Section III: Current Status of the MMI Fund

As of the end of FY 2008, the MMI Fund had an estimated economic value of $12.908 billion. The corresponding economic value at the end of FY 2007 was $21.277 billion. The current economic value is 39.34 percent lower than what it was at the end of FY 2007. Two main factors contributed to this significant reduction in economic value. First, the continued weakening of the housing market since FY 2007 along with the forecasted further decrease in house prices through FY 2009 and FY 2010 caused claim rates realized in FY 2008 and forecasted for future years to be much higher than those previously estimated based on the August 2007 Global Insight, Inc. economic forecasts. Second, the concentration in loans receiving downpayment assistance from non-profit organizations did not decrease during FY 2008 as rapidly as was projected in the FY 2007 Review. While the numerator of the capital ratio decreased, the denominator, IIF, increased from its FY 2007 value of $332.293 billion to $429.634 billion, an increase of 29.29 percent. The significant reduction in the economic value and the substantial increase in IIF resulted in a dramatic decline in the capital ratio from its FY 2007 level of 6.40 percent to its FY 2008 level of 3.00 percent. This decline is a reduction of 340 basis points.

In the remainder of this section, we present an analysis of the MMI Fund's current status. The analysis examines the status of the Fund at the end of FY 2008 and the projected future performance for new books of business through FY 2015. This section describes the basic components of the Fund's economic value and how they are expected to change through FY 2015.

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 2008, plus the present value of expected future cash flows of the existing loan portfolio as estimated by 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 2008 was not available at the time this Review was prepared. Hence, we had to project the end-of-FY 2008 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 with 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] These calculations include all cash flows that occur 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 the 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 the Fund's 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 2007 at $24.903 billion.

The next step in estimating the capital resources as of the end of FY 2008 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 2008, and (2) the net cash income from the mortgage insurance policies. The net total return on the beginning capital resources was estimated to be $1.026 billion during FY 2008. Estimated by assuming the total capital resources as of the end of FY 2007 earns an investment return equal to 1-year Treasury Constant-maturity Rate, which averaged 4.12 percent during FY 2008 according to the Board of Governors of the Federal Reserve System.

Based on the econometric models and the economic forecast, we estimated the cash flows generated during FY 2008 by all books of business from FY 1979 through FY 2008. 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 2008 was estimated to be $1.352 billion. The projected FY 2008 year-end capital resources are computed to be $27.281 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 2007 and 2008 ($ Millions)		
Item	**End of FY 2007[a]**	**End of FY 2008**
Cash	$ 4,413	
Investments	22,473	
Properties and Mortgages	1,394	
Other Assets and Receivables	183	
Total Assets	$ 28,463	
Liabilities	3,560	
Total Capital Resources	$ 24,903	
Net Gain from Investments		1,026[b]
Net Insurance Income in FY 2008		1,352
Total Capital Resources		**27,281**
PV of Future Cash Flows on Outstanding Business		(14,374)
Economic Value	**$ 21,277[c]**	**12,908**
Unamortized Insurance-In-Force	332,293[c]	429,634
Current Capital Ratio	**6.40%[c]**	**3.00%**
Amortized Insurance-In-Force		401,461
Current Capital Ratio with Amortized Insurance-In-Force		**3.22%**

[a] Source: Audited Financial Statements for FY 2007.
[b] Estimated by assuming the total capital resources as of the end of FY 2007 earns an investment return equal to 1-year Treasury Constant-maturity Rate, which averaged 4.12 percent during FY 2008. (Source: Board of Governors of the Federal Reserve System).
[c] From the FY 2007 Actuarial Review.

Exhibit III-2

Net Cash Flow During FY 2008 by Origination Fiscal Year and Mortgage Type[a] ($ Millions)							
Fiscal Year	**FRM 30**	**FRM 15**	**ARM**	**SR 30**	**SR 15**	**SR ARM**	**Total**
1979	0			0			0
1980	1						1
1981	1			0			1
1982	1			0			1
1983	2			0			2
1984	0		0	0			0
1985	0		0	0			0
1986	-1		0	0		0	-1
1987	-1		0	0		0	-2
1988	-1		0	0		0	-1
1989	-1		0	0		0	-1
1990	-2		0	0			-2
1991	-2		0	0		0	-2
1992	-2		0	0	0	0	-2
1993	3	0	0	-1	0	0	2
1994	3	0	0	-2	0	0	2
1995	1	0	0	0	0	0	1
1996	-1	0	-1	-1	0	0	-3
1997	-2	0	-1	0	0	0	-4
1998	-3	0	-2	-2	0	0	-7
1999	-8	0	-1	-3	0	0	-13
2000	-29	0	-4	0	0	0	-34
2001	-38	0	-2	-1	0	0	-42
2002	-60	-1	-12	0	0	-4	-77
2003	-125	-2	-19	8	4	-9	-143
2004	-224	-2	-47	-9	5	-17	-294
2005	-232	-5	-49	-20	2	-14	-317
2006	-308	-8	-12	-12	1	-2	-340
2007	-39	-5	1	-3	0	0	-46
2008[b]	2,421	37	24	186	4	3	2,675
Total	1,350	15	-125	140	15	-43	1,352

