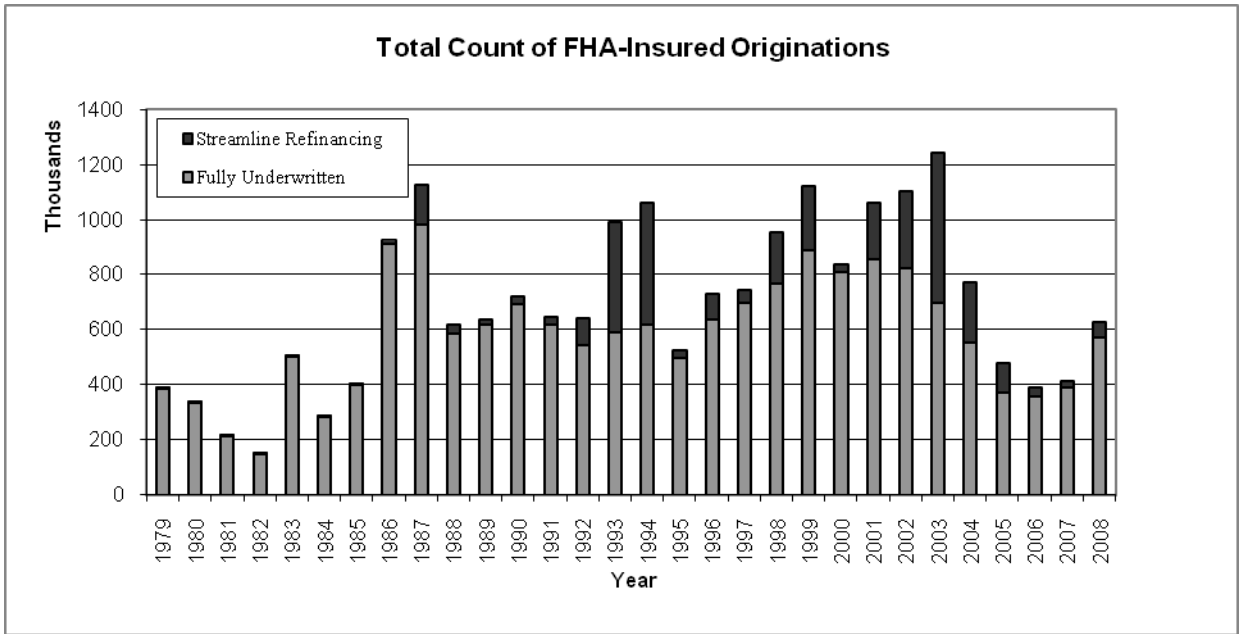
Section IV: Characteristics of the Fiscal Year 2008 Insurance Portfolio

This section analyzes the characteristics of the loan portfolio insured by the MMI Fund at the end of FY 2008. The characteristic descriptions cover the following three areas: (1) analysis of the volume and composition of loan originations; (2) comparison of new purchase versus refinancing and (3) the distribution of loans by relative loan size, loan-to-value ratios, and borrower credit scores. This section also examines and compares the FY 2008 book with previous books in order to gain insights into how the FY 2008 book is likely to influence future MMI Fund performance. Because the data used for this analysis is an extract as of June 30, 2008, the characteristics for the FY 2008 book reflect only loans originated in the first three quarters, between October 1, 2007 and June 30, 2008. The year-end portfolio size was estimated by HUD.

A. Volume and Share of Mortgage Originations

During FY 2008, FHA is estimated to have insured about $154.247 billion[4] in single-family mortgages through the MMI Fund, bringing the fund's total unamortized IIF to about $429.811 billion. Exhibit IV-1 shows the annual FHA origination counts as of June 30, 2008, for fully underwritten purchase and refinance loans and streamline refinancing loans, for FY 1979 through FY 2008.

Exhibit IV-1



Source: FHA data warehouse, June 30, 2008 extract.

[4] According to the August 2008 estimation by HUD.

Exhibit IV-1 shows that FHA's business volume dropped significantly from its peak in FY 2003 to FY 2007. The decline was particularly significant for streamline refinancing, which fell 58.6 percent in FY 2004 from its high in FY 2003, experienced another 51.8 percent drop from FY 2004 to FY 2005, and attenuated in FY 2006 and FY 2007. In January 2006, HUD increased the allowable LTV on cash-out refinance loans from 85 percent to 95 percent. This led to growth in the volume of fully underwritten refinance loans. Despite this growth, the total volume of fully underwritten purchase and refinance mortgage insurance still showed a steady decrease from FY 2002 to FY 2006. In FY 2007, the volume of FHA's business increased by 6 percent.

