Data on the Risk Characteristics and Performance of Single- Family Mortgages Originated from 2001 through 2008 and Financed in the Secondary Market

September 13, 2010

Overview

There has been considerable public discussion of the roles Fannie Mae and Freddie Mac (the Enterprises) may have played in the financial crisis that began in the third quarter of 2007.1 This Federal Housing Finance Agency (FHFA) data release contributes to that discussion by summarizing information on the risk characteristics and performance of two sets of single-family mortgage loans originated from 2001 through 2008 and financed in the secondary mortgage market: those acquired by the Enterprises and those financed through the issuance of private-label mortgage-backed and asset- backed securities (collectively called private-label MBS). The period 2001 through 2008 encompasses the development and peak of the recent single- family mortgage lending and house price boom and the beginning of the ensuing bust. The release focuses on conventional loans—those without government insurance or a government guarantee.

Purpose

The data in the release provide broad answers to the questions:

• How do the volume, risk characteristics, and subsequent performance of single-family mortgages acquired by the Enterprises compare to those financed with private-label MBS during that period? and

• How did the distribution of risk characteristics such as loan-to- value (LTV) ratios and credit scores and the mix between fixed- and adjustable-rate loans change over time for Enterprise- acquired and loans financed with private-label MBS?

Key Findings

The data reveal important differences in the characteristics and performance of the conventional single-family mortgages originated from 2001 through

1 For example, the testimony before the Financial Crisis Inquiry Commission on February 27, 2010, of Dwight M. Jaffee, "The Role of the GSEs and Housing Policy in the Financial Crisis," and Christopher Mayer, "Housing, Subprime Mortgages, and Securitization: How did we go wrong and what can we learn so this doesn't happen again?"

2008 that were acquired by the Enterprises and financed with private-label MBS, as well as other significant information.

Credit Scores

A major innovation in single-family mortgage lending has been the reliance on statistical models of borrower behavior. Credit scores are a fundamental part of that innovation and have facilitated the rapid movement of mortgage lenders to automated underwriting. Lower credit scores are associated with greater mortgage credit risk. Borrower credit scores used here were calculated using models developed by Fair Isaac Corporation (FICO).

• Enterprise-acquired mortgages were predominantly made to borrowers with FICO scores above 660. Such loans comprised 84 percent of all Enterprise-acquired mortgages originated between 2001 and 2008 and ranged from 82 percent of 2001 originations to 91 percent of 2008 originations. Eleven percent of all Enterprise-acquired loans during the period were made to borrowers with FICO scores between 620 and 660. Only 5 percent of Enterprise-acquired loans were made to borrowers with FICO scores below 620.

• Mortgages financed with private-label MBS originated between 2001 and 2008 were much more likely to be made to borrowers with lower FICO scores. Borrowers with FICO scores above 660 received 47 percent of mortgages financed with private-label MBS, while borrowers with FICO scores below 620 received close to 32 percent of those mortgages, and borrowers with FICO scores between 620 and 660 received just over 21 percent.

Loan-to-Value Ratios

Loan-to-value ratios measure the relative use of borrower equity and mortgage debt to finance the purchase of a home. Loans with higher LTV ratios rely more heavily on borrowed funds and pose more credit risk. Second liens (including closed-end second mortgages and home equity lines of credit) further increase credit risk by reducing borrower equity in the property, but second liens, even if incurred simultaneously with the first mortgage, are not captured in the datasets used to prepare this release.

• The vast majority of Enterprise-acquired loans had LTV ratios at origination of 80 percent or less. Such loans comprised 82 percent of all Enterprise-acquired mortgages originated between 2001 and 2008 and ranged from 75 percent of 2007 originations to 86 percent of 2003 and 2005 originations. Loans with LTV ratios above 80 percent but no greater than 90 percent and loans with LTV ratios above 90 percent each constituted 9 percent of Enterprise-acquired loans during the period, with loans in the latter category spiking to more than 15 percent of 2007 originations.

• About two-thirds of mortgages financed with private-label MBS had LTV ratios at or below 80 percent, with such loans increasing from 54 percent of 2001 originations to 81 percent of 2008 originations. Loans with LTV ratios above 80 percent but no greater than 90 percent constituted 20 percent of all mortgages financed with private-label MBS, while loans with LTV ratios above 90 percent constituted 11 percent. Loans in the latter two categories decreased significantly over time.

• The pattern of decreasing LTV ratios over time, most pronounced for loans financed with private-label MBS, is consistent with the greater use of second liens to avoid mortgage insurance on low- down payment mortgages, a practice that was increasingly common into 2007. In addition, loans with LTV ratios at origination of 80 percent or 90 percent tend to have higher delinquency rates than loans with slightly higher LTV ratios in several origination years. That observation is consistent with the existence of second liens that are not captured in the LTV ratio.

Loan Payment Type

Adjustable-rate loans offer borrowers lower initial payments in return for less certainty about future payments. In the data analyzed here, adjustable-rate loans perform worse than fixed-rate loans in part because some originators of adjustable-rate loans evaluated borrower repayment capacity using artificially low rates, called “teaser rates.”

• Enterprise-acquired mortgages were predominantly fixed-rate loans. Such loans comprised 88 percent of all Enterprise-acquired mortgages originated between 2001 and 2008 and ranged from 79 percent for 2004 originations to 96 percent for 2001 originations.

• Mortgages financed with private-label MBS were predominantly adjustable-rate loans. Such loans comprised 70 percent of mortgages financed with private-label MBS originated between 2001 and 2008 and ranged from 53 percent of 2008 originations to 75 percent of 2004 originations.

Performance

This data release measures performance as the percentage of loans in a given origination-year (as measured by their principal balance at origination) that have ever become 90-days delinquent, entered foreclosure processing, or entered real estate owned (REO) status through December 2009. We call such loans ever 90-days delinquent.

• Roughly 5 percent of Enterprise-acquired fixed-rate mortgages (FRMs) and 10 percent of Enterprise-acquired adjustable-rate mortgages (ARMs) were ever 90-days delinquent at some point before the end of 2009.

• In contrast, roughly 20 percent of FRMs financed with private- label MBS and 30 percent of ARMs financed with private-label MBS were ever 90-days delinquent at some point before year- end 2009. The relatively worse performance of private-label MBS-financed mortgages was consistent across origination years and, within each year, across nearly all groups of loans with similar LTV ratios and FICO scores.

• Although higher FICO scores and lower LTV ratios are correlated with lower 90-day delinquency rates within an origination-year, that correlation varies significantly across origination years. Delinquency rates of all mortgages deteriorate over time from the 2003 through the 2007 origination years. That deterioration is worse for ARMs and for loans that combine low FICO scores and high LTV ratios.

Data and Methodology

The data used to prepare the release include conventional fixed- and adjustable-rate mortgages secured by first liens on owner-occupied and investor-owned one-to-four-family properties originated between 2001 and 2008. The data are filtered to include only mortgages that had initial balances at or below the conforming limit for one-unit properties in effect during the year and in the area in which the mortgage was originated. The data come from two distinct datasets.

• The Historical Loan Performance dataset, which is maintained by FHFA, contains loan-level information on the characteristics and performance of all single-family mortgages acquired by the Enterprises. Enterprise-acquired mortgages include those purchased for cash and those financed with Enterprise- guaranteed mortgage-backed securities but not those backing private-label MBS bought by the Enterprises. The mortgages in the Historical Loan Performance dataset used to prepare the release had an aggregate unpaid principal balance at origination of $8.6 trillion.

• The LoanPerformance securities dataset contains loan-level information on the characteristics and performance of single- family mortgages financed with private-label MBS. FHFA leases this dataset from CoreLogic, Inc. This dataset includes loans backing private-label MBS bought by the Enterprises. The mortgages in the LoanPerformance dataset used to prepare the release had an aggregate unpaid principal balance at origination of $1.8 trillion before weighting and $2 trillion after weighting. (Appendix A provides a detailed discussion of the datasets and weighting.)

The release compares the unpaid principal balance at origination, loan counts, and performance through year-end 2009 of groups of single-family mortgages originated in each year. The groups were formed on the basis of loan payment type (fixed or adjustable rate), borrower credit score at origination, and LTV ratio at origination. Both datasets include borrower credit scores calculated using models developed by Fair Isaac Corporation (FICO). Those dimensions were chosen to facilitate comparisons across the Enterprise and private-label MBS funding channels while taking into account factors associated with credit risk. The datasets lack some information necessary to assess mortgage credit risk, including the level of documentation and other underwriting practices that distinguish Alternative-A (Alt-A) loans and the presence of second liens on properties, whether at origination of the first mortgage or subsequently.

See Appendix A for more information on the data.

Discussion of the Data

This section provides more detail about the differences among loans acquired by the Enterprises or financed through the issuance of private-label MBS, including more information on the dollar volumes of loans, risk characteristics, subsequent performance, and some evidence of the consequences for that performance of layering the risks associated with low FICO scores and high LTV ratios. Tables 1 through 3 (see pages 19 through 27) provide additional detail. Appendix B includes tables with greater detail in terms of FICO scores and LTV ratios.

In the figures and tables, shades of blue indicate Enterprise-acquired mortgages and shades of red indicate loans financed with private-label MBS. Darker shades generally indicate less risky mortgages (that is, those with fixed rates, lower LTV ratios, or higher FICO scores), whereas lighter shades indicate riskier loans (that is, those with adjustable rates, higher LTV ratios, or lower FICO scores). In tables 1 through 3, the darkest shades of red and blue indicate statistics for combined ARMs and FRMs.

Payment Types and Dollar Volumes

Figure 1 shows how the distribution of single-family mortgages originated from 2001 through 2008 varied across the two secondary market funding channels and the two payment types.2

• The combined datasets encompass $10.6 trillion in single-family mortgages originated from 2001 through 2008. Of that total, 82 percent ($8.6 trillion) was acquired by the Enterprises and 18 percent ($2 trillion) was financed with private-label MBS. Thus, the Enterprises acquired more than four times the dollar volume of loans that were financed with private-label MBS.

• With respect to payment type, 78 percent of the loans in the two datasets were FRMs and 22 percent were ARMs.

Figure 1: Single-Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market, by Funding Channel, Payment Type, and Origination Year ($ in Billions)

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

2 Figure 1 and the subsequent figures exclude loans with missing FICO scores or LTV ratios.

• Enterprise-acquired mortgages were predominantly FRMs, whereas loans financed with private-label MBS were predominantly ARMs.

• The volumes of both FRMs and ARMs financed with private-label MBS grew rapidly from 2001 through 2005 and then declined to almost nothing by 2008.

