

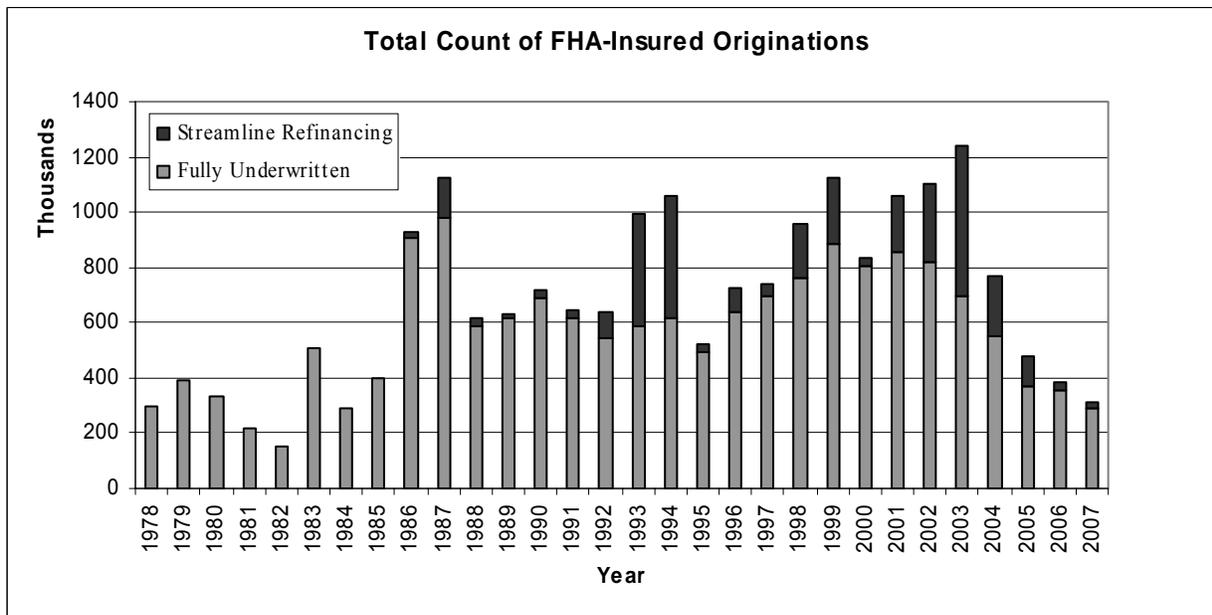
Section IV: Characteristics of the Fiscal Year 2007 Book of Business

This section analyzes the characteristics of the FY 2007 book of business. The characteristic descriptions include: the analysis of the volume and composition of loan originations, the comparison of new purchase versus refinancing, and the distribution of loans by relative loan size, loan-to-value ratios, and borrower credit scores. This section also examines and compares the FY 2007 book with previous books in order to gain insights into how the FY 2007 book is likely to influence future MMI Fund performance. Because the data used for this analysis is an extract as of July 31, 2007, the characteristics for the FY 2007 book reflect only loans originated between October 1, 2006 and July 31, 2007.

A. Volume and Share of Mortgage Originations

In FY 2007, FHA is estimated to have insured about \$52.193 billion⁴ in single-family mortgages through the MMI Fund, bringing the fund’s total unamortized IIF to about \$332.293 billion. Exhibit IV-1 shows the annual FHA originations counts, for new fully underwritten purchase and refinance loans and streamline refinancing, for FY 1978 through FY 2007.

Exhibit IV-1



Source: FHA data warehouse, July 31, 2007 extract.

⁴ According to the August 2007 estimation by HUD.

Exhibit IV-1 shows that FHA's business volume dropped significantly during the past four years from its peak in FY 2003. The decline was particularly significant for streamline refinancing which fell 58.6 percent in FY 2004 from its high in FY 2003, another 51.8 percent drop from FY 2004 to FY 2005, and attenuating 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 an growth in the fully underwritten refinance loans in the past two years. Despite this growth, the total volume of fully underwritten purchase and refinance mortgage insurance still showed a steady decrease since FY 2002.