As private lenders have recently tightened their underwriting rules due to the subprime mortgage crisis, FHA has become a primary source of mortgage originations in most of the country. This phenomenon is reflected in the data by a clear reversal of the declining volume trend starting in the second quarter of FY 2007. The volume of new insurance has steadily and rapidly increased every quarter since then. This upward trend was further enhanced by the enactment of the Economic Stimulus Act of 2008 which raised the FHA-insured loan limits and allowed FHA to serve more borrowers. The volume of new insurance in the third quarter of FY 2008 is more than quadruple the volume of new insurance in the second quarter of FY 2007.

Mortgage interest rates had reached a 30-year low during the FY 2003 to FY 2005 period, rose by about 1 percentage point during the FY 2006 to FY 2007 period; then declined again during FY 2008. These low mortgage rates substantially improved housing affordability in the United States. Although the rapidly rising house prices during the same period partially offset housing affordability, the period of FY 2003 to FY 2007 has the highest number of homes sold during a five-year period of the nation's history. During the same time period, the number of home-purchase loans endorsed by FHA dropped by 56 percent. The same divergence was observed in dollar volumes. Exhibit IV-2 shows the mortgage origination volume and FHA's market share from FY 1991 to FY 2008.

The divergent trend between the number of houses sold and number of home-purchase mortgages FHA endorsed is reflected in the substantial decrease in FHA's market share in recent years. However, this trend has been reversed during the most recent months. FHA's share by loan count increased from 4.14 percent in FY 2007 to 10.48 percent in FY 2008, and its share by dollar volume increased from 2.03 percent in FY 2007 to 6.47 percent in FY 2008.

Exhibit IV-2

FHA's Market Shares of New Insurance Counts and Volumes National Home Purchase Market						
	Number of Mortgages Originated (000)			Volume of Mortgages Originated (billions, current dollars)		
Fiscal Year	FHA[a]	Market[b]	FHA Share (%)	FHA	Market	FHA Share (%)
1991	656	3,842	17.09	45	499	9.09
1992	597	4,123	14.47	43	547	7.77
1993	639	4,554	14.04	48	613	7.90
1994	652	4,987	13.07	52	696	7.42
1995	556	4,845	11.48	45	689	6.46
1996	688	5,289	13.00	58	784	7.43
1997	753	5,467	13.77	66	854	7.73
1998	790	6,084	12.99	71	1,004	7.12
1999	911	6,463	14.09	89	1,124	7.96
2000	858	6,335	13.55	89	1,157	7.71
2001	872	6,405	13.61	96	1,221	7.87
2002	808	6,615	12.22	94	1,356	6.93
2003	657	7,148	9.19	80	1,578	5.08
2004	506	7,901	6.41	63	1,914	3.27
2005	346	8,454	4.09	43	2,247	1.89
2006	302	7,979	3.78	39	2,201	1.75
2007	289	6,992	4.14	39	1,920	2.03
2008[c]	429	4,098	10.48	68	1,052	6.47

Sources: Existing Home Sales are from the National Association of Realtors; FHA numbers are from HUD.
[a] Home purchase loans endorsed by FHA under either the General Insurance Fund or the MMI Fund.
[b] Total number of home sales in the nation.
[c] FY 2008 numbers are the annualized estimates as of June 2008.

Exhibit IV-2 shows that, during the decade of FY 1992 to FY 2002, FHA's market share remained stable at around 13 percent of the market in terms of the number of loans insured. Because of the smaller size of FHA-insured loans, FHA's market share by dollar volume was around 8 percent during the same time period. This relationship had been stable regardless of the total market volume and macroeconomic conditions.

The high rate of house price appreciation may have contributed to the decrease in the FHA market share. FHA's loan limits did not permit it to do business in areas with higher house price appreciation. It is also very likely that the reduction in the FHA market share was a result of the expansion of subprime lending during the past several years. The subprime mortgage market

expanded rapidly during the last housing boom when the annual house price growth rate reached its peak in FY 2004 and FY 2005. Many lenders relaxed their underwriting criteria and designed creative products to qualify borrowers with impaired credit histories, and allowing low downpayments, high payment-to-income ratios, negative amortization features, and reduced documentation requirements. As FHA maintained its underwriting standards throughout the mortgage-demand boom during the last three years, it suffered a loss in market share, especially with respect to refinance loans and adjustable-rate mortgages. But, we should point out that given the recent declining house prices, the lower market share was beneficial to the financial health of the MMI Fund.

In the rest of this section, we examine FHA's business concentration pattern to determine if there are adverse quality indicators that were not incorporated into the actuarial models applied in the FY 2008 Actuarial Review.