FICO Scores and Loan-to-Value Ratios

Figures 2 and 3 show the distribution of mortgages in the two datasets by borrower FICO scores and LTV ratios for each origination year. In Figure 2, loans labeled "high FICO" have FICO scores of 660 or higher; loans labeled "medium FICO" have FICO scores below 660 but no less than 620; and loans labeled "low FICO" have FICO scores below 620. In Figure 3, loans labeled "low LTV" have original LTV ratios no greater than 80 percent; loans labeled "medium LTV" have original LTV ratios above 80 percent but no greater than 90 percent; and loans labeled "high LTV" have original LTV ratios above 90 percent.

• In every origination year, loans with FICO scores above 660 make up at least 70 percent of all mortgages in the combined datasets. However, in years 2004 through 2006, such loans account for 70 percent to 72 percent of the data, whereas in other years they account for 78 percent to 92 percent.

Figure 2: Single-Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market, by Funding Channel, FICO Score Category, and Origination Year ($ in Billions)

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

• In every origination year, mortgages with LTV ratios of 80 percent reached or in less 2007.

make 3

up at least 75 percent of all loans, the level During the height of the lending boom from 2003 through 2006, the share of loans with reported LTV ratios at origination of 80 percent or less stayed between 78 percent and 83 percent.

• From 2004 through 2007, loans financed with private-label MBS accounted for unusually large shares of loans with high FICO scores or low LTV ratios. From 2004 through 2006, the Enterprises' shares of loans with higher-risk characteristics also fell relative to total loans.

3 Federal regulatory guidance on nontraditional mortgage product risks issued in September 2006 discouraged the use of simultaneous second liens, the presence of which led to understatement of the total or combined LTV ratio of all liens on the property. See Interagency Guidance on Nontraditional Mortgage Product Risks, available at http://www.occ.treas.gov/ftp/release/2006-107a(Guidance).pdf.

Figure 3: Single-Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market, by Funding Channel, LTV Ratio Category, and Origination Year ($ in Billions)

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

Tables 1 and 2 on pages 19 through 24 show more detail about the distribution by origination year of Enterprise-acquired and mortgages financed with private-label MBS by payment type, FICO score, and LTV ratio at origination. Those tables reveal major differences in the credit risk profile of the loans financed through those two funding channels.

• About 5 percent of all Enterprise-acquired loans had FICO scores of less than 620 at origination. Another 11 percent had FICO scores above 620 but no greater than 660. Only about one-tenth of those loans were ARMs.

• About 32 percent of all loans financed with private-label MBS had FICO scores below 620. Another 21 percent had FICO scores no greater than 660. About three-quarters of those loans carried adjustable interest rates.

• About 9 percent of all Enterprise-acquired loans and about 11 percent of all loans financed with private-label MBS had LTV ratios above 90 percent. Less than one-tenth of the Enterprise- acquired loans with LTV ratios in that category carried adjustable interest rates, whereas just over two-thirds of the loans financed with private-label MBS with LTV ratios above 90 percent carried adjustable-rates.

Performance

Figure 4 shows, by origination-year cohort, the Enterprises' shares of all single-family mortgages in the combined datasets and of those loans that have been ever 90-days delinquent. That figure yields some broad generalizations about the relative performance of Enterprise-acquired and mortgages financed with private-label MBS.

• The Enterprises' share of total loans fell from above 90 percent in 2001 and 2002 to just above 60 percent in 2005 before climbing back to nearly 100 percent in 2008.

• For all origination years, the Enterprises' share of ever 90-days delinquent mortgages is lower than the Enterprises' share of all loans in the combined datasets. That indicates that the post- origination performance of Enterprise-acquired loans was, on average, superior to the post-origination performance of private- label MBS-financed loans. That result is not surprising, since Enterprise-acquired loans had generally better risk characteristics as measured by payment type, FICO score, and LTV ratio at origination.

Figure 4: Enterprise Shares of Single-Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market and Ever 90-Day Delinquencies of Those Mortgages by Origination Year

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

Table 3 on pages 25 though 27 gives more detail on the relative performance of Enterprise-acquired and loans financed with private-label MBS, comparing groups of mortgages based on payment type, FICO score, and LTV ratio at origination. The data in Table 3 reveal that, even holding those characteristics constant, Enterprise-acquired loans have lower ever 90-day delinquency rates than mortgages financed with private-label MBS for almost all combinations of characteristics and origination years.

• For all loans taken together, ever 90-day delinquency rates were four to five times greater for mortgages financed with private- label MBS (27 percent) than for Enterprise-acquired loans (6 percent).

• When holding payment type constant, differences in those delinquency rates are smaller.

o For FRMs, ever 90-day delinquency rates were about four times greater for loans financed with private-label MBS (20 percent) than for Enterprise- acquired mortgages (5 percent).

o For ARMs, ever 90-day delinquency rates were about three times greater for mortgages financed with private-label MBS (30 percent) than for Enterprise-acquired loans (10 percent).

• The greater difference between the delinquency experience of all mortgages financed with private-label MBS versus all Enterprise- acquired mortgages arises from the greater concentration of the loans financed with private-label MBS in much poorer performing ARMs and the greater concentration of Enterprise-acquired loans in much better performing FRMs.

• At the level of detail shown in Table 3, there are only a few combinations of characteristics where Enterprise-acquired mortgages had higher ever 90-day delinquency rates than loans financed with private-label MBS. All but one of those combinations are in 2008, after the private-label MBS market had largely shut down and private-label MBS-financed loan originations were very limited. The exceptional instance is ARMs originated in 2007 with FICO scores below 620 and LTV ratios above 90 percent.

FICO Score and LTV Ratio Risk Layering and Performance

Figures 5 and 6 on pages 13 and 14 show the dollar volume of single-family mortgages in each dataset that fall into the two most extreme FICO score/LTV ratio groups presented by origination year in tables 1 through 3. Figure 5 shows the dollar volumes of loans with characteristics that suggest they pose the least credit risk—those with FICO scores at or above 660 and LTV ratios at or below 80 percent. Figure 6 shows the dollar volumes of loans with characteristics that suggest they pose the greatest credit risk—FICO scores below 620 and LTV ratios above 90 percent. Note that the scale of Figure 5 is 64 times that of Figure 6 because of the dominance of lower-risk FRMs acquired by the Enterprises among all mortgages in the combined datasets. (Tables 1 and 2 on pages 19 through 24 give more detail by origination year about the distribution of Enterprise-acquired and private-label MBS-financed loans by payment type, FICO score, and LTV ratio.)

• Mortgage origination volumes, payment types, FICO scores, LTV ratios, and performance differ systematically across the two datasets.

• Enterprise acquisitions were dominated by loans to borrowers with FICO scores above 660 and LTV ratios at or below 80 percent. The share of such mortgages averaged 71 percent of Enterprise volume for the whole period and dipped as low as 64 percent in 2007 and 66 percent in 2001.

Figure 5: Lower Risk Single-Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market, by Origination Year: FICO Score > 660, LTV Ratio ≤ 80 Percent ($ in Billions and Percent of Annual Originations by Secondary Market Funding Channel)

$1,600

90%

$1,400

79%

80%

75%

71%

66%

$0

0% 2001 2002 2003 2004 2005

2006 2007 2008

Enterprise Loans PLS Loans Enterprise Loans (%) PLS Loans (%)

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

74%

72%

64%

74%

$1,200

15%

71%

70%

60% $1,000

48%

50%

$800

44% 40%

40%

$600

35%

28%

30%

$400

21%

20%

$200

10%

Figure 6: Higher Risk Single-Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market, by Origination Year: FICO Score < 620, LTV Ratio > 90 Percent ($ in Billions and Percent of Annual Originations by Secondary Market Funding Channel)

$25

4.5%

1.0%

0.9%

$0

2001 2002 2003 2004 2005 2006 2007 2008

Enterprise Loans PLS Loans Enterprise Loans (%) PLS Loans (%) Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

• Loans to borrowers with FICO scores above 660 and LTV ratios at or below 80 percent accounted for a much lower share of total private-label MBS volume. Such mortgages averaged 37 percent of private-label MBS volume for loans originated between 2001 and 2008 and increased over the period from 15 percent in 2001 to 79 percent (of much lower overall volume) in 2008.

• Mortgages with both FICO scores below 620 and LTV ratios above 90 percent averaged 1 percent of total Enterprise-acquired loans, peaking at 2 percent in 2007.

• Mortgages with both FICO scores below 620 and LTV ratios above 90 percent constituted an average of 3 percent of all loans financed with private-label MBS. Such loans peaked as a share of volume at almost 4 percent in 2003.

Figures 7 and 8 show the relative performance of the two groups of loans with combinations of FICO scores and LTV ratios that suggest they pose the lowest and highest levels of credit risk. As in Figure 4, Enterprise-acquired mortgages originated in each year perform better than mortgages financed with private- label MBS.

4.0% 3.8% $20

3.3%

2.5%

3.5%

2.8%

3.0%

2.9%

3.0%

$15

2.5% 2.3%

2.0%

2.0% $10

1.5%

$5

1.0%

0.3% 0.3%

0.5%

0.0%

Figure 7: Ever 90-Day Delinquency Rates on Lower Risk Single- Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market, by Origination Year: FICO Score > 660, LTV Ratio ≤ 80 Percent

60%

50%

40%

30%

20%

10%

0%

2001 2002 2003 2004 2005 2006 2007 2008

Enterprise Loans PLS Loans

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

• Ever 90-day delinquency rates for Enterprise-acquired loans in those FICO score/LTV ratio groups increase over time, reaching peak levels for loans originated in 2006 for the lowest-risk group (see Figure 7) and for loans originated in 2007 for the highest- risk group (see Figure 8).

• The increase in delinquency rates for Enterprise-acquired loans is greater for the highest-risk group (rising from 18 percent for 2001 originations to 49 percent for 2007 originations) than for the lowest-risk group (rising from just under 1 percent for 2001 originations to just under 10 percent for 2006 originations).

• Ever 90-day delinquency rates for loans financed with private- label MBS in those FICO score/LTV ratio groups declined in origination years 2002 and 2003 as the economy emerged from the 2001 recession. Delinquency rates then increased over time, peaking with 2006 originations for the lowest-risk FICO score/LTV ratio group and with 2006 and 2007 originations for the highest-risk group.

• The increase in delinquency rates for loans financed with private- label MBS is proportionately greater for the lowest-risk FICO score/LTV ratio group (rising from just over 4 percent for 2003 originations to just over 38 percent for 2006 originations) than for the highest-risk group (rising from just under 26 percent for 2003 originations to just over 58 percent for 2007 originations).