Mortgage interest rates had reached a 30-year low during the FY 2003 to FY 2005 period and remained low until recently. 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 highest number of homes sold in the nation's history took place over this three-year period. Specifically, the number of homes sold increased from FY 2002 to FY 2005 by about 28 percent. On the other hand, the home-purchase loans endorsed by FHA dropped by 57 percent during the same period. The same divergence was observed in dollar terms. The dollar volume of total-market home sales rose by 66 percent, while the FHA for-purchase endorsement dollar volume dropped by 55 percent. Exhibit IV-2 shows the mortgage origination volume and FHA's market share.

The divergent trend between the number of houses sold and number of home-purchase mortgages FHA endorsed led to the substantial decrease in FHA's market share in recent years. FHA's share by loan count decreased from 13.61 percent in FY 2001 to 3.78 percent in FY 2006 and is estimated to increase slightly to 4.23 percent for FY 2007. When measured by dollar volume, the estimated FHA market share for FY 2007 is about 1.99 percent, down from 7.87 percent in FY 2001.

Exhibit IV-2

| FHA's Market Shares of New Insurance Counts and Volumes | | | | | | |
|---|--------------------------------|---------------------|---------------|-------------------------------|--------|---------------|
| National Home Purchase Market | | | | | | |
| Fiscal Year | Number of Mortgages Originated | | | Volume of Mortgage Originated | | |
| | (000) | | | (billions, current dollars) | | |
| | FHA ^a | Market ^b | FHA Share (%) | FHA | Market | FHA Share (%) |
| 1990 | 742 | 4,109 | 18.05 | 49 | 519 | 9.51 |
| 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 | 1004 | 7.12 |
| 1999 | 911 | 6,463 | 14.09 | 89 | 1124 | 7.96 |
| 2000 | 858 | 6,335 | 13.55 | 89 | 1157 | 7.71 |
| 2001 | 872 | 6,405 | 13.61 | 96 | 1221 | 7.87 |
| 2002 | 808 | 6,615 | 12.22 | 94 | 1356 | 6.93 |
| 2003 | 657 | 7,148 | 9.19 | 80 | 1578 | 5.08 |
| 2004 | 506 | 7,901 | 6.41 | 63 | 1914 | 3.27 |
| 2005 | 346 | 8,454 | 4.09 | 43 | 2247 | 1.89 |
| 2006 | 302 | 7,979 | 3.78 | 39 | 2201 | 1.75 |
| 2007 ^c | 296 | 6998 | 4.23 | 39 | 1949 | 1.99 |

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 2007 numbers are the annual size estimated as of May 2007.

Looking at the longer history shown in Exhibit IV-2, during the decade of 1992 to 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 FHA market share. It is also very likely that the reduction in FHA market share is 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, low downpayments, and high payment ratios. As FHA maintained its underwriting standards throughout the mortgage-demand boom during the last three years, it suffered a loss in market share, especially in refinance loans and adjustable rate mortgages.

According to OFHEO's 2007 Q2 HPI, the housing market has slowed down significantly during FYs 2006 and 2007. The house-price growth rate in FY 2006 fell to 6.1 percent, and the annualized growth rates were further lowered to 2.2 and 0.3 percent during the first and second quarters of 2007. The cooling down of the housing market is consistent with Global Insight's forecast back in 2006 but appears to be more severe. Global Insight has revised its forecast downward accordingly. In its August 2007 forecast, Global Insight forecasts that the OFHEO national average house price index would drop by 2.14 percent during FY 2007, and another 1.17 percent during FY 2008. The housing market slowdown will have a negative impact on FHA claim rates during the next few years. However, as there is an extremely high concentration of recent FHA books in the relatively safer 30-year FRM product, we do not anticipate that default rates for FHA loans will approach current default rates in the subprime market.

In the rest of this section, we examine FHA's business concentration pattern to determine if there exist adverse quality indicators that were not incorporated into the actuarial models applied in the FY 2007 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 FYs 2003 through 2007. The table includes the top 10 States during FY 2007 plus California.