B. Originations by Location

FHA insures loans in all regions of the U.S., but about half of FHA's total dollar volume is concentrated in only ten states. Exhibit IV-3 illustrates the percent of FHA's total dollar volume originated in these ten states over FY 2004 through FY 2008. The table includes the top 10 states during FY 2008.

Exhibit IV-3

Percentage of FHA Dollar volume Originated Between FY 2004 and FY 2008					
State[a]	**2004**	**2005**	**2006**	**2007**	**2008**
Texas	11.42	13.53	12.56	11.04	7.40
Georgia	5.33	6.22	6.11	6.17	5.04
Florida	5.28	4.35	3.91	4.73	4.95
New Jersey	4.05	3.99	3.58	4.37	4.88
California	5.19	2.33	1.52	1.82	4.77
Maryland	3.76	2.65	2.40	3.10	4.56
Illinois	4.78	4.40	4.08	4.15	4.31
Ohio	3.81	4.24	4.90	4.56	3.74
Virginia	3.39	2.81	2.78	2.96	3.61
New York	3.56	2.88	3.33	3.40	3.38

Source: FHA data warehouse, June 30, 2008 extract.
[a] States are listed according to their share of FY 2008 origination volume in the MMI Fund.

This year Texas maintains the top percentage share of FHA loans in dollar volume, even though its share has decreased by about 3.6 percentage points since last year. On the other hand, the percentage share of FHA loans originated in California increased significantly from 1.82 percent in FY 2007 to 4.77 percent in FY 2008, although it is still far lower than the 15.4 and 14.25 percent shares that it had in FY 2000 and FY 2001.

Historical house price growth rates at the MSA level are captured by our econometric model through the variable measuring the probability of negative equity, and the geographical concentration of the MMI Fund and the historical house price growth rates in the various locations have been reflected in the actuarial simulation model.

C. Originations by Mortgage Type

Exhibit IV-4 shows that historically the 30-year fixed-rate fully underwritten mortgage (FRM) has comprised most of FHA's single-family business. This pattern began to change in the early 1990s when FHA started insuring the adjustable-rate mortgage (ARM) and the streamline-refinancing mortgage (SR). Gradually, ARM and SR mortgages took on a bigger share of annual loan originations. For the next few years, the 30-year FRM share decreased, with FY 1993, FY 1994, and FY 2003 recording the lowest shares. An opposite trend has emerged as market interest rates recently stabilized. From FY 2005 to FY 2008, 30-year FRM endorsements increased from 69.55 percent to 89.13 percent, while 30-year SR endorsements dropped from 16.30 percent to 8.33 percent. At the same time, the ARM share of the portfolio (including both ARMs and ARM SRs) also shrank dramatically from 8.67 percent in FY 2005 down to 0.67 percent in FY 2008. As ARMs are more vulnerable to economic downturns, the smaller concentration in ARMs of the most recent two books of business will help the performance of the MMI portfolio during the next few years. Meanwhile, 15-year FRMs and 15-year SRs continue to be minor product types in the total MMI Fund portfolio.

The dynamics of the MMI Fund product-type concentrations is captured by our econometric models with separate models fitted to the historical performance of the six individual product types.

Exhibit IV-4

FHA-Insured Originations By Mortgage Type (Percentage of FHA-Insured Mortgages by Dollar Volume)						
Fiscal Year	Fully-written Mortgages			Streamline Refinancings		
	30-Year FRMs	15-Year FRMs	ARMs	30-Year SRs	15-Year SRs	ARMs SRs
1979	99.94	0.06	0.00	0.00	0.00	0.00
1980	99.90	0.10	0.00	0.00	0.00	0.00
1981	99.84	0.15	0.00	0.00	0.00	0.00
1982	99.62	0.38	0.00	0.00	0.00	0.00
1983	93.71	6.28	0.00	0.01	0.00	0.00
1984	94.28	5.68	0.01	0.02	0.01	0.00
1985	92.00	7.75	0.14	0.08	0.03	0.00
1986	88.93	8.07	0.74	1.90	0.36	0.00
1987	80.44	4.97	1.47	11.22	1.84	0.06
1988	86.30	3.59	4.98	4.64	0.45	0.04
1989	92.95	2.69	1.52	2.64	0.19	0.00
1990	93.09	2.77	0.80	3.09	0.25	0.00
1991	88.20	3.14	4.43	3.63	0.57	0.04
1992	66.79	2.51	16.35	10.84	2.17	1.34
1993	45.78	2.25	12.14	29.96	7.75	2.13
1994	42.49	1.81	16.97	27.95	8.06	2.72
1995	65.10	1.28	29.25	2.78	0.94	0.65
1996	61.09	1.29	25.42	8.65	1.72	1.83
1997	57.18	1.10	35.06	3.62	0.69	2.35
1998	65.56	1.16	11.93	17.78	1.39	2.18
1999	73.57	1.13	4.24	18.35	1.74	0.98
2000	85.36	0.71	11.04	2.06	0.26	0.57
2001	75.84	0.94	2.08	19.77	0.65	0.73
2002	66.96	1.21	6.05	21.11	1.57	3.09
2003	51.42	1.34	3.89	36.95	3.12	3.29
2004	63.62	1.36	8.70	19.53	2.43	4.36
2005	69.55	1.26	8.67	16.30	1.37	2.85
2006	88.66	1.35	2.65	6.66	0.48	0.21
2007	92.13	1.22	1.34	5.12	0.11	0.07
2008[a]	89.13	1.57	0.67	8.33	0.18	0.12