Figure 8: Ever 90-Day Delinquency Rates on Higher Risk Single-Family Mortgages Originated from 2001 through 2008 and Sold into the Secondary Market, by Origination Year: FICO Score < 620, LTV Ratio > 90 Percent

60%

50%

40%

30%

20%

10%

0%

2001 2002 2003 2004 2005 2006 2007 2008

Enterprise Loans PLS Loans

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

Table 3 on pages 25 through 27 gives more detailed information about the performance of mortgages in each FICO score/LTV ratio group. Ever 90-day delinquency rates vary considerably by year of origination, payment type, and risk characteristics at origination.

• Ever-90-day delinquency rates of all groups of loans increased from 2003 through 2007. The increase was greater for ARMs than for FRMs. The layering of the risks posed by lower FICO scores and higher LTV ratios matters as well.

• Roughly 5 percent of Enterprise-acquired FRMs and 10 percent of Enterprise-acquired ARMs became ever 90-days delinquent at some point before December 31, 2009. For origination years 2001 through 2005, ARMs performed comparably to FRMs, but the performance of ARMs relative to FRMs deteriorated after 2004.

• In contrast, roughly 22 percent of FRMs financed with private- label MBS FRMs and 32 percent of ARMs financed with private- label MBS became ever 90-days delinquent at some point before December 31, 2009. ARMs financed with private-label MBS had higher ever 90-day delinquency rates than private-label MBS- financed FRMs in each origination year.

Topics for Future Research

This release represents FHFA's initial effort to compare the single-family mortgages acquired by the Enterprises and financed with private-label MBS in the last decade. In addition to the information on payment types, LTV ratios on first liens, borrowers FICO scores, and performance exploited to construct this data release, the Historical Loan Performance and LoanPerformance databases contain information on the ZIP codes in which properties are located and the contract terms of loans. That information can be used to analyze the market shares of Enterprise-acquired and private-label MBS- financed mortgages in different states and localities and the prevalence in the two channels of nontraditional products such as interest-only loans, negatively amortizing mortgages, and ARMs with steep teaser rates. Exploration of those data would shed further light on the roles the Enterprises may have played in the mortgage lending boom of the last decade.

In addition, the Historical Loan Performance and LoanPerformance datasets lack uniform information on the level of documentation and other underwriting practices that distinguish Alt-A loans and on the presence of second liens on properties, whether at origination of the first lien or subsequently. Such information would be necessary to assess the contribution of Alt-A lending or second liens to the differences in mortgage performance documented in this release.

The data presented in this release or contained in the Historical Loan Performance and LoanPerformance datasets are inadequate to draw conclusions with respect to complex, causal relationships between Enterprise or private-label financing of single-family mortgages and contemporaneous or later developments in housing and financial markets or the broader economy.

Understanding those relationships would require extensive and careful analysis of the data presented here in conjunction with other data.

Table 1a: Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination ($ in Millions)*

Adjustable-Rate Mortgages (ARMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total

620 <

620 <

620 < FICO <

FICO <

FICO < 660 FICO ≥ 660 Subtotal

660

660

19

6

20 < Funding

FICO <

FICO <

FICO ≥

FICO <

I

ICO < Vintage

Channel

620

620

660 Subtotal

620

660 FICO ≥ 660 Total

2001 Enterprise $ 2,069 $ 3,557 $ 28,207 $ 33,833 $ 614 $ 756 $ 3,408 $ 4,778 $ 200 $ 543 $ 2,678 $ 3,421 $ 2,883 $ 4,856 $ 34,293 $

42,032 Private-Label $ 14,074 $ 4,644 $ 3,901 $ 22,618 $ 10,099 $ 3,273 $ 1,690 $ 15,062 $ 1,102 $ 1,108 $ 919 $ 3,128 $ 25,274 $ 9,025 $ 6,509 $ 40,808 2002 Enterprise $ 4,654 $ 10,263 $ 84,472 $ 99,390 $ 1,101 $ 1,827 $ 8,375 $ 11,303 $ 866 $ 1,846 $ 7,232 $ 9,944 $ 6,622 $ 13,936 $ 100,080 $ 120,638 Private-Label $ 23,867 $ 8,105 $ 13,069 $ 45,041 $ 17,012 $ 5,388 $ 3,523 $ 25,923 $ 2,372 $ 2,762 $ 2,812 $ 7,946 $ 43,251 $ 16,255 $ 19,404 $ 78,911 2003 Enterprise $ 5,297 $ 18,245 $ 133,777 $ 157,320 $ 1,119 $ 2,619 $ 12,021 $ 15,759 $ 1,282 $ 3,034 $ 10,356 $ 14,671 $ 7,698 $ 23,898 $ 156,154 $ 187,750 Private-Label $ 34,647 $ 14,146 $ 33,467 $ 82,260 $ 24,206 $ 8,647 $ 7,083 $ 39,936 $ 7,387 $ 7,640 $ 7,474 $ 22,502 $ 66,240 $ 30,433 $ 48,025 $ 144,698 2004 Enterprise $ 5,444 $ 16,079 $ 140,268 $ 161,791 $ 879 $ 2,442 $ 11,105 $ 14,425 $ 1,359 $ 3,110 $ 9,068 $ 13,538 $ 7,682 $ 21,631 $ 160,441 $ 189,755 Private-Label $ 66,402 $ 39,676 $ 108,929 $ 215,007 $ 40,810 $ 15,494 $ 14,798 $ 71,102 $ 12,446 $ 12,679 $ 14,559 $ 39,684 $ 119,657 $ 67,849 $ 138,287 $ 325,793 2005 Enterprise $ 5,816 $ 13,274 $ 132,406 $ 151,497 $ 542 $ 1,409 $ 7,709 $ 9,660 $ 589 $ 1,451 $ 4,580 $ 6,620 $ 6,948 $ 16,134 $ 144,695 $ 167,776 Private-Label $ 81,789 $ 62,490 $ 150,712 $ 294,991 $ 42,544 $ 17,692 $ 18,572 $ 78,808 $

12,218 $ 10,986 $ 13,826 $ 37,030 $ 136,551 $ 91,167 $ 183,110 $ 410,828 2006 Enterprise $ 6,823 $ 14,028 $ 113,893 $ 134,744 $ 640 $ 1,048 $ 5,266 $ 6,954 $ 407 $ 987 $ 4,606 $ 6,000 $ 7,870 $ 16,063 $ 123,765 $ 147,698 Private-Label $ 48,470 $ 48,798 $ 126,511 $ 223,778 $ 24,721 $ 10,468 $ 13,071 $ 48,261 $ 9,795 $ 7,376 $ 9,963 $ 27,134 $ 82,986 $ 66,642 $ 149,545 $ 299,172 2007 Enterprise $ 4,445 $ 9,232 $ 74,509 $ 88,187 $ 777 $ 1,182 $ 5,634 $ 7,593 $ 446 $ 1,073 $ 6,177 $ 7,696 $ 5,668 $ 11,487 $ 86,320 $ 103,476 Private-Label $ 7,419 $ 7,422 $ 28,165 $ 43,007 $ 4,411 $ 2,596 $ 4,613 $ 11,621 $ 1,640 $ 1,595 $ 3,896 $ 7,131 $ 13,471 $ 11,613 $ 36,674 $ 61,759 2008 Enterprise $ 470 $ 1,477 $ 41,595 $ 43,541 $ 70 $ 227 $ 5,043 $ 5,340 $ 18 $ 101 $ 2,165 $ 2,284 $ 558 $ 1,805 $ 48,803 $ 51,166 Private-Label -$ $ 2 $ 123 $ 126 -$ $ 1 $ 23 $ 23 -$ -$ $ 8 $ 8 -$ $ 3 $ 154 $ 157 All Years Enterprise $ 35,018 $ 86,157 $ 749,127 $ 870,302 $ 5,743 $ 11,509 $ 58,561 $ 75,813 $ 5,167 $ 12,146 $ 46,862 $ 64,175 $ 45,928 $ 109,812 $ 854,550 $ 1,010,290 Private-Label $ 276,667 $ 185,283 $ 464,878 $ 926,828 $ 163,803 $ 63,560 $ 63,373 $ 290,736 $ 46,961 $ 44,145 $ 53,458 $ 144,564 $ 487,431 $ 292,987 $ 581,709 $ 1,362,127 * Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc. "--" Indicates no applicable loans in dataset. Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

Table 1b: Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination ($ in Millions)*

2008

Fixed-Rate Mortgages (FRMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total

620 <

620 <

620 < FICO <

FICO <

FICO < 660 FICO ≥ 660 Subtotal

660

660

2001

2002

2003

2004

2005

2006

2007

All Years

* Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc.

20

6

20 < Funding

FICO <

FICO <

FICO ≥

FICO <

I

ICO < Vintage

Channel

620

620

660 Subtotal

620

660 FICO ≥ 660 Total

Enterprise $ 36,642 $ 75,975 $ 629,193 $ 741,809 $ 10,754 $ 19,833 $ 86,602 $ 117,189 $ 9,513 $ 18,315 $ 68,427