Exhibit IV-3

| Percentage of FHA Dollar volume Originated Between FY 2003 and FY 2007 | | | | | |
|---|--------------|--------------|--------------|--------------|--------------|
| State^a | 2003 | 2004 | 2005 | 2006 | 2007 |
| Texas | 9.27 | 11.42 | 13.53 | 12.56 | 11.19 |
| Georgia | 4.24 | 5.33 | 6.22 | 6.11 | 6.05 |
| Ohio | 3.40 | 3.81 | 4.24 | 4.90 | 4.62 |
| Florida | 4.78 | 5.28 | 4.34 | 3.91 | 4.59 |
| New Jersey | 3.65 | 4.05 | 3.99 | 3.58 | 4.40 |
| Illinois | 5.00 | 4.78 | 4.40 | 4.08 | 4.24 |
| Michigan | 3.01 | 3.33 | 3.83 | 3.82 | 3.81 |
| Colorado | 5.53 | 4.99 | 4.59 | 3.74 | 3.49 |
| New York | 3.00 | 3.56 | 2.88 | 3.33 | 3.46 |
| N. Carolina | 2.76 | 2.88 | 3.53 | 3.46 | 3.24 |
| California ^b | 8.89 | 5.19 | 2.33 | 1.52 | 1.74 |
| % of Total | 44.64 | 49.43 | 51.55 | 49.49 | 49.09 |

Source: FHA data warehouse, July 31, 2007 extract.

^a States are sorted according to their share of FY 2007 origination volume in the MMI Fund.

^b California had been one of the top 10 States in FHA's business up to FY 2004. It was ranked 19th in 2005, 23rd in 2006, and 21st in 2007, respectively.

This year New York appears for the first time in the top-ten list. We also see that California continued to contribute a low percentage share to FHA's business volume, while Texas has maintained the top percentage share of over 11 percent. The rapid growth in California house prices during the past several years has pushed more home mortgages over the FHA loan-size limit.

The historical house price growth rates at the MSA level are captured by our econometric model through the probability of negative equity variable, 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 FRM has comprised most of FHA's single-family business. This pattern began to change in the early 1990s when FHA began 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 FYs 1993, 1994 and 2003 recording the lowest shares. An opposite trend has emerged as market interest rates recently stabilized. From FY 2005 to FY 2007, 30-year FRMs increased from 69.54 percent to 91.38 percent while

30-year SRs dropped from 16.31 percent to 5.82 percent. At the same time, the ARM share of the portfolio (including both ARMs and ARM SRs) also shrank dramatically from 11.52 percent in FY 2005 down to 2.86 in FY 2006, and finally to 1.42 percent in FY 2007. 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 six separate models fitted to the historical performance of the individual product types.

Exhibit IV-4

| FHA-Insured Originations By Mortgage Type (Percentage of FHA-Insured Mortgages by Dollar Volume) | | | | | | |
|---|--------------------|---------|-------|-------------------------|---------|---------|
| Fiscal Year | Purchase Mortgages | | | Streamline Refinancings | | |
| | 30-Year | 15-Year | ARMs | 30-Year | 15-Year | ARM SRs |
| | FRMs | FRMs | | SRs | SRs | |
| 1978 | 99.91 | 0.09 | n/a | 0.00 | n/a | n/a |
| 1979 | 99.94 | 0.06 | n/a | 0.00 | n/a | n/a |
| 1980 | 99.90 | 0.10 | n/a | 0.00 | n/a | n/a |
| 1981 | 99.84 | 0.15 | n/a | 0.00 | n/a | n/a |
| 1982 | 99.62 | 0.38 | n/a | 0.00 | n/a | n/a |
| 1983 | 93.71 | 6.28 | n/a | 0.01 | 0.00 | n/a |
| 1984 | 94.28 | 5.68 | 0.01 | 0.02 | 0.01 | n/a |
| 1985 | 92.00 | 7.75 | 0.14 | 0.08 | 0.03 | n/a |
| 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 | 18.34 | 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 | 69.54 | 1.26 | 8.67 | 16.31 | 1.37 | 2.85 |
| 2006 | 88.65 | 1.35 | 2.65 | 6.66 | 0.48 | 0.21 |
| 2007 ^a | 91.38 | 1.26 | 1.34 | 5.82 | 0.12 | 0.08 |