Source: FHA data warehouse, June 30, 2008 extract.
[a] Based on partial year data.

D. Initial Loan-to-Value Distributions

Based on previous econometric studies of mortgage behavior, a borrower's equity position in the mortgaged house is one of the most important drivers of default behavior. The larger the equity position a borrower has, the greater the incentive to avoid default on the loan. The initial LTV is an inverse measure of the borrower's equity at the origination date. Exhibit IV-5 shows the distribution of mortgage originations by initial LTV categories.

Exhibit IV-5

Distribution of Originations by Initial LTV Category (Percentage of FHA-Insured Mortgages by Dollar Volume)						
Books of Business	Unknown LTV	≤ 80%	> 80% ≤ 90%	> 90% < 95%	≥ 95% < 97%	≥ 97%
1979	19.76	7.10	16.55	31.05	22.51	3.03
1980	11.45	12.75	27.86	26.03	19.83	2.07
1981	26.96	11.87	26.88	17.70	15.44	1.15
1982	16.54	19.14	26.68	20.73	16.07	0.83
1983	20.42	19.04	24.39	20.22	14.68	1.25
1984	2.78	16.19	26.17	24.27	23.56	7.03
1985	1.11	16.19	31.22	25.26	23.57	2.64
1986	0.56	18.26	30.33	25.32	22.53	3.00
1987	0.18	15.57	27.26	27.57	26.29	3.13
1988	0.13	8.01	19.72	33.07	34.37	4.71
1989	8.92	6.78	16.86	30.95	32.06	4.42
1990	11.93	6.15	16.19	29.84	31.49	4.40
1991	1.79	5.59	15.74	28.09	31.68	17.11
1992	1.76	4.39	13.99	27.84	38.45	13.57
1993	0.31	3.65	12.85	25.34	33.13	24.73
1994	0.24	3.46	11.70	24.12	33.09	27.40
1995	0.07	2.75	10.36	24.30	34.47	28.05
1996	0.03	2.84	11.10	25.35	34.87	25.81
1997	0.01	3.26	11.43	26.01	34.85	24.45
1998	0.01	3.55	12.23	26.31	35.00	22.91
1999	0.00	3.17	9.10	13.16	30.73	43.84
2000	0.00	2.34	6.23	6.59	32.76	52.07
2001	0.00	3.27	7.56	5.90	26.27	57.00
2002	0.00	3.88	8.09	5.67	25.39	56.96
2003	0.00	5.47	9.61	5.92	25.36	53.63
2004	0.01	5.56	9.17	5.88	25.00	54.38
2005	0.01	5.80	9.22	5.71	23.75	55.52
2006	0.01	6.81	10.06	9.55	24.23	49.34
2007	0.01	7.34	11.46	12.97	25.99	42.23
2008[a]	0.02	7.08	13.08	14.61	26.14	39.07

Source: FHA data warehouse, June 30, 2008 extract
[a]: Based on partial year data.

As Exhibit IV-5 indicates, the distribution among initial LTV categories shifted significantly after FY 1999. More than half of the loans insured during the period of FY 2000 to FY 2005 are concentrated in the category of LTV greater than or equal to 97 percent. This high concentration in the riskiest category gradually declined during the past three years. During FY 2008, about 39.07 percent of the mortgages have LTV ratios of 97 percent or more. This is a 16 percentage-point reduction from FY 2005, when over 55.5 percent of that book of business was concentrated in this highest LTV category. At the same time, there is a clear increase in the concentration in LTVs less than 95 percent. This recent shift in LTV concentration will also help the MMI Fund portfolio in weathering the current housing market slowdown.