$ 96,255 $ 56,909 $ 114,122 $ 784,222 $ 955,253 Private-Label $ 4,803 $ 2,973 $ 5,883 $ 13,659 $ 2,983 $ 1,726 $ 2,087 $ 6,797 $ 762 $ 1,307 $ 3,275 $ 5,344 $ 8,548 $ 6,006 $ 11,245 $ 25,800 Enterprise $ 43,605 $ 92,461 $ 864,131 $ 1,000,197 $ 10,609 $ 19,140 $ 84,025 $ 113,774 $ 10,514 $ 18,299 $ 66,059 $ 94,872 $ 64,728 $ 129,901 $ 1,014,215 $ 1,208,843 Private-Label $ 6,745 $ 4,826 $ 12,798 $ 24,369 $ 3,331 $ 2,480 $ 3,850 $ 9,661 $ 1,217 $ 2,148 $ 5,199 $ 8,564 $ 11,293 $ 9,454 $ 21,847 $ 42,594 Enterprise $ 49,731 $ 131,316 $ 1,240,092 $ 1,421,138 $ 8,913 $ 20,636 $ 98,461 $ 128,010 $ 10,855 $ 20,323 $ 71,332 $ 102,510 $ 69,498 $ 172,275 $ 1,409,885 $ 1,651,658 Private-Label $ 13,134 $ 10,043 $ 32,686 $ 55,864 $ 6,067 $ 5,119 $ 8,244 $ 19,430 $ 1,585 $ 3,436 $ 9,421 $ 14,442 $ 20,787 $ 18,598 $ 50,352 $ 89,737 Enterprise $ 28,982 $ 63,219 $ 495,979 $ 588,180 $ 4,697 $ 10,083 $ 41,887 $ 56,667 $ 7,478 $ 14,746 $ 41,825 $ 64,048 $ 41,156 $ 88,048 $ 579,691 $ 708,896 Private-Label $ 17,276 $ 14,333 $ 40,911 $ 72,520 $ 6,796 $ 5,879 $ 8,809 $ 21,484 $ 1,641 $ 3,373 $ 7,885 $ 12,899 $ 25,714 $ 23,585 $ 57,604 $ 106,903 Enterprise $ 29,744 $ 58,767 $ 531,284 $ 619,795 $ 4,003 $ 8,491 $ 40,956 $ 53,450 $ 6,547 $ 12,761 $ 39,546 $ 58,854 $ 40,294 $ 80,019 $ 611,786 $ 732,099 Private-Label $ 18,430 $ 20,028 $ 73,216 $ 111,674 $ 6,880 $ 5,509 $ 9,311 $ 21,700 $ 1,667 $ 2,604 $ 5,301 $ 9,572 $ 26,977 $ 28,141 $ 87,828 $ 142,946 Enterprise $ 30,574 $ 57,892 $ 518,723 $ 607,188 $ 4,140 $ 8,031 $ 39,248 $ 51,419 $ 10,044 $ 16,112 $ 44,667 $ 70,822 $ 44,758 $ 82,034 $ 602,637 $ 729,429 Private-Label $ 16,626 $ 21,226 $ 64,162 $ 102,013 $ 6,844 $ 4,743 $ 6,509 $ 18,096 $ 2,610 $ 3,115 $ 5,294 $ 11,019 $ 26,079 $ 29,083 $ 75,966 $ 131,128 Enterprise $ 37,566 $ 59,742 $ 574,793 $ 672,101 $ 7,795 $ 13,933 $ 65,995 $ 87,722 $ 19,916 $ 31,755 $ 97,824 $ 149,495 $ 65,277 $ 105,429 $ 738,613 $ 909,319 Private-Label $ 4,981 $ 5,305 $ 21,911 $ 32,197 $ 2,112 $ 1,455 $ 2,335 $ 5,902 $ 808 $ 993 $ 2,659 $ 4,459 $ 7,901 $ 7,753 $ 26,904 $ 42,559 Enterprise $ 16,306 $ 31,196 $ 537,058 $ 584,559 $ 2,182 $ 6,328 $ 78,471 $ 86,981 $ 2,204 $ 6,791 $ 55,097 $ 64,092 $ 20,691 $ 44,315 $ 670,627 $ 735,633 Private-Label $ 1 $ 3 $ 109 $ 114 $ 0 $ 1 $ 13 $ 14 $ 1 $ 1 $ 8 $ 10 $ 2 $ 5 $ 130 $ 138 Enterprise $ 273,149 $ 570,568 $ 5,391,252 $ 6,234,969 $ 53,093 $ 106,474 $ 535,645 $ 695,212 $ 77,069 $ 139,102 $ 484,777 $ 700,948 $ 403,311 $ 816,144 $ 6,411,674 $ 7,631,129 Private-Label $ 81,997 $ 78,737 $ 251,676 $ 412,410 $ 35,014 $ 26,911 $ 41,159 $ 103,084 $ 10,290 $ 16,978 $ 39,042 $ 66,310 $ 127,301 $ 122,626 $ 331,876 $ 581,803 Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

Table 1c: Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination ($ in Millions)*

All Mortgages (ARMs + FRMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total

2007

2008

All Years

* Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc.

620 <

620 <

620 < FICO <

FICO <

FICO < 660 FICO ≥ 660 Subtotal

660

660

6

20 < Funding

FICO <

FICO <

FICO ≥

FICO <

I

ICO < Vintage

Channel

620

620

660 Subtotal

620

660 FICO ≥ 660 Total

2001

Enterprise $ 38,711 $ 79,532 $ 657,400 $ 775,643 Private-Label $ 18,877 $ 7,617 $ 9,783 $ 36,277 $ 11,368 $ 20,589 $ 90,010 $ 121,967 $ 9,713 $ 18,858 $ 71,105 $ 99,675 $ 59,792 $ 118,979 $ 818,514 $

997,285 $ 13,082 $ 4,999 $ 3,777 $ 21,858 $ 1,864 $ 2,415 $ 4,194 $ 8,472 $ 33,823 $ 15,031 $ 17,754 $ 66,608 2002 Enterprise $ 48,259 $ 102,725 $ 948,603 $ 1,099,587 Private-Label $ 30,612 $ 12,931 $ 25,867 $ 69,410 $ 11,710 $ 20,967 $ 92,400 $ 125,077 $ 11,380 $ 20,145 $ 73,291 $ 104,816 $ 71,349 $ 143,837 $ 1,114,294 $

1,329,480 $ 20,343 $ 7,868 $ 7,373 $ 35,585 $ 3,589 $ 4,910 $ 8,011 $ 16,510 $ 54,545 $ 25,709 $ 41,251 $ 121,505 2003 Enterprise $ 55,028 $ 149,562 $ 1,373,868 $ 1,578,458 Private-Label $ 47,781 $ 24,189 $ 66,153 $ 138,124 $ 10,032 $ 23,255 $ 110,482 $ 143,768 $ 12,136 $ 23,357 $ 81,688 $ 117,181 $ 30,273 $ 13,766 $ 15,328 $

59,367 $ 8,972 $ 11,076 $ 16,896 $ 36,944 $ 77,196 $ 196,173 $ 1,566,038 $

1,839,407 $ 87,027 $ 49,031 $ 98,377 $ 234,434 2004 Enterprise $ 34,426 $ 79,299 $ 636,247 $ 749,972 Private-Label $ 83,678 $ 54,009 $ 149,840 $ 287,527 $ 5,576 $ 12,525 $ 52,992 $ 71,093 $ 8,837 $ 17,856 $ 50,893 $ 77,586 $ 48,839 $ 109,680 $ 740,132 $

898,650 $ 47,606 $ 21,373 $ 23,607 $ 92,586 $ 14,087 $ 16,052 $ 22,444 $ 52,583 $ 145,371 $ 91,433 $ 195,891 $ 432,696 2005 Enterprise $ 35,560 $ 72,041 $ 663,690 $ 771,291 Private-Label $ 100,219 $ 82,518 $ 223,927 $ 406,664 $ 4,546 $ 9,899 $ 48,665 $ 63,110 $ 7,136 $ 14,212 $ 44,126 $ 65,474 $ 47,242 $ 96,153 $ 756,480 $

899,875 $ 49,423 $ 23,201 $ 27,884 $ 100,508 $ 13,885 $ 13,590 $ 19,127 $ 46,602 $ 163,527 $ 119,308 $ 270,938 $ 553,774 2006 Enterprise $ 37,396 $ 71,920 $ 632,616 $ 741,932 Private-Label $ 65,095 $ 70,023 $ 190,673 $ 325,791 $ 4,781 $ 9,079 $ 44,514 $ 58,373 $ 10,451 $ 17,098 $ 49,272 $ 76,822 $ 52,628 $ 98,097 $ 726,402 $

877,127 $ 31,565 $ 15,211 $ 19,580 $ 66,356 $ 12,405 $ 10,491 $ 15,257 $ 38,153 $ 109,065 $ 95,725 $ 225,510 $ 430,300 Enterprise $ 42,011 $ 68,974 $ 649,303 $ 760,288 $ 8,572 $ 15,115 $ 71,629 $ 95,316 $ 20,362 $ 32,828 $ 104,001 $ 157,191 $ 70,945 $ 116,917 $ 824,933 $ 1,012,795 Private-Label $ 12,401 $ 12,727 $ 50,076 $ 75,204 $ 6,524 $ 4,051 $ 6,948 $ 17,523 $ 2,448 $ 2,588 $ 6,555 $ 11,591 $ 21,372 $ 19,367 $ 63,579 $ 104,318 Enterprise $ 16,775 $ 32,673 $ 578,652 $ 628,101 $ 2,252 $ 6,555 $ 83,515 $ 92,321 $ 2,222 $ 6,893 $ 57,262 $ 66,377 $ 21,249 $ 46,120 $ 719,429 $ 786,799 Private-Label $ 1 $ 5 $ 233 $ 239 $ 0 $ 2 $ 35 $ 37 $ 1 $ 1 $ 16 $ 18 $ 2 $ 8 $ 284 $ 295 Enterprise $ 308,167 $ 656,725 $ 6,140,379 $ 7,105,271 $ 58,836 $ 117,983 $ 594,206 $ 771,025 $ 82,237 $ 151,248 $ 531,639 $ 765,123 $ 449,239 $ 925,955 $ 7,266,224 $ 8,641,419 Private-Label $ 358,664 $ 264,020 $ 716,553 $ 1,339,237 $ 198,816 $ 90,471 $ 104,532 $ 393,820 $ 57,251 $ 61,123 $ 92,499 $ 210,873 $ 614,732 $ 415,613 $ 913,585 $ 1,943,930 Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

Table 2a: Share of Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination*

Adjustable-Rate Mortgages (ARMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total 620 <

620 <

620 < Funding

FICO <

FICO <

FICO ≥

FICO <

FICO <

FICO ≥

FICO <

FICO < Channel

620

660

660 Subtotal

620

660

660 Subtotal

620

660

22

ICO ≥ Vintage

660 Total

2001 Enterprise 0.2% 0.4% 2.8% 3.4% 0.1% 0.1% 0.3% 0.5% 0.0% 0.1% 0.3% 0.3% 0.3% 0.5% 3.4% 4.2%
Private-Label 21.1% 7.0% 5.9% 34.0% 15.2% 4.9% 2.5% 22.6% 1.7% 1.7% 1.4% 4.7% 37.9% 13.5% 9.8% 61.3%

2002 Enterprise 0.4% 0.8% 6.4% 7.5% 0.1% 0.1% 0.6% 0.9% 0.1% 0.1% 0.5% 0.7% 0.5% 1.0% 7.5% 9.1%
Private-Label 19.6% 6.7% 10.8% 37.1% 14.0% 4.4% 2.9% 21.3% 2.0% 2.3% 2.3% 6.5% 35.6% 13.4% 16.0% 64.9%

2003 Enterprise 0.3% 1.0% 7.3% 8.6% 0.1% 0.1% 0.7% 0.9% 0.1% 0.2% 0.6% 0.8% 0.4% 1.3% 8.5% 10.2%
Private-Label 14.8% 6.0% 14.3% 35.1% 10.3% 3.7% 3.0% 17.0% 3.2% 3.3% 3.2% 9.6% 28.3% 13.0% 20.5% 61.7%