Source: FHA data warehouse, July 31, 2007 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 Fully Underwritten FHA-Insured Mortgages by Dollar Volume) | | | | | | |
|---|-------------|-------|----------------|----------------|----------------|-------|
| Books of Business | Unknown LTV | ≤ 80% | > 80% ≤ 90% | > 90% < 95% | ≥ 95% < 97% | ≥ 97% |
| 1978 | 18.07 | 4.89 | 12.38 | 29.49 | 28.91 | 6.26 |
| 1979 | 19.76 | 7.10 | 16.55 | 31.05 | 22.51 | 3.03 |
| 1980 | 11.45 | 12.75 | 27.86 | 26.04 | 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 | 8.93 | 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 | 5.79 | 9.22 | 5.71 | 23.75 | 55.52 |
| 2006 | 0.01 | 6.81 | 10.06 | 9.56 | 24.23 | 49.33 |
| 2007 ^a | 0.01 | 7.52 | 11.52 | 12.99 | 25.70 | 42.27 |

Source: FHA data warehouse, July 31, 2007 extract

^a: Based on partial year data.

As Exhibit IV-5 indicates, the distribution among initial LTV categories shifted after 1999. About 42.27 percent of the mortgages originated in FY 2007 have LTV ratios of 97 percent or more. This is a 13 percentage-point reduction from FY 2005, when over 55.5 percent of that

book of business is concentrated in this highest LTV category. On the other hand, there is a clear increase in the concentration in LTVs less than 95 percent. The shift in the LTV concentration is partially due to the increase of the fully underwritten refinance loans, whose maximum allowable LTV is 95 percent, during the past two years. The highest LTV allowed on these loans are 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 the negative equity variable. Second, the initial LTV itself is also included in the model to capture potential behavioral differences among borrowers self-selected into different initial LTV categories.

E. Borrower Credit History Distributions

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

Since May 2004, all lenders originating loans for FHA insurance are required to report borrower credit scores directly to HUD if they choose to order them as part of the underwriting process. Nevertheless, all loans going through the TOTAL scorecard will have credit scores ordered electronically by the affiliated 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 typically too new to generate significant numbers of claim and prepayment events for use in econometric modeling.

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 2007, the median FICO score is approximately 640, the level below which a loan is generally regarded as a subprime mortgage. About 15 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-fifth of the loans originated in FY 2007 are expected to perform worse than loans with a 580 FICO score.

The distribution among credit score categories remained stable in general during the past three years, when the data were obtained directly from lenders.

Due to the over-sampling of early-default loans, there is a particularly high concentration of loans in the lowest credit score category (FICO ≤ 539) during the FY 1997 to 2004 period. 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.

Exhibit IV-6

| Distribution of Originations by Credit Score Category ^a (Percentage of Fully Underwritten FHA-Insured Mortgages by Dollar Volume) | | | | | | | |
|---|------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|----------------------------|
| Books of Business | Lack of Credit History | > 300 ≤ 539 | > 540 ≤ 579 | > 580 ≤ 619 | > 620 ≤ 679 | > 680 ≤ 850 | Credit Score Not Collected |
| 1992 | 4.48 | 0.10 | 0.38 | 1.07 | 3.59 | 3.17 | 87.22 |
| 1993 | 4.59 | 0.12 | 0.40 | 0.96 | 2.97 | 2.47 | 88.48 |
| 1994 | 3.87 | 0.11 | 0.49 | 1.44 | 4.22 | 3.06 | 86.81 |
| 1995 | 3.38 | 0.16 | 0.51 | 1.15 | 2.68 | 1.77 | 90.35 |
| 1996 | 4.17 | 0.35 | 1.19 | 3.06 | 7.03 | 4.29 | 79.90 |
| 1997 | 2.45 | 0.91 | 1.76 | 3.60 | 6.30 | 2.98 | 82.01 |
| 1998 | 1.82 | 1.19 | 2.21 | 4.44 | 7.56 | 3.12 | 79.66 |
| 1999 | 1.72 | 1.13 | 2.29 | 4.57 | 7.59 | 2.88 | 79.81 |
| 2000 | 1.88 | 1.65 | 2.70 | 4.48 | 6.62 | 2.39 | 80.27 |
| 2001 | 1.35 | 1.38 | 2.51 | 4.20 | 6.24 | 2.26 | 82.05 |
| 2002 | 1.34 | 1.55 | 2.72 | 4.59 | 6.94 | 2.64 | 80.22 |
| 2003 | 1.47 | 1.72 | 3.24 | 5.53 | 8.54 | 3.24 | 76.25 |
| 2004 ^c | 3.23 | 1.76 | 4.06 | 8.19 | 14.11 | 5.88 | 62.77 |
| 2005 ^b | 6.83 | 3.68 | 10.45 | 22.82 | 40.02 | 16.20 | 0.00 |
| 2006 ^b | 5.67 | 3.52 | 9.92 | 22.76 | 41.35 | 16.79 | 0.00 |
| 2007 ^b | 5.08 | 4.43 | 11.12 | 24.35 | 39.98 | 15.05 | 0.00 |