[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 2007 and the first quarter of FY 2008.

2. Present Value of Future Cash Flows in FY 2009 and Future Years

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 1979 through the FY 2008 books of business. The present values are computed from the projected cash flows occurring during FY 2009 and future years. This exhibit is offered to facilitate comparison among books of business and mortgage types according to cash flows that would not yet have been realized as of the end of FY 2008. From Exhibit III-3, the total present value of future cash flows is a negative $14.374 billion dollars. Compared to the same number estimated in the FY 2007 Review, this amount deteriorated by $10.422 billion. This is a consequence of lower-than-expected house price growth rates realized in FY 2008 and projected for FY 2009. The projected negative house price growth rates during FY 2008 and FY 2009 suggest that most mortgages originated during the past two years will experience negative equity and high claim rates during the next few years. Together with the high concentration of loans with downpayment assistance from non-profit organizations, the FY 2007 book may turn out to be the worst book over the past 30 years and the FY 2008 book will be even worse. Exhibit III-3 indicates that, if the economy follows the pattern of the Global Insight, Inc. July 2008 forecast, both the FY 2007 and FY 2008 books will experience negative cash flows, amounting to negative $3.297 billion for the FY 2007 book and negative $6.318 billion for the FY 2008 book over their remaining lives. In point of fact, the economic values of each of these two books of business are negative, meaning that the expected 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 2008 By Origination Fiscal Year & Mortgage Type ($ Millions)							
Fiscal Year	**FRM 30**	**FRM 15**	**ARM**	**SR 30**	**SR 15**	**SR ARM**	**Total**
1979	0			0			0
1980	0						0
1981	1			0			1
1982	1			0			1
1983	3			0			3
1984	0		0	0			0
1985	-1		0	0			-1
1986	-2		0	0		0	-2
1987	-2		0	0		0	-3
1988	-2		0	0		0	-2
1989	-2		0	0		0	-2
1990	-3		0	0			-3
1991	-3		0	0		0	-3
1992	-2		0	0	0	0	-3
1993	10		2	-2	0	0	10
1994	15	0	3	-3	0	0	15
1995	7	0	2	0	0	0	9
1996	5	0	1	-1	0	0	4
1997	2	0	0	0	0	0	2
1998	12	0	0	-2	0	0	9
1999	29	0	0	-6	0	0	23
2000	-32	0	-2	-1	0	0	-35
2001	-68	0	-2	-5	0	0	-76
2002	-132	-1	-18	-10	0	-6	-167
2003	-350	-3	-28	-33	-1	-18	-433
2004	-679	-3	-82	-45	0	-41	-850
2005	-948	-10	-146	-108	2	-48	-1,259
2006	-1,797	-21	-70	-103	1	-8	-1,998
2007	-3,048	-43	-51	-150	0	-5	-3,297
2008[a]	-5,688	-96	-58	-452	2	-26	-6,318
Total	-12,674	-177	-451	-922	3	-153	-14,374

[a] Based on volume and composition distribution forecasted based on actual data through July 2008.

3. Amortization of Current Books of Business

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 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 endorsements for all types of mortgages for each book of business, and the unamortized IIF and the amortized IIF, as of the end of FY 2008.

As can be inferred from Exhibit III-4, the FY 2008 book of business constitutes approximately 35.29 percent of the Fund's total unamortized IIF. In addition, the FY 2008 book of business contributed the largest portion of mortgage endorsement volume. Mortgage endorsements previously dropped significantly following FY 2003 when the subprime market began to expand. FHA endorsements rapidly ramped up during FY 2008, as the housing market deteriorated, mortgage default rates skyrocketed, and most private lenders tightened their underwriting standards. Loans endorsed over the past 4 years would suffer the most from the recent national housing recession. With the relatively small volume of the FY 2005 to FY 2007 books, the MMI Fund is likely to experience relatively less negative impacts than most private mortgage lenders.