2004 Enterprise 0.6% 1.8% 15.6% 18.0% 0.1% 0.3% 1.2% 1.6% 0.2% 0.3% 1.0% 1.5% 0.9% 2.4% 17.9% 21.1%
Private-Label 15.3% 9.2% 25.2% 49.7% 9.4% 3.6% 3.4% 16.4% 2.9% 2.9% 3.4% 9.2% 27.7% 15.7% 32.0% 75.3%

2005 Enterprise 0.6% 1.5% 14.7% 16.8% 0.1% 0.2% 0.9% 1.1% 0.1% 0.2% 0.5% 0.7% 0.8% 1.8% 16.1% 18.6%
Private-Label 14.8% 11.3% 27.2% 53.3% 7.7% 3.2% 3.4% 14.2% 2.2% 2.0% 2.5% 6.7% 24.7% 16.5% 33.1% 74.2%

2006 Enterprise 0.8% 1.6% 13.0% 15.4% 0.1% 0.1% 0.6% 0.8% 0.0% 0.1% 0.5% 0.7% 0.9% 1.8% 14.1% 16.8%

Private-Label 11.3% 11.3% 29.4% 52.0% 5.7% 2.4% 3.0% 11.2% 2.3% 1.7% 2.3% 6.3% 19.3% 15.5% 34.8% 69.5%

2007 Enterprise 0.4% 0.9% 7.4% 8.7% 0.1% 0.1% 0.6% 0.7% 0.0% 0.1% 0.6% 0.8% 0.6% 1.1% 8.5% 10.2%
Private-Label 7.1% 7.1% 27.0% 41.2% 4.2% 2.5% 4.4% 11.1% 1.6% 1.5% 3.7% 6.8% 12.9% 11.1% 35.2% 59.2%

2008 Enterprise 0.1% 0.2% 5.3% 5.5% 0.0% 0.0% 0.6% 0.7% 0.0% 0.0% 0.3% 0.3% 0.1% 0.2% 6.2% 6.5%
Private-Label 0.0% 0.8% 41.9% 42.7% 0.0% 0.3% 7.7% 8.0% 0.0% 0.0% 2.7% 2.7% 0.0% 1.1% 52.2% 53.3%

All Years Enterprise 0.4% 1.0% 8.7% 10.1% 0.1% 0.1% 0.7% 0.9% 0.1% 0.1% 0.5% 0.7% 0.5% 1.3% 9.9% 11.7%
Private-Label 14.2% 9.5% 23.9% 47.7% 8.4% 3.3% 3.3% 15.0% 2.4% 2.3% 2.7% 7.4% 25.1% 15.1% 29.9% 70.1%

* Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc. Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

620 < FICO < 660

Table 2b: Share of Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination*

2008

Fixed-Rate Mortgages (FRMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total 620 <

620 <

620 < Funding

FICO <

FICO <

FICO ≥

FICO <

FICO <

FICO ≥

FICO <

FICO < Channel

620

660

660 Subtotal

620

660

660 Subtotal

620

660

2001

2002

2003

2004

2005

2006

2007

All Years

* Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc.

ICO ≥ Vintage

660 Total

Enterprise	3.7%	7.6%	63.1%	74.4%	1.1%	2.0%	8.7%	11.8%	1.0%	1.8%	6.9%	9.7%	5.7%	11.4%	78.6%	95.8%
Private-Label	7.2%	4.5%	8.8%	20.5%	4.5%	2.6%	3.1%	10.2%	1.1%	2.0%	4.9%	8.0%	12.8%	9.0%	16.9%	38.7%
Enterprise	3.3%	7.0%	65.0%	75.2%	0.8%	1.4%	6.3%	8.6%	0.8%	1.4%	5.0%	7.1%	4.9%	9.8%	76.3%	90.9%
Private-Label	5.6%	4.0%	10.5%	20.1%	2.7%	2.0%	3.2%	8.0%	1.0%	1.8%	4.3%	7.0%	9.3%	7.8%	18.0%	35.1%
Enterprise	2.7%	7.1%	67.4%	77.3%	0.5%	1.1%	5.4%	7.0%	0.6%	1.1%	3.9%	5.6%	3.8%	9.4%	76.6%	89.8%
Private-Label	5.6%	4.3%	13.9%	23.8%	2.6%	2.2%	3.5%	8.3%	0.7%	1.5%	4.0%	6.2%	8.9%	7.9%	21.5%	38.3%
Enterprise	3.2%	7.0%	55.2%	65.5%	0.5%	1.1%	4.7%	6.3%	0.8%	1.6%	4.7%	7.1%	4.6%	9.8%	64.5%	78.9%
Private-Label	4.0%	3.3%	9.5%	16.8%	1.6%	1.4%	2.0%	5.0%	0.4%	0.8%	1.8%	3.0%	5.9%	5.5%	13.3%	24.7%
Enterprise	3.3%	6.5%	59.0%	68.9%	0.4%	0.9%	4.6%	5.9%	0.7%	1.4%	4.4%	6.5%	4.5%	8.9%	68.0%	81.4%
Private-Label	3.3%	3.6%	13.2%	20.2%	1.2%	1.0%	1.7%	3.9%	0.3%	0.5%	1.0%	1.7%	4.9%	5.1%	15.9%	25.8%
Enterprise	3.5%	6.6%	59.1%	69.2%	0.5%	0.9%	4.5%	5.9%	1.1%	1.8%	5.1%	8.1%	5.1%	9.4%	68.7%	83.2%
Private-Label	3.9%	4.9%	14.9%	23.7%	1.6%	1.1%	1.5%	4.2%	0.6%	0.7%	1.2%	2.6%	6.1%	6.8%	17.7%	30.5%
Enterprise	3.7%	5.9%	56.8%	66.4%	0.8%	1.4%	6.5%	8.7%	2.0%	3.1%	9.7%	14.8%	6.4%	10.4%	72.9%	89.8%
Private-Label	4.8%	5.1%	21.0%	30.9%	2.0%	1.4%	2.2%	5.7%	0.8%	1.0%	2.5%	4.3%	7.6%	7.4%	25.8%	40.8%
Enterprise	2.1%	4.0%	68.3%	74.3%	0.3%	0.8%	10.0%	11.1%	0.3%	0.9%	7.0%	8.1%	2.6%	5.6%	85.2%	93.5%
Private-Label	0.5%	1.0%	37.1%	38.5%	0.0%	0.4%	4.3%	4.7%	0.3%	0.4%	2.8%	3.4%	0.8%	1.8%	44.1%	46.7%
Enterprise	3.2%	6.6%	62.4%	72.2%	0.6%	1.2%	6.2%	8.0%	0.9%	1.6%	5.6%	8.1%	4.7%	9.4%	74.2%	88.3%
Private-Label	4.2%	4.1%	12.9%	21.2%	1.8%	1.4%	2.1%	5.3%	0.5%	0.9%	2.0%	3.4%	6.5%	6.3%	17.1%	29.9%

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

620 < FICO < 660

Table 2c: Share of Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination*

All Mortgages (ARMs + FRMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total 620 <

620 <

620 < Funding

FICO <

FICO <

FICO ≥

FICO <

FICO <

FICO ≥

FICO <

FICO < Channel

620

660

660 Subtotal

620

660

660 Subtotal

620

660

2007

2008

All Years

* Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc.

ICO ≥ Vintage

660 Total

2001

Enterprise Private-Label 28.3% 3.9% 8.0% 65.9% 77.8% 11.4% 14.7% 54.5% 1.1% 2.1% 9.0% 12.2% 19.6% 7.5% 5.7% 32.8% 1.0% 1.9% 7.1% 10.0% 6.0% 11.9% 82.1% 100.0% 2.8% 3.6% 6.3% 12.7% 50.8% 22.6% 26.7% 100.0%

2002

Enterprise Private-Label 25.2% 3.6% 7.7% 71.4% 82.7% 10.6% 21.3% 57.1% 0.9% 1.6% 7.0% 9.4% 16.7% 6.5% 6.1% 29.3% 0.9% 1.5% 5.5% 7.9% 5.4% 10.8% 83.8% 100.0% 3.0% 4.0% 6.6% 13.6% 44.9% 21.2% 34.0% 100.0%

2003

Enterprise Private-Label 20.4% 3.0% 8.1% 74.7% 85.8% 10.3% 28.2% 58.9% 0.5% 1.3% 6.0% 7.8% 12.9% 5.9% 6.5% 25.3% 0.7% 1.3% 4.4% 6.4% 4.2% 10.7% 85.1% 100.0% 3.8% 4.7% 7.2% 15.8% 37.1% 20.9% 42.0% 100.0%

2004

Enterprise Private-Label 19.3% 3.8% 8.8% 70.8% 83.5% 12.5% 34.6% 66.5% 0.6% 1.4% 5.9% 7.9% 11.0% 4.9% 5.5% 21.4% 1.0% 2.0% 5.7% 8.6% 5.4% 12.2% 82.4% 100.0% 3.3% 3.7% 5.2% 12.2% 33.6% 21.1% 45.3% 100.0%

2005

Enterprise Private-Label 18.1% 4.0% 8.0% 73.8% 85.7% 14.9% 40.4% 73.4% 0.5% 1.1% 5.4% 7.0% 8.9% 4.2% 5.0% 18.1% 0.8% 1.6% 4.9% 7.3% 5.2% 10.7% 84.1% 100.0% 2.5% 2.5% 3.5% 8.4% 29.5% 21.5% 48.9% 100.0%

2006

Enterprise Private-Label 15.1% 4.3% 8.2% 72.1% 84.6% 16.3% 44.3% 75.7% 0.5% 1.0% 5.1% 6.7% 7.3% 3.5% 4.6% 15.4% 1.2% 1.9% 5.6% 8.8% 6.0% 11.2% 82.8% 100.0% 2.9% 2.4% 3.5% 8.9% 25.3% 22.2% 52.4% 100.0%

Enterprise 4.1% 6.8% 64.1% 75.1% 0.8% 1.5% 7.1% 9.4% 2.0% 3.2% 10.3% 15.5% 7.0% 11.5% 81.5% 100.0% Private-Label 11.9% 12.2% 48.0% 72.1% 6.3% 3.9% 6.7% 16.8% 2.3% 2.5% 6.3% 11.1% 20.5% 18.6% 60.9% 100.0%

Enterprise 2.1% 4.2% 73.5% 79.8% 0.3% 0.8% 10.6% 11.7% 0.3% 0.9% 7.3% 8.4% 2.7% 5.9% 91.4% 100.0% Private-Label 0.5% 1.8% 79.0% 81.2% 0.0% 0.6% 12.0% 12.6% 0.3% 0.4% 5.5% 6.1% 0.8% 2.8% 96.4% 100.0%