^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.

F. Initial Loan Size Distributions

One of our model's explanatory variables is the relative loan-size. This variable is identified by comparing the size of a particular loan with the average loan size of all other FHA-insured loans originated in the same period and within the same state. Existing literature indicates that using *relative* loan size categories eliminates the upward bias that occurs when classifying loans in higher-cost areas using *absolute* loan-size categories. The upper limits for our relative loan size categories are based on breakpoints determined by a percentage of the average loan amount in each state.

Exhibit IV-7 shows the percentage of new originations within each relative loan-size category. Overall, the FY 2007 book of business is similar to other recent books of business. Over the years, the largest loan size category (> 140 percent of the average loan size) has been gradually increasing. Most of this increase corresponds to a decrease in the share of loans in the 80-100 percent and 120-140 percent relative loan size categories.

FHA experience indicates that larger loans tend to perform better in two respects compared with smaller loans in the same geographical area, all else being equal. Larger loans incur claims at a lower rate, and in those cases where a claim occurs, loss severity tends to be lower. The loss severity rate is defined as the claim amount not recovered through the sale of the conveyed property or mortgage note as a percent of the unpaid principal balance. Houses securing larger FHA loans tend to fall into the average house price range for their surrounding areas. Since this market is relatively liquid and there is a relatively large number of these similar-quality homes in the area, the house price volatility of these houses tends to be relatively smaller in comparison to the house-price volatility of extremely low- and high-priced houses. With similar initial LTVs, higher priced houses will be associated with larger loan amounts. In addition, because a large portion of claim costs are fixed and do not vary with regard to loan or property value, larger loans are generally accompanied by lower loss-severity rates.

Exhibit IV-7

| 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 |
| 1978 | 3.53 | 12.16 | 25.12 | 27.31 | 21.56 | 10.32 |
| 1979 | 3.30 | 11.12 | 24.33 | 30.98 | 21.79 | 8.48 |
| 1980 | 3.50 | 10.69 | 23.45 | 33.64 | 19.85 | 8.87 |
| 1981 | 4.07 | 11.05 | 23.47 | 29.60 | 19.49 | 12.31 |
| 1982 | 4.90 | 11.30 | 21.39 | 27.75 | 20.78 | 13.88 |
| 1983 | 4.16 | 11.48 | 22.36 | 28.26 | 22.24 | 11.50 |
| 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 | 12.76 | 19.57 | 22.75 | 18.84 | 20.19 |
| 2006 | 5.91 | 13.17 | 19.29 | 22.63 | 18.22 | 20.78 |
| 2007 ^a | 5.97 | 13.04 | 19.45 | 22.64 | 17.96 | 20.94 |

Source: FHA data warehouse, July 31, 2007 extract

^a: Based on partial year data.

Exhibit IV-8 provides a detailed breakdown of average loan sizes by relative loan-size category.