The LTV concentration of individual books of business affects our econometric models in two respects. First, it serves as the starting position for updating the probability of negative equity variable. Holding everything else constant, loans with higher starting LTV will experience higher probability of negative equity in all future years. Second, the initial LTV itself is also included in the model to capture potential behavioral differences among borrowers who self-select into different initial LTV categories.

E. Borrower Credit History Distributions

Credit score data were collected through two different channels. The first channel includes credit scores collected for a sample of FHA applications from FY 1992, FY 1994, and FY 1996; and subsequently extended to loan applications during FY 1997 through FY 2003. This set of credit score data is particularly useful because these loans have existed for multiple years and provide valuable historical claim and prepayment performance records. The limitation of this data source is that it covers only a limited sample of FHA loans. In addition, the sample was originally collected for policy research purposes and represents a choice-based sample. For example, there was over-sampling of early-default loans during the 1997-to-2003 application period.

Since May 2004, all lenders originating loans for FHA insurance are required to report borrower credit scores directly to HUD if the credit scores were ordered as part of the underwriting process. In any event, all loans going through the FHA TOTAL scorecard have credit scores obtained electronically by the affiliated automated underwriting systems (AUS). This is the second source of credit score data. As there are no exceptions to this requirement, the credit scores collected through this channel are considered to be comprehensive and unbiased. However, these loans are generally of too recent vintage to generate significant numbers of claim and prepayment events to have an influence on the econometric estimates.

Exhibit IV-6 shows the distributions of fully underwritten FHA mortgage loans by borrower credit score categories and origination years. For loans originated in FY 2008, the median FICO score is approximately 640. About 28 percent of the loans have FICO scores above 680.

Referring to statistical results presented in Appendix A, loans that lack credit scores exhibit claim and prepayment patterns similar to the loans with about 580 FICO scores. The lack of credit scores is suspected to include primarily borrowers for which there was not sufficient information in their credit file to allow computation of a score. Including these loans that lack credit history, about one-sixth of the loans originated in FY 2008 are expected to perform worse than loans with a 580 FICO score. The distribution among credit score categories remained stable during the past four years, when the data were obtained directly from lenders. Notice that the category "Missing" refers to loans with insufficient borrower credit history to generate a FICO score; and the category "Not Collected" refers to loans where no attempt was made to obtain the FICO score.

Exhibit IV-6

Distribution of Originations by Credit Score Category[a]
(Percentage of Fully Underwritten FHA-Insured Mortgages by Dollar Volume)

Books of Business	Missing	300-499	500-559	560-599	600-639	640-679	680-850	Not Collected
1993	4.44	0.01	0.17	0.69	1.35	2.09	5.63	85.61
1994	3.73	0.01	0.17	0.93	2.05	2.88	6.42	83.80
1995	3.32	0.02	0.22	0.89	1.49	1.81	3.58	88.68
1996	3.99	0.03	0.48	2.17	3.88	4.58	8.38	76.49
1997	2.39	0.19	1.00	2.95	4.18	3.94	5.47	79.88
1998	1.79	0.24	1.32	3.65	5.20	4.63	5.40	77.77
1999	1.69	0.22	1.30	3.78	5.37	4.61	4.86	78.18
2000	1.85	0.33	1.81	4.11	4.99	3.97	3.91	79.02
2001	1.33	0.27	1.57	3.88	4.64	3.75	3.84	80.72
2002	1.31	0.31	1.71	4.20	5.09	4.19	4.48	78.70
2003	1.44	0.32	1.97	5.01	6.16	5.14	5.54	74.44
2004[c]	3.05	0.41	2.88	8.59	11.64	10.29	12.40	50.74
2005[c]	4.84	0.54	4.26	16.16	24.05	22.18	27.97	
2006[b]	4.50	0.53	3.85	15.27	24.03	22.48	29.34	
2007[b]	4.51	0.84	5.38	18.89	25.40	21.06	23.91	
2008[b]	2.40	0.68	4.49	16.49	25.06	22.74	28.14	

[a] Most FICO score data are obtained from the previous HUD special data collection project. Problematic loans were over-sampled during the years 1997 to part of 2004.
[b] Starting May 2004, lenders are required to report FICO data directly to HUD.
[c] Mixture of the above two sources of data.

Due to the over-sampling of early-default loans, there is a particularly high concentration of loans in the lowest credit score categories (FICO ≤ 559) over the FY 1997 to FY 2004 loan cohorts. The original choice-based sampling scheme was not available, so it was not possible to compare the credit score distributions between the two data channels.