The endorsement volume of the FY 2008 book has risen rapidly to be the second largest book in FHA’s history. However, as the housing market is forecasted to continue to deteriorate through 2010, this book of business also contributed the largest negative value to the MMI Fund’s economic value.

Exhibit III-4

Endorsements and Insurance-in-Force of the MMI Fund As of End of FY 2008 (in $ Millions)			
Book of Business[a]	**Mortgage Endorsements**	**Unamortized Insurance in Force[b]**	**Amortized Insurance in Force[b]**
1979	15,660	559	34
1980	14,875	553	83
1981	10,266	388	110
1982	7,317	246	103
1983	26,819	774	335
1984	15,931	422	209
1985	24,086	533	298
1986	57,747	1863	1,020
1987	70,230	2934	1,643
1988	37,433	1326	824
1989	39,764	1,205	799
1990	47,127	1,276	875
1991	44,067	1,197	849
1992	45,093	1,570	1,121
1993	73,799	3,006	2,106
1994	79,692	4,658	3,101
1995	41,534	1,684	1,278
1996	61,696	2,673	2,061
1997	65,469	2,743	2,221
1998	88,593	5,265	4,328
1999	110,067	8,601	7,186
2000	86,805	3,968	3,509
2001	119,891	7,971	7,131
2002	128,891	15,513	13,921
2003	150,582	47,310	42,834
2004	92,897	38,436	35,580
2005	57,710	35,245	33,351
2006	50,128	36,634	35,392
2007	57,598	49,425	48,499
2008	154,240	151,657	150,661
Total	1,876,009	429,634	401,461

[a] End of year insurance-in-force

[b] Based on June 30, 2008 data extract from HUD and the performance of outstanding loans projected by the econometric model for the last two quarters of fiscal year 2008

[c] Based on the FHA July 2008 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 2015) are tabulated in Exhibit III-5. Notice that these values are greater than the projections from the FY 2007 Review mainly due to the much larger endorsement volumes forecasted by FHA. Since Global Insight, Inc. forecasts the national housing market recession will last for two more years, the FY 2009 and FY 2010 books suffer from low initial economic value per endorsement dollar. Under the assumption that the high-claim-rate downpayment assistance loans would no longer be endorsed, as prohibited by HERA of 2008, the expected present values are more favorable for FY 2009 and future books than for the FY 2008 and earlier books. Note that the total present value for the future books following FY 2009 is greater than the FY 2009 book of business. This is a result of the combination of recovery from the current housing recession and completely eliminating the high-claim-rate gift loans starting in FY 2009 and beyond.

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
2009	2,158	52	35	138	9	-8	2,384
2010	3,735	48	61	150	9	-4	3,999
2011	4,810	61	77	234	10	0	5,192
2012	5,505	66	81	293	10	2	5,957
2013	5,266	63	79	290	10	2	5,710
2014	5,363	63	79	293	10	2	5,810
2015	5,583	65	82	313	10	2	6,055

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

2. Projected Capital Ratios for FY 2008 to FY 2015 Using Amortized IIF

Exhibit III-6 shows the projected capital ratios of the Fund using the amortized IIF. The capital ratio starts at 3.22 percent in FY 2008 and declines to its lowest level of 2.36 percent in FY 2011 and then begins to increase again reaching 3.06 percent in FY 2015. If amortized IIF were substituted for unamortized IIF, the Fund's estimated capital ratios for FY 2008 and FY 2015 would be 3.22 percent and 3.06 percent, respectively. 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 FYs 2008 to 2015[a]
($ Millions)

Fiscal Year	Economic Value of the Fund	Capital Ratio (%)	Volume of New Endorse-ments	Amortized Insurance in Force	Economic Value of Each New Book of Business	Investment Earnings on Fund Balances
2008	12,908	3.22	154,240	401,461	-3,643	
2009	15,823	2.65	280,404	597,235	2,384	532
2010	20,491	2.40	331,092	854,341	3,999	669
2011	26,597	2.38	357,002	1,117,981	5,192	914
2012	33,807	2.49	364,405	1,356,286	5,957	1,254
2013	41,179	2.65	359,606	1,551,622	5,710	1,662
2014	49,030	2.85	364,344	1,718,527	5,810	2,041
2015	57,512	3.07	382,138	1,874,030	6,055	2,427

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