Exhibit IV-8

| Average Loan Size by Relative Loan-Size Category (\$) | | | | | | |
|---|----------------------------|-----------------------------|------------------------------|-------------------------------|-------------------------------|----------------------------|
| Books 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 |
| 1978 | 16,471 | 24,133 | 31,030 | 37,511 | 45,919 | 48,769 |
| 1979 | 18,759 | 28,091 | 36,749 | 45,573 | 52,103 | 54,367 |
| 1980 | 20,427 | 30,766 | 40,507 | 50,452 | 56,326 | 60,788 |
| 1981 | 21,630 | 33,050 | 43,938 | 53,932 | 60,784 | 68,269 |
| 1982 | 22,484 | 34,121 | 45,165 | 55,587 | 64,470 | 71,728 |
| 1983 | 25,161 | 37,142 | 48,451 | 59,297 | 68,798 | 76,377 |
| 1984 | 25,879 | 38,581 | 51,013 | 62,994 | 72,510 | 78,989 |
| 1985 | 28,069 | 41,754 | 55,205 | 68,138 | 79,415 | 83,603 |
| 1986 | 29,857 | 43,556 | 56,584 | 69,924 | 80,836 | 86,007 |
| 1987 | 30,501 | 43,639 | 56,555 | 69,984 | 81,180 | 86,562 |
| 1988 | 29,393 | 42,257 | 55,080 | 69,456 | 79,570 | 85,961 |
| 1989 | 30,081 | 43,627 | 56,658 | 71,003 | 82,270 | 90,737 |
| 1990 | 31,839 | 45,965 | 59,911 | 74,427 | 84,880 | 98,441 |
| 1991 | 32,971 | 47,807 | 62,089 | 76,631 | 90,813 | 100,461 |
| 1992 | 34,463 | 49,531 | 64,098 | 78,688 | 92,962 | 104,378 |
| 1993 | 36,886 | 52,567 | 67,546 | 81,947 | 96,233 | 112,185 |
| 1994 | 37,262 | 53,212 | 67,803 | 82,169 | 97,642 | 115,735 |
| 1995 | 39,377 | 56,164 | 71,450 | 87,826 | 104,508 | 121,520 |
| 1996 | 41,859 | 59,830 | 75,913 | 93,397 | 111,343 | 128,075 |
| 1997 | 43,632 | 62,578 | 78,872 | 97,698 | 116,303 | 134,245 |
| 1998 | 45,845 | 65,643 | 82,831 | 102,641 | 121,193 | 140,382 |
| 1999 | 48,820 | 69,380 | 87,720 | 108,052 | 127,109 | 154,366 |
| 2000 | 51,649 | 72,812 | 93,311 | 114,990 | 134,903 | 165,774 |
| 2001 | 55,874 | 79,059 | 101,780 | 125,039 | 144,337 | 179,761 |
| 2002 | 57,895 | 81,952 | 105,281 | 128,922 | 148,706 | 188,689 |
| 2003 | 59,778 | 85,102 | 109,212 | 133,222 | 153,623 | 195,796 |
| 2004 | 59,136 | 83,970 | 108,100 | 132,414 | 153,735 | 197,120 |
| 2005 | 58,332 | 84,682 | 109,231 | 133,725 | 156,138 | 197,181 |
| 2006 | 61,965 | 90,457 | 117,678 | 142,552 | 167,542 | 210,455 |
| 2007 ^a | 66,281 | 97,564 | 127,108 | 153,736 | 180,601 | 224,555 |

Source: FHA data warehouse, July 31, 2007 extract

^a: Based on partial year data.

G. Initial Contract Interest Rate

Exhibit IV-9 shows the average contract rate by mortgage type since FY 1990. In general, average contract rates reached their lowest level during the FY 2003 to FY 2005 period and have risen slightly during the past two years for all loan types.

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 rate of the FY 2006 and FY 2007 books would 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 could rise during the next few years. As a result of these two reinforcing forces, the FY 2006 and FY 2007 books of business are expected to experience higher cumulative claim rates than all other books originated since 1990.