As the amount of credit score information collected via the new channel increases and as the loans with scores age further, the ability to differentiate loan credit quality by borrower credit history will continue to improve.

F. Initial Relative House Price Distributions

In this Review we introduce a variable measuring the relative house price level within the local market. The relative house price variable is computed by comparing the original purchase price of the house underlying a particular mortgage with the median house value in the same time period and location. The Census median house price data at the county and metropolitan Core Based Statistical Area (CBSA) levels for the years 1980, 1990, 2000, and 2006 are provided by HUD. Quarterly median price estimates for all time periods from 1975 to 2008 were derived through linear interpolation or extrapolation of these official estimates. The CBSA median price estimates were applied to FHA loans with properties located in metropolitan areas. These non-metro median price estimates at the county level, aggregated to the state level, were applied to FHA loans with properties in non-metro counties, *i.e.*, not located in a CBSA.

The relative house price variable improves on the previous relative loan size variable in two ways: (1) it enables the model to account for the impact of changes in FHA loan limits on the distribution of FHA property values; and (2) it provides a broader-based approach by applying a market-wide estimate of median property values, rather than an FHA-specific estimate of median loan size. This improves on the ability of the models to account for the position of FHA loans within the broader market, which may be changing rapidly in view of recent market developments with the expansion in FHA endorsements and contraction in conventional mortgage originations. For the streamline refinance mortgages, the house price is not available, so we continued to use the relative loan size.

Exhibit IV-7 shows the percentage of new originations within each relative house price category. The largest share is the 50-to-100 percent category.

Exhibit IV-7

Distribution of Originations by Relative House Price Category (Percentage of Fully Underwritten FHA Insured Mortgages by Dollar Volume)						
Books of Business	**0-50% of Median House Prices**	**50-75% of Median House Prices**	**75-100% of Median House Prices**	**100-125% of Median House Prices**	**125-150% of Median House Prices**	**>150% of Median House Prices**
1979	9.90	34.92	33.68	14.16	4.51	2.83
1980	6.90	25.74	33.41	20.62	7.62	5.70
1981	8.45	23.88	31.36	21.32	8.01	6.98
1982	14.57	24.67	26.29	17.97	8.37	8.12
1983	7.27	22.75	27.64	20.71	10.93	10.70
1984	12.98	28.37	27.16	17.30	8.30	5.89
1985	10.47	26.61	27.49	18.58	10.01	6.85
1986	5.80	20.46	28.80	23.27	12.79	8.88
1987	6.27	22.00	30.64	22.69	11.58	6.83
1988	9.32	27.77	31.91	19.53	7.96	3.51
1989	9.54	28.19	32.31	19.10	7.49	3.36
1990	8.81	27.83	32.37	19.58	8.03	3.38
1991	9.63	30.75	32.75	18.10	6.44	2.33
1992	9.34	30.80	34.14	18.32	5.73	1.66
1993	8.87	31.01	35.23	18.41	5.25	1.24
1994	9.27	31.79	35.32	17.57	4.85	1.20
1995	12.71	35.87	32.98	14.31	3.28	0.84
1996	11.29	34.44	33.81	15.71	3.64	1.11
1997	12.23	35.15	33.81	14.63	3.19	1.00
1998	10.18	34.07	35.78	15.49	3.37	1.12
1999	9.13	32.22	35.93	16.49	4.64	1.59
2000	10.89	33.43	33.84	15.14	4.90	1.81
2001	11.98	34.01	32.98	14.22	4.86	1.95
2002	12.38	33.63	31.82	14.99	5.16	2.02
2003	10.54	32.31	32.39	16.33	5.96	2.48
2004	10.11	31.59	32.71	16.67	5.99	2.93
2005	8.51	30.17	33.45	17.48	6.68	3.71
2006	7.10	27.49	33.29	18.82	7.90	5.40
2007	7.55	27.40	32.21	18.21	8.23	6.40
2008[a]	8.71	29.53	31.16	16.85	7.57	6.19

Source: FHA data warehouse, June 30, 2008 extract

[a]: Based on partial year data.

FHA experience indicates that larger houses, which are the average houses in the area, tend to perform better compared with smaller houses in the same geographical area, all else being equal. The average houses, which have been the larger houses having FHA-insured mortgages, incur claims at a lower rate. Since the average quality housing market is relatively more liquid and there are a relatively large number of these similar-quality homes in the area, the price volatility of these houses tends to be smaller in comparison to the house-price volatility of extremely low- and high-priced houses.

G. Initial Loan Size Distributions

Besides the relative house price categories, the relative loan size categories used in previous years are still applied to the modeling of streamline refinance loans. The streamlined refinance loans are endorsed without a purchase price or an appraisal requirement. There is no reliable indicator of the market value of the underlying house. The relative loan size variable is still used in modeling the performance of these loans.