Enterprise 3.6% 7.6% 71.1% 82.2% 0.7% 1.4% 6.9% 8.9% 1.0% 1.8% 6.2% 8.9% 5.2% 10.7% 84.1% 100.0% Private-Label 18.5% 13.6% 36.9% 68.9% 10.2% 4.7% 5.4% 20.3% 2.9% 3.1% 4.8% 10.8% 31.6% 21.4% 47.0% 100.0%

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

620 < FICO < 660

Table 3a: Percent of Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprise or Financed with Private-Label MBS Ever 90-Days Delinquent by Loan-to-Value Ratio and Borrower FICO Score at Origination*

Adjustable-Rate Mortgages (ARMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total

620 <

620 <

620 < Funding

FICO <

FICO <

FICO ≥

FICO <

FICO <

FICO ≥

FICO <

FICO < Channel

620

660

660 Subtotal

620

660

660 Subtotal

620

660

25

ICO ≥ Vintage

660 Total

2001 Enterprise 10.8% 3.8% 0.7% 1.7% 18.5% 7.2% 1.8% 4.8% 10.1% 7.4% 2.3% 3.5% 12.4% 4.8% 0.9% 2.2% Private-Label 26.5% 16.9% 7.9% 21.3% 29.2% 19.0% 11.4% 25.0% 26.4% 20.8% 10.8% 19.8% 27.5% 18.2% 9.2% 22.6%

2002 Enterprise 7.3% 2.9% 0.8% 1.3% 12.3% 6.0% 2.3% 3.8% 12.8% 7.4% 3.0% 4.7% 8.8% 3.9% 1.1% 1.8% Private-Label 20.9% 13.6% 4.8% 14.9% 23.9% 15.1% 9.8% 20.1% 24.9% 18.0% 9.6% 17.1% 22.3% 14.8% 6.4% 16.9%

2003 Enterprise 7.5% 3.2% 1.4% 1.8% 13.5% 7.3% 3.3% 4.7% 18.2% 9.6% 4.3% 6.6% 10.2% 4.5% 1.8% 2.4% Private-Label 17.1% 11.0% 4.5% 10.9% 19.7% 12.4% 8.2% 16.1% 25.1% 16.0% 9.1% 16.7% 18.9% 12.7% 5.8% 13.2%

2004 Enterprise 10.4% 6.8% 3.5% 4.1% 14.4% 11.0% 6.1% 7.4% 23.7% 14.0% 6.7% 10.1% 13.2% 8.3% 3.9% 4.8% Private-Label 20.3% 16.5% 8.8% 13.8% 24.2% 16.6% 12.1% 20.0% 29.7% 20.7% 13.2% 20.8% 22.6% 17.3% 9.6% 16.0%

2005 Enterprise 17.3% 16.8% 10.4% 11.2% 25.7% 21.3% 14.6% 16.2% 27.6% 25.9% 14.5% 18.1% 18.8% 18.0% 10.7% 11.8% Private-Label 33.8% 36.9% 26.2% 30.6% 38.0% 32.6% 27.4% 34.3% 43.9% 35.7% 28.2% 35.6% 36.0% 35.9% 26.5% 31.8%

2006 Enterprise 38.2% 34.9% 19.8% 22.3% 42.1% 41.0% 29.6% 32.5% 46.9% 40.8% 33.5% 35.6% 39.0% 35.6% 20.8% 23.3% Private-Label 51.0% 58.4% 44.7% 49.0% 57.4% 56.2% 50.6% 55.3% 60.5% 56.6% 48.6% 55.1% 54.0% 57.9% 45.5% 50.6%

2007 Enterprise 49.9% 43.7% 22.1% 25.8% 59.6% 52.3% 37.8% 42.3% 63.9% 54.2% 47.0% 49.0% 52.4% 45.6% 24.9% 28.7% Private-Label 56.0% 57.0% 40.6% 46.1% 61.8% 59.5% 52.0% 57.4% 61.3% 60.0% 54.0% 57.0% 58.6% 58.0% 43.5% 49.5%

2008 Enterprise 20.8% 12.4% 3.5% 4.0% 40.3% 25.6% 10.8% 11.9% 43.0% 26.7% 10.7% 11.6% 24.0% 14.8% 4.6% 5.2% Private-Label -- 36.4% 13.0% 13.5% -- 0.0% 37.9% 36.7% -- -- 41.2% 41.2% -- 27.4% 18.1% 18.3%

All Years Enterprise 21.3% 15.6% 8.3% 9.5% 24.9% 17.6% 11.4% 13.4% 25.8% 18.9% 14.2% 16.0% 22.2% 16.2% 8.8% 10.2% Private-Label 30.6% 35.5% 25.7% 29.1% 33.4% 28.8% 26.9% 31.0% 39.9% 30.9% 25.9% 31.9% 32.4% 33.3% 25.9% 29.8%

g p g y y q p y Inside Mortgage Finance Publications, Inc. Cells with borders indicate Enterprise-acquired loans had higher ever 90-day delinquency rates than loans financed with private-label MBS. "--" Indicates no applicable loans in dataset. Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

620 < FICO < 660

Table 3b: Percent of Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprise or Financed with Private-Label MBS Ever 90-Days Delinquent by Loan-to-Value Ratio and Borrower FICO Score at Origination*

Fixed-Rate Mortgages (FRMs)

2003

2004

2005

2006

2007

2008

Total

2001

2002

LTV ≤ 80 80 < LTV ≤ 90 90 < LTV

620 <

620 <

620 < Funding

FICO <

FICO <

FICO ≥

FICO <

FICO <

FICO ≥

FICO <

FICO < Channel

620

660

660 Subtotal

620

660

660 Subtotal

620

660

All Years

* Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc. Cells with borders indicate Enterprise-acquired loans had higher ever 90-day delinquency rates than loans financed with

private-label MBS.

26

ICO ≥ Vintage

660 Total

Enterprise 9.2% 4.3% 0.9% 1.6% 15.6% 8.6% 2.8% 4.9% 18.3% 10.5% 3.2% 6.1% 11.9% 6.0% 1.3% 2.5% Private-Label 25.0% 14.0% 5.2% 14.1% 31.1% 20.2% 10.5% 22.0% 36.9% 29.7% 8.2% 17.5% 28.2% 19.2% 7.0% 16.9%

Enterprise 8.6% 4.1% 0.9% 1.5% 14.8% 8.5% 3.1% 5.1% 19.2% 10.8% 3.9% 6.9% 11.4% 5.7% 1.2% 2.3% Private-Label 18.1% 11.3% 3.9% 9.3% 22.8% 15.2% 8.0% 14.9% 33.0% 24.0% 7.9% 15.5% 21.1% 15.2% 5.6% 11.8%

Enterprise 9.5% 4.7% 1.2% 1.8% 14.7% 8.9% 3.7% 5.3% 23.3% 13.7% 5.0% 8.6% 12.3% 6.3% 1.6% 2.5% Private-Label 15.1% 9.4% 3.7% 7.4% 19.2% 13.1% 7.9% 12.8% 29.4% 17.8% 8.6% 13.1% 17.4% 12.0% 5.3% 9.5%

Enterprise 12.5% 6.9% 2.1% 3.1% 17.9% 11.5% 5.2% 7.4% 26.4% 16.7% 6.9% 11.5% 15.6% 9.1% 2.7% 4.2% Private-Label 18.3% 12.7% 6.2% 10.4% 24.6% 16.7% 11.0% 16.9% 30.3% 21.2% 12.1% 16.8% 20.7% 14.9% 7.7% 12.4%

Enterprise 17.6% 12.7% 4.2% 5.6% 22.3% 17.5% 8.9% 11.2% 33.0% 23.8% 10.5% 15.9% 20.5% 15.0% 4.9% 6.9% Private-Label 27.3% 23.9% 13.4% 17.6% 36.1% 28.3% 19.0% 26.8% 39.7% 32.0% 20.2% 26.8% 30.3% 25.5% 14.4% 19.6%

Enterprise 23.3% 19.0% 7.5% 9.4% 29.0% 23.2% 13.3% 16.1% 43.8% 30.8% 14.4% 22.3% 28.5% 21.7% 8.4% 11.1% Private-Label 39.2% 38.4% 25.6% 30.5% 48.9% 41.2% 30.9% 40.4% 50.7% 42.6% 28.4% 37.7% 42.9% 39.3% 26.3% 32.5%

Enterprise 27.8% 19.4% 7.3% 9.5% 35.4% 28.1% 16.2% 19.8% 48.7% 36.0% 18.8% 26.4% 35.1% 25.6% 9.6% 13.3% Private-Label 44.2% 36.7% 22.9% 28.5% 52.6% 44.1% 31.5% 42.2% 52.6% 48.5% 34.9% 41.1% 47.3% 39.6% 24.9% 31.7%

Enterprise 19.2% 10.0% 2.0% 2.9% 29.9% 20.4% 6.7% 8.3% 35.6% 23.5% 7.2% 9.9% 22.1% 13.5% 3.0% 4.1% Private-Label 0.0% 0.0% 8.1% 7.8% 0.0% 23.4% 25.0% 24.7% 0.0% 0.0% 21.2% 17.1% 0.0% 5.0% 10.5% 10.2%

Enterprise 15.2% 8.9% 2.8% 3.9% 20.6% 14.0% 6.7% 8.8% 32.8% 21.7% 9.1% 14.2% 19.2% 11.7% 3.6% 5.3% Private-Label 26.0% 23.6% 14.3% 18.4% 32.8% 24.3% 16.2% 23.9% 39.4% 28.7% 15.2% 22.4% 28.9% 24.5% 14.6% 19.8%

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO ≥

660 Subtotal

FICO < 620

620 < FICO < 660

Table 3c: Percent of Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprise or Financed with Private-Label MBS Ever 90-Days Delinquent by Loan-to-Value Ratio and Borrower FICO Score at Origination*

All Mortgages (ARMs + FRMs) LTV ≤ 80 80 < LTV ≤ 90 90 < LTV Total

620 <

620 < Funding

FICO <

FICO <

FICO ≥

FICO <

FICO <

FICO ≥ Channel

620

660

660 Subtotal

620

660

660 Subtotal

2007

2008

All Years

* Loans with missing or invalid data on LTV ratio or FICO score are excluded from these data. The LoanPerformance dataset has been scaled up so that total weighted issuance volume by year equals that reported by Inside Mortgage Finance Publications, Inc. Cells with borders indicate Enterprise-acquired loans had higher ever 90-day delinquency rates than loans financed with private-label MBS.