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 | SRs Average |
| 1990 | 9.69 | 9.48 | 8.54 | 10.70 | 9.95 | 8.94 | 9.71 |
| 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 ^a | 6.44 | 6.35 | 5.58 | 6.34 | 6.21 | 5.57 | 6.43 |

Source: FHA data warehouse, July 31, 2007 extract.

^a: Based on partial year data.

H. Downpayment Assistance through Gifts

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 by gift source starting FY 1999.

Exhibit IV-10 shows that virtually all downpayment gifts prior to FY 2000 were funded by the borrower's relatives. However, starting in FY 2000, there was a rapid increase in the share of loans with gift letters from non-profit, religious, or community entities. This concentration reached about 10 percent by FY 2003 and increased dramatically to over 20 percent in FY 2005 and remains at that high level at the present time.

Exhibit IV-10

| Concentration of Loans with Gift Letter by Sources | | | | | |
|---|----------------|-----------------|--|------------------------------|-----------------|
| (Percent)^a | | | | | |
| Origination Year | No Gift | Relative | Non-profit, Religious, or Community | Government Assistance | Employer |
| 1999 | 82.20 | 16.32 | 0.55 | 0.86 | 0.06 |
| 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 | 62.02 | 9.39 | 24.30 | 4.18 | 0.10 |
| 2007 ^b | 65.97 | 7.70 | 22.82 | 3.43 | 0.08 |

Source: FHA data warehouse, July 31, 2007 extract.

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

^b Based on partial year data.

In view of the significant number of loans receiving gifts for downpayments, and the relatively recent vintages of these loans that puts them at greatest risk of default, we conducted a closer investigation of these loans. Exhibit IV-11 shows the cumulative claim rates realized on loans by gift source and origination year based on the FHA data.

Exhibit IV-11

| Cumulative Claim Rates of Loans with Different Gift Sources | | | | | |
|--|----------------|-----------------|--|------------------------------|-----------------|
| (Percent) | | | | | |
| Origination Year | No Gift | Relative | Non-profit, Religious, or Community | Government Assistance | Employer |
| 1999 | 4.87 | 8.01 | 12.73 | 12.35 | 8.60 |
| 2000 | 6.17 | 8.51 | 15.99 | 13.47 | 8.93 |
| 2001 | 4.77 | 6.38 | 15.32 | 12.91 | 7.44 |
| 2002 | 3.53 | 4.23 | 12.17 | 9.57 | 5.37 |
| 2003 | 2.26 | 3.04 | 9.37 | 7.46 | 4.06 |
| 2004 | 1.82 | 2.14 | 6.65 | 3.96 | 3.09 |
| 2005 | 1.03 | 0.98 | 3.46 | 2.00 | 1.50 |
| 2006 | 0.27 | 0.21 | 1.04 | 0.48 | 0.53 |

Source: FHA data warehouse, July 31, 2007 extract.

Holding everything else the same, we find that the non-relative gift loans performed worse than the loans without gifts across all origination years. In order to reflect this growing business concentration and the different performance of loans with different sources, we refined our econometric model by incorporating a series of categorical variables to reflect this important development. As shown in Appendix A, the estimated coefficients of these gift-source variables are both economically and statistically significant.

Among the different gift letter sources, non-profit organization sources appear to have the highest cumulative claim rates for all origination years. A GAO report pointed out that the gift letter 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 receives downpayment assistance from non-profit organizations makes the credit risk of these recent books of business particularly high.

In 2006, the IRS issued a ruling stating that an organization that receives funding from home sellers and then provide downpayment gifts to home buyers will no longer qualify for tax-exempt status and may lose its non-profit organization status. Subsequently, in late 2007, HUD issued a separate ruling that prohibits the endorsement of loans that receive downpayment assistance from any entity (including non-profit organization) that are funded or receive contributions from the home sellers. These two rulings indicated government's strong resolve to eliminate this particular type of downpayment assistance loan from the FHA program. As a result, we expect significantly fewer loans receiving downpayment assistance from non-profit organizations to be endorsed by FHA in the future years. If these rulings are effectively enforced, it is likely the future books of business will improve in terms of their credit quality, other things remaining the same. In the base case analysis of this Review, we assumed that these loans will wind down over FY 2008 and be zero in 2009.