Exhibit IV-8 shows the percentage of new originations within each relative loan size category. Overall, the FY 2008 book of business is similar to other recent books of business, for the reasons discussed above. Over the years, the largest loan size category (> 140 percent of the median loan size) has been gradually increasing. Most of this increase corresponds to a decrease in the share of loans in the 100-140 percent relative loan size categories.

Exhibit IV-8

Distribution of Originations by Relative Loan Size Category (Percentage of FHA-Insured Mortgages by Dollar Volume)						
Book of Business	**0-60% of Average Loan Size**	**60-80% of Average Loan Size**	**80-100% of Average Loan Size**	**100-120% of Average Loan Size**	**120-140% of Average Loan Size**	**>140% of Average Loan Size**
1979	3.30	11.12	24.33	30.98	21.80	8.48
1980	3.50	10.70	23.45	33.64	19.85	8.87
1981	4.07	11.04	23.46	29.61	19.49	12.32
1982	4.90	11.31	21.38	27.75	20.77	13.88
1983	4.16	11.48	22.36	28.25	22.23	11.52
1984	4.30	11.71	22.27	28.22	21.29	12.21
1985	4.27	11.62	21.91	28.39	23.75	10.06
1986	3.60	11.48	23.01	30.17	23.98	7.76
1987	3.51	11.78	23.14	29.51	23.88	8.16
1988	4.22	12.18	21.71	28.58	21.36	11.94
1989	4.51	12.37	21.40	26.23	21.28	14.21
1990	4.79	12.64	21.42	25.59	18.93	16.63
1991	4.80	12.55	21.39	24.33	21.40	15.53
1992	4.43	12.35	21.97	25.62	21.60	14.03
1993	3.92	12.31	23.16	26.89	20.90	12.82
1994	4.33	12.81	22.34	24.93	20.31	15.28
1995	4.74	12.98	20.93	24.59	20.85	15.90
1996	4.56	12.87	21.01	25.27	21.54	14.74
1997	4.63	12.92	20.49	25.78	21.67	14.50
1998	4.29	12.53	21.14	27.71	21.53	12.79
1999	4.63	12.94	21.45	25.82	19.08	16.08
2000	5.27	12.82	20.80	23.98	18.93	18.19
2001	4.93	12.31	22.02	24.85	19.11	16.78
2002	5.14	12.29	21.72	24.52	18.88	17.46
2003	5.08	12.22	21.80	25.09	18.85	16.96
2004	5.89	12.46	20.10	22.97	18.77	19.80
2005	5.88	12.77	19.57	22.75	18.85	20.18
2006	5.91	13.17	19.28	22.63	18.22	20.78
2007	5.96	13.04	19.47	22.66	17.94	20.93
2008[a]	5.93	12.99	20.54	22.24	17.23	21.08

[a]: Based on partial year data.

H. Initial Contract Interest Rate

Exhibit IV-9 shows the average contract rate by mortgage type since FY 1991. In general, average contract rates in FY 2008 are lower than they were in FY 2007.

Research has found that, in general, an FRM with a lower initial contract rate tends to prepay at a slower speed. Slower prepayment rates imply that mortgages are exposed to default risk for longer periods of time, which means that, under an environment in favor of prepayments, the conditional claims rate would be lower than in otherwise similar situations. Likewise, during a housing recession where default is more likely, the conditional prepayment rate also tends to be low. This drives the performance of FRMs in particular. As the interest rate is expected to rise, the prepayment rates of the FY 2006 to FY 2008 books are likely to be low, which would leave more loans subject to claim risk for a longer period of time. Meanwhile, the low house price growth rate forecasted by Global Insight, Inc. also implies that the claim probability will rise during the next few years. As a result of these two reinforcing forces, the FY 2006 to FY 2008 books of business are expected to experience higher cumulative claim rates and absolute losses than all other books originated since FY 1985.