ICO ≥ Vintage

660 Total

2001

Enterprise Private-Label 26.1% 9.3% 4.3% 15.8% 0.9% 1.6% 6.3% 18.6% 15.8% 8.6% 2.7% 4.9% 18.2% 10.4% 3.2% 6.0% 29.6% 19.4% 10.9% 24.1% 30.7% 25.6% 8.8% 18.4% 12.0% 6.0% 1.3% 2.5% 27.7% 18.6% 7.8% 20.4%

2002

Enterprise Private-Label 20.3% 8.5% 4.0% 12.7% 0.9% 1.5% 4.4% 13.0% 14.6% 8.2% 3.0% 5.0% 18.7% 10.5% 3.8% 6.7% 23.7% 15.1% 8.8% 18.7% 27.6% 20.6% 8.5% 16.3% 11.1% 5.5% 1.2% 2.2% 22.0% 15.0% 6.0% 15.1%

2003

Enterprise Private-Label 16.6% 9.3% 4.5% 10.3% 1.2% 1.8% 4.1% 9.5% 14.5% 8.8% 3.7% 5.2% 22.7% 13.1% 4.9% 8.4% 19.6% 12.7% 8.0% 15.0% 25.8% 16.6% 8.8% 15.3% 12.1% 6.0% 1.6% 2.5% 18.6% 12.4% 5.5% 11.8%

2004

Enterprise Private-Label 12.2% 19.9% 6.9% 15.5% 2.4% 3.3% 8.1% 12.9% 17.4% 11.4% 5.4% 7.4% 26.0% 16.2% 6.9% 11.2% 15.3% 8.9% 2.9% 4.3% 24.3% 16.6% 11.7% 19.3% 29.8% 20.8% 12.8% 19.8% 22.3% 16.7% 9.1% 15.1%

2005

Enterprise Private-Label 17.5% 32.6% 13.5% 5.4% 33.8% 22.0% 6.7% 27.0% 22.7% 18.0% 9.8% 12.0% 32.5% 24.0% 10.9% 16.1% 20.3% 15.5% 6.0% 7.8% 37.7% 31.6% 24.6% 32.6% 43.4% 35.0% 26.0% 33.8% 35.1% 33.5% 22.6% 28.6%

2006

Enterprise Private-Label 26.1% 48.0% 22.1% 9.7% 52.3% 38.3% 11.8% 43.2% 30.8% 25.3% 15.2% 18.1% 44.0% 31.4% 16.2% 23.4% 55.5% 51.5% 44.1% 51.2% 58.4% 52.4% 41.6% 50.1% 30.0% 24.0% 10.5% 13.2% 51.3% 52.2% 39.0% 45.1%

Enterprise 30.1% 22.7% 9.0% 11.4% 37.6% 30.0% 17.9% 21.6% 49.0% 36.6% 20.5% 27.6% 36.4% 27.5% 11.2% 14.9% Private-Label 51.3% 48.6% 32.9% 38.6% 58.9% 53.9% 45.1% 52.3% 58.4% 55.6% 46.2% 50.9% 54.4% 50.6% 35.6% 42.2%

Enterprise 19.2% 10.1% 2.1% 3.0% 30.2% 20.6% 7.0% 8.5% 35.7% 23.5% 7.3% 10.0% 22.1% 13.6% 3.1% 4.2% Private-Label 0.0% 16.7% 10.7% 10.8% 0.0% 13.7% 33.3% 32.2% 0.0% 0.0% 31.0% 27.6% 0.0% 13.6% 14.7% 14.5%

Enterprise 15.9% 9.8% 3.5% 4.6% 21.0% 14.3% 7.1% 9.3% 32.4% 21.5% 9.6% 14.4% 19.6% 12.3% 4.2% 5.9% Private-Label 29.6% 32.0% 21.7% 25.8% 33.3% 27.4% 22.7% 29.1% 39.8% 30.3% 21.4% 29.0% 31.7% 30.7% 21.8% 26.8%

Source: FHFA (using data from Fannie Mae, Freddie Mac, and CoreLogic, Inc.)

FICO < 620

620 < FICO < 660

FICO ≥

660 Subtotal

FICO < 620

620 < FICO < 660

Appendix A: Description of the Data

This data release presents information by year of origination on the dollar amounts, loan counts, and delinquency experience through year-end 2009 of single-family mortgages originated between 2001 and 2008 and financed through the secondary mortgage market. The release presents information separately on loans acquired by Fannie Mae and Freddie Mac (the Enterprises) and mortgages financed through the issuance of private-label mortgage- backed securities and asset-backed securities (collectively, private-label MBS). The data used to prepare the analysis include conventional fixed- and adjustable-rate mortgages secured by first liens on owner-occupied and investor-owned one-to-four-family properties.

The data come from two distinct sources. FHFA's Historical Loan Performance dataset contains loan-level information on the characteristics and performance of all single-family mortgages acquired (that is, purchased for cash or financed with mortgage-backed securities guaranteed) by the Enterprises.4 FHFA updates the Historical Loan Performance dataset quarterly with information from each Enterprise. The data summarized in this release reflects the information provided by the Enterprises for the first quarter of 2010. The loans in the Historical Loan Performance dataset originated from 2001 through 2008 and had an aggregate unpaid principal balance at origination of $8.6 trillion.

The LoanPerformance mortgage securities dataset, which FHFA leases from CoreLogic, Inc., contains loan-level information on the characteristics and performance of single-family mortgages financed with private-label MBS.5 CoreLogic updates the LoanPerformance dataset monthly. The data summarized in this release reflects information provided by CoreLogic in April 2010. The mortgages in the LoanPerformance dataset originated from 2001 through 2008 and had an aggregate unpaid principal balance at origination of $1.8 trillion before weighting and $2 trillion after weighting.

Each dataset contains information on factors that lenders use to assess mortgage credit risk at origination and information on subsequent loan performance. Risk factors include payment type (that is, fixed rate or adjustable rate), initial loan-to-value (LTV) ratio based on the purchase price

4 The Historical Loan Performance dataset does not include loans backing private-label MBS bought by the Enterprises. 5 FHFA leases two LoanPerformance securities databases that contain loan-level information on mortgages backing private-label MBS. The LoanPerformance dataset used to prepare this release includes data derived from both of those databases.

or appraised property value and the first-lien balance,6 and credit score(s) for the borrower(s) calculated using models developed by Fair Isaac Corporation (FICO). The analysis summarized in this release targets first-lien mortgages on one-unit properties not insured or guaranteed by an agency of the federal government that were originated from 2001 through 2008 and subsequently acquired by the Enterprises or financed by the issuance by private securitizers of private-label MBS.7 The sample excludes balloon and reverse mortgages as well as all loans acquired by the Enterprises or financed with private-label MBS in the period but originated before 2001.

Missing Data

Mortgages missing either FICO scores or LTV ratios comprise 0.7 percent of the principal of all mortgages in the datasets. The percentage of loans by principal balance with missing data is about 15 percent higher for Enterprise- acquired loans in the Historical Loan Performance dataset than for private-label MBS-financed loans in the LoanPerformance dataset. In the Historical Loan Performance dataset, 0.7 percent of adjustable-rate mortgages (ARMs) and 1.22 percent of fixed-rate mortgages (FRMs) are missing data, but in the LoanPerformance dataset, 0.9 percent of ARMs and 0.56 percent of FRMs are missing data.

Dataset Coverage and Sample Weighting

The Historical Loan Performance dataset contains nearly complete coverage of single-family mortgages financed by Fannie Mae and Freddie Mac, but the LoanPerformance dataset comprises only a sample of single-family mortgages financed with private-label MBS. To make meaningful comparisons between those two funding channels, we adjusted the LoanPerformance data so that the total dollar volume of originations in each year of the period from 2001 through 2008 is comparable to the universe of mortgages originated in those years and financed with private-label MBS issued from 2001 through 2009. We use estimates of private-label MBS issuance in that period compiled by Inside Mortgage Finance (IMF) Publications, Inc. Because the LoanPerformance dataset includes information on first liens that issuers

6 This measure of LTV ratio does not capture any second liens secured by the property that were present at origination, so loans with equal reported LTV ratios may pose significantly different credit risk. 7 This universe of loans was targeted as well as the data allow. For example, we could not accurately identify the lien status of many Enterprise-acquired mortgages in the Historical Loan Performance dataset. Because most loans acquired by the Enterprises are first liens, we treat as first liens all mortgages identified as “unknown” in the Historical Loan Performance dataset. In addition, neither dataset identifies mortgages that finance one-unit properties. To target such properties, we include all mortgages associated with one- to four-unit properties with an initial loan balance at or below the conforming limit for one-unit properties that was in effect during the origination year and in the area in which the loan was originated.

characterized as of prime, subprime, and Alternative-A (Alt-A) credit quality that had initial balances below and above the conforming loan limit, as well as information on closed-end second liens, the relevant universe used for scaling the LoanPerformance dataset is the sum of mortgages backing those categories of private-label MBS issues reported by Inside Mortgage Finance Publications, Inc.

The LoanPerformance dataset's total coverage of the universe of loans financed with private-label MBS in each year is estimated as the total dollar volume of mortgages in the dataset that back securities issued during the given year, divided by the estimate of issuance during the year made by Inside Mortgage Finance Publications, Inc. To scale the LoanPerformance data to that of the universe estimated by Inside Mortgage Finance Publications, Inc. and make it more comparable to the universe of Enterprise-acquired loans in the Historical Loan Performance dataset, the balance of each loan in LoanPerformance is multiplied by the scale factor in the year in which the loan was securitized.

Appendix Table A-1 presents the data and calculations used to determine the LoanPerformance coverage ratio and scale factor used for weighting each loan in the LoanPerformance dataset. The weighted LoanPerformance data are aggregated by origination year to produce tables 1 through 3 in the body of this release and appendix tables B-1 through B-3.

Appendix Table A-1. Basis for Weighting Mortgages in the Loan Performance Dataset

	(a)	**(b)**	**(c) = (b)/(a)**	**(d) = (a)/(b)**
Issuance Year	**Private-Label Mortgage Securities Issued[1] ($ in Billions)**	**Mortgages in Loan Performance Dataset[2] ($ in Billions)**	**Coverage Ratio of Loan Performance Dataset (Percent)**	**Scale Factor Used for Weighting (Percent)**
2001	$256.1	$221.1	86.3%	115.8%
2002	$372.5	$325.0	87.2%	114.6%
2003	$526.9	$500.6	95.0%	105.3%
2004	$803.6	$720.0	89.6%	111.6%
2005	$1,138.8	$1,041.0	91.4%	109.4%
2006	$1,107.6	$1,046.8	94.5%	105.8%
2007	$664.9	$624.4	93.9%	106.5%
2008	$10.8	$9.7	89.6%	111.6%

Source: FHFA (using data from Inside Mortgage Finance Publications, Inc. and CoreLogic, Inc.)

