review, reflecting the projection that the housing economy moves out of the FY 2007 and FY 2008 slowdown. Another reason for these more favorable values is FHA's ruling against endorsement of loans with gift letters from seller-funded non-profit organizations. Under the assumption that these high-claim-rate loans would rapidly phase out during the next four quarters, the expected present values are more favorable for FY 2009 and future books. Note that the total present value for the FY 2009 book is more than double the FY 2008 book of business. This is a result of the combination of moving out of the housing recession and completely eliminating the high-claim-rate gift loans.

Exhibit III-5

Present Value of Future Books of Business[a] by Origination Year & Mortgage Type (in $ Million)							
Fiscal Year	**FRM 30**	**FRM 15**	**ARM**	**SR 30**	**SR 15**	**SR ARM**	**Total**
2008	334	-4	-6	64	3	0	390
2009	740	3	8	94	4	1	849
2010	770	4	11	101	5	1	892
2011	806	3	11	109	5	1	936
2012	844	4	18	114	5	1	985
2013	1,003	5	22	130	6	1	1,167
2014	1,222	5	26	150	7	1	1,410

[a.] Present values are estimated as of the end of each corresponding fiscal years.

2. Projected Future Economic Values and Capital Ratios

Exhibit III-6 shows the projected capital ratios of the Fund using amortized IIF. If amortized IIF were substituted for unamortized IIF, the Fund's estimated capital ratios for FY 2007 and FY 2014 would be 6.97 percent and 7.96 percent, respectively. The slight improvement from FY 2007 to FY 2014 is driven mainly by the forecast of the housing market recovery after FY 2008. However, following the requirements specified in NAHA, we continue to use the unamortized IIF measure in calculating the capital ratio elsewhere in this Review.

Exhibit III-6

Projected MMI Fund Performance for FY 2007 to FY 2014[a]
($ Millions)

Fiscal Year	Economic Value of the Fund	Capital Ratio (%)	Volume of New Endorsements	Amortized Insurance in Force	Economic Value of Each New Book of Business	Investment Earnings on Fund Balances
2007	21,277	6.97	52,193	305,449	-406	
2008	22,748	7.26	50,149	313,313	390	1,082
2009	24,706	7.44	58,381	331,980	849	1,108
2010	26,796	7.49	65,658	357,981	892	1,199
2011	29,053	7.50	72,556	387,249	936	1,321
2012	31,492	7.56	77,773	416,717	985	1,454
2013	34,251	7.68	86,237	445,854	1,167	1,592
2014	37,405	7.96	92,439	470,024	1,410	1,744

[a] All values are as of the end of each fiscal year.