Exhibit IV-9

Average Contract Interest Rate by Loan Type (Percent)							
Fiscal Year	**30-Year FRMs**	**15-Year FRMs**	**ARMs**	**30-Year SRs**	**15-Year SRs**	**ARM SRs**	**Average**
1991	9.46	9.15	7.56	10.10	9.32	7.78	9.40
1992	8.54	8.35	6.47	8.92	8.38	6.52	8.26
1993	7.76	7.40	5.87	8.16	7.59	6.28	7.64
1994	7.56	7.12	6.06	7.76	7.43	6.09	7.36
1995	8.39	8.23	7.18	8.70	8.74	7.34	8.10
1996	7.84	7.53	6.49	8.01	7.69	6.79	7.53
1997	7.97	7.75	6.53	8.29	8.04	6.81	7.51
1998	7.37	7.18	6.12	7.58	7.18	6.48	7.25
1999	7.24	6.95	6.00	7.17	6.89	6.05	7.16
2000	8.30	8.07	6.95	8.31	8.05	6.19	8.16
2001	7.56	7.12	6.19	7.42	6.85	6.12	7.49
2002	7.00	6.53	5.28	6.95	6.42	5.31	6.84
2003	6.07	5.50	4.38	6.01	5.49	4.44	5.91
2004	6.12	5.57	4.46	5.98	5.52	4.39	5.88
2005	5.92	5.63	4.79	5.85	5.65	4.67	5.79
2006	6.33	6.18	5.42	6.14	6.04	5.13	6.28
2007	6.51	6.40	5.62	6.38	6.25	5.59	6.49
2008[a]	6.28	5.83	5.26	6.05	5.58	5.21	6.25

Source: FHA data warehouse, June 30, 2008 extract.
[a]: Based on partial year data.

I. Source of Downpayment Assistance

FHA's database started tracking the sources of loans with downpayment gift support in FY 1998. Exhibit IV-10 shows the distribution of MMI loans endorsed annually by gift source starting FY 2000.

Exhibit IV-10 shows that starting in FY 2000, there was a rapid increase in the share of loans with gift letters from non-profit, religious, or community institutions. This concentration reached about 10 percent by FY 2003 and increased dramatically to almost one-fourth of the FY 2005 book of business. Only very recently, in FY 2008, we observed a noticeable reduction of the share of this type of loan.

Exhibit IV-10

Concentration of Loans with Downpayment Assistance by Sources (Percent)[a]					
Origination Year	**No Gift**	**Relative**	**Non-profit, Religious, or Community**	**Government**	**Employer**
2000	77.17	18.81	1.83	2.10	0.09
2001	83.24	11.08	4.25	1.36	0.07
2002	82.26	9.15	7.05	1.48	0.06
2003	81.35	7.41	9.76	1.42	0.06
2004	70.24	9.59	18.05	2.04	0.08
2005	63.87	9.50	23.52	3.03	0.08
2006	62.03	9.39	24.30	4.18	0.10
2007	65.58	7.80	23.15	3.40	0.08
2008[b]	74.38	6.21	17.56	1.80	0.05

Source: FHA data warehouse, June 30, 2008 extract.

[a] As a percentage of all MMI Fund endorsed loans, including purchase and refinance loans. The concentration rate of downpayment assistance would be much higher if refinance loans were excluded from this calculation.

[b] Based on partial year data.

Exhibit IV-11 shows the cumulative claim rates realized on loans by downpayment gift source and origination year, based on the FHA data. With the exception of employer-funded loans in FY 2007, we find that loans with downpayment assistance performed worse than loans that do not receive any downpayment assistance across all origination years. In order to reflect this differential performance of loans with different downpayment assistance sources, our econometric model incorporated a series of categorical variables to reflect this important characteristic. As shown in Appendix A, the estimated coefficients of these downpayment assistance-source variables are both economically and statistically significant.

Exhibit IV-11

Cumulative Claim Rates of Loans with Different of Downpayment Assistance Sources (Percent) As of June 30, 2008					
Origination Year	**No Gift**	**Relative**	**Non-profit, Religious, or Community**	**Government**	**Employer**
2000	6.47	8.82	16.45	14.02	9.20
2001	5.13	6.79	16.20	13.81	7.84
2002	4.00	4.77	13.51	11.02	6.12
2003	2.86	3.86	11.59	9.39	5.50
2004	2.77	3.26	9.95	6.22	4.47
2005	2.35	2.47	7.72	4.73	3.01
2006	1.33	1.35	4.21	2.32	3.16
2007	0.26	0.26	0.99	0.44	0.00

Source: FHA data warehouse, June 30, 2008 extract.

Among the different downpayment assistance sources, non-profit organization sources appear to have the highest cumulative claim rates for all origination years. GAO has reported[5] that the downpayment assistance program might have been misused by many non-profit organizations that are funded by home sellers. The high concentration of these high-claim-rate loans that receive downpayment assistance from non-profit organizations makes the claim risk of these recent books of business particularly high.

As discussed in Section I, the passage of HERA terminates seller-financed downpayment assistance effective October 1, 2008. In the base-case analysis of this Review, we assumed that these loans will no longer be endorsed starting in FY 2009.

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