1 Per Inside Mortgage Finance Publications, Inc. Includes securities backed by loans designated as prime, subprime, Alt-A, and second mortgages 2 Unpaid principal balance at origination of all mortgages in the LoanPerformance dataset, aggregated by issuance year of the securities with which the loans were financed

Calculation of Ever-90-Day Delinquency Rates

Table 3 and appendix tables B-3 and B-6 show ever 90-day delinquency rates. We compute those rates as the proportion of the original principal balance of a group of mortgages that have ever been 90 days past due, in foreclosure processing, or in real estate owned (REO) status through December 2009.

The information available in the LoanPerformance and Historical Loan Performance datasets do not allow us to compute ever 90-day delinquency in exactly the same way across the two datasets. LoanPerformance reports monthly performance data for every loan in the dataset and identifies each loan as current, prepaid, in foreclosure, REO, or past due in each month using the Mortgage Bankers Association's definition of delinquency.8 So, for the LoanPerformance dataset, we identify a loan as 90-plus days delinquent if, for any month through December 2009, its status is 90 days or more delinquent, in foreclosure processing, or REO.

The Historical Loan Performance dataset contains monthly information on the number of days each delinquent mortgage is past due and whether loans are in foreclosure processing. However, mortgages are identified as being in REO only at the end of each quarter. We identify a loan in Historical Loan Performance as having been ever 90-days delinquent if it is 90 or more days past due or in foreclosure in any month through December 2009, or if it is identified as being REO in any quarter through the fourth quarter of 2009.

The ever 90-day delinquency rates shown in Table 3 and appendix tables B-3 and B-6 should be interpreted with caution. Relative comparisons of those rates are likely to be most revealing within origination years for two reasons. First, because ever 90-day delinquency rates can only increase as time passes, rates for identical groups of mortgages that finance properties that experienced identical economic conditions after origination but were originated in different years will be different. Second, low interest rates and rapid house price appreciation allowed many borrowers who took out loans early in the 2001-2008 period to refinance their loans, reducing the ever 90- day delinquency rates of mortgages in those origination years relative to those loans taken out later in the period. In addition, the ever 90-day delinquency rates of groups of loans originated in any year may not correspond to their ultimate default rates and will differ from the rates of loss on the loans.

8 The Mortgage Bankers Association considers a loan delinquent if the payment is not received by the day before the next payment is due. Thus, a loan would be 30 days delinquent if, for example, the March 1 installment had not been paid as of March 31. Similarly, a loan would be 60- or 90-days delinquent if, for example, the February 1 or January 1 installment was unpaid as of March 31.

Treatment of FICO Credit Scores

Loans in the Historical Loan Performance dataset may have multiple FICO credit scores. First, a loan may have multiple borrowers. Second, each borrower may have multiple credit scores for a given date collected from different sources, such as each of the major credit reporting agencies. Third, each Enterprise monitors over time the credit scores of borrowers whose loans it has acquired. To select a credit score for the analysis reported here, we first considered only those scores closest to the origination date. Of those, we chose the lowest credit score associated with the primary borrower. In choosing the lowest credit score, we were conservative. In contrast, the LoanPerformance dataset contains just one credit score for each loan, which LoanPerformance describes as the "FICO score at origination." In both datasets, out-of-range scores (those below 300 or above 850) are treated as missing.

Determining Origination Years

The Historical Loan Performance dataset contains the origination date of each loan, and that date is used to determine the origination year of Enterprise- acquired mortgages. The LoanPerformance dataset contains two variables that can be used to identify the origination year—the origination date and the first payment date. For most loans, these data are reasonably consistent and yield the same origination years. However, for a significant subset of loans, the years recorded for origination and first payment are different, sometimes by as much as eight years.

This data release uses origination date rather than first payment date to determine origination year. The effects of that decision relative to determining origination year using first payment data are presented in Appendix Table A- 2. They include reducing the total number of loans in our study by about 125,000 and the total unpaid principal balance of those loans by approximately $29 billion, or about 1.5 percent. In addition, the numbers of loans and their unpaid principal balances are higher from 2001 through 2004 and lower from 2005 through 2008. The overall ever 90-day delinquency rate across all years remains unchanged, but the pattern of delinquencies is shifted across years.

Appendix Table A-2: Comparison of Annual and Total Loan Counts, Unpaid Principal Balances, and Ever-90-Day Delinquency Rates for Loans Financed with Private-Label Securities When Origination Year is Determined by Origination Date or by First Payment Date

Loan Counts	2001	2002	2003	2004	2005	2006	2007	2008	All Years
Origination Date	517,358	837,221	1,490,041	2,449,189	2,939,734	2,132,378	485,778	592	10,852,291
First Payment	496,547	774,529	1,371,152	2,287,643	2,994,084	2,280,808	769,249	3,270	10,977,282
Difference	(20,811)	(62,692)	(118,889)	(161,546)	54,350	148,430	283,471	2,678	124,991

Unpaid Principle Balance ($ in Billions)	2001	2002	2003	2004	2005	2006	2007	2008	All Years
Origination Date	$66.6	$121.5	$234.4	$432.7	$553.8	$430.3	$104.3	$0.3	$1,943.9
First Payment	$61.6	$112.1	$212.4	$400.1	$563.1	$458.1	$163.6	$1.8	$1,972.6
Difference	-$5.0	-$9.4	-$22.1	-$32.6	$9.3	$27.8	$59.3	$1.5	$28.7

Ever-90-day Delinquency Rates	2001	2002	2003	2004	2005	2006	2007	2008	All Years
Origination Date	20.4%	15.1%	11.8%	15.1%	28.6%	45.1%	42.2%	14.5%	26.8%
First Payment	21.2%	15.7%	11.7%	14.2%	25.8%	43.4%	44.2%	13.5%	26.8%
Difference	0.9%	0.7%	-0.1%	-0.9%	-2.8%	-1.7%	1.9%	-1.0%	0.0%

Source: FHFA (using data from CoreLogic, Inc.)

Appendix B: Description of Data Tables

Weighted Data (Based on Unpaid Principal Balance)

Appendix Table B-1: Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan- to-Value Ratio and Borrower FICO Score at Origination ($ in Billions)

Appendix Table B-2: Share of Single-Family Mortgages from Each Origination Year Acquired by the Enterprises or Financed with Private-Label MBS Represented by Each Combination of Loan-to- Value Ratio and Borrower FICO Score at Origination, 2001-2008 (Percent)

Appendix Table B-3: Ever 90-Day Delinquency Rates of Single- Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination (Percent)

Unweighted Data (Based on Unpaid Principal Balance)

Appendix Table B-4: Single-Family Mortgages Originated from 2001 through 2008 and Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination ($ in Billions)

Appendix Table B-5: Share of Single-Family Mortgages from Each Origination Year Financed with Private-Label MBS Represented by Each Combination of Loan-to-Value Ratio and Borrower FICO Score at Origination, 2001-2008 (Percent)

Appendix Table B-6: Ever 90-Day Delinquency Rates of Single- Family Mortgages Originated from 2001 through 2008 and Financed with Private-Label MBS by Loan-to-Value Ratio and Borrower FICO Score at Origination (Percent)

Unweighted Data (Based on Loan Count)

Appendix Table B-7: Single-Family Mortgages Originated from 2001 through 2008 and Acquired by the Enterprises or Financed with Private-Label MBS by Loan- to-Value Ratio and Borrower FICO Score at Origination (Loan Count)

Appendix Table B-8: Share of Single-Family Mortgages from Each Origination Year Acquired by the Enterprises or Financed with Private-Label MBS Represented by Each Combination of Loan-to- Value Ratio and Borrower FICO Score at Origination, 2001-2008 (Percent of Loan Count)

Each table listed above presents data for single-family mortgages acquired by the Enterprises or financed with private-label mortgage-backed securities (MBS) or asset-backed securities (collectively, private-label MBS) from 2001 through 2008 along five dimensions: funding channel (Enterprise or private- label MBS), payment type (fixed or adjustable rate), origination year, borrower credit score at origination, and loan-to-value (LTV) ratio at origination. Those dimensions were chosen to facilitate comparisons across the funding channels while taking into account factors that affect credit risk. The years 2001 through 2008 encompass the development and peak of the recent single-family housing and mortgage lending boom and the beginning of the subsequent bust. Each table consists of eight pages, one for each origination year. Each page provides data for Enterprise-acquired loans (shaded in blue) in the first panel, data for loans financed with private-label MBS (shaded in red) in the second panel, data for FRMs in the left column (darker shading), and data for ARMs in the right column (lighter shading).

Appendix tables B-1, B-2, and B-3 present data weighted to represent the universe of the designated loan types funded through the secondary market. The weighting makes comparisons across funding channels (that is, Enterprise-acquired and private-label MBS-funded loans) more valid, since without the weighting, loans financed with private-label MBS would be undercounted relative to Enterprise-acquired loans. For Enterprise loans the weighting is equal to one since FHFA has information on virtually all loans funded through Enterprise activities. Therefore, we do not publish both weighted and unweighted data for Enterprise-acquired loans. For loans financed with private-label MBS, the weighting is as described in Appendix A. Because that weighting is complex, we publish both weighted and unweighted data on loans financed with private-label MBS. The unweighted data is presented in appendix tables B-4, B-5, and B-6.

Tables B-3 and B-6 measure the performance of each group of mortgages using the ever 90-day delinquency rates described in Appendix A. The heat map presentation of this information facilitates visual comparison of performance across the dimensions of analysis (funding channel, payment type, origination year, credit score, and LTV ratio). The background colors in tables B-3 and B-6 follow the same rules as the other tables, but the data is shaded as a heat map to show by color the severity of ever 90-day delinquency rates—blue indicates rates near zero percent; yellow indicates rates near 15 percent; and red indicates rates of 100 percent. Thus, blues and greens indicate lower ever 90-day delinquency rates, while yellows, oranges, and reds indicate increasingly higher rates.

Appendix tables B-7 and B-8 present raw, unweighted loan counts. For some research purposes, loan counts may be preferable to dollars loaned. We do not produce weighted loan counts for loans financed with private-label MBS because we do not have an independent count of the numbers of total loans originated and financed with private-label MBS in each year. Therefore, comparisons across the funding channels based on loan counts should be interpreted with caution.

To shed light on the ex ante credit risk of loans and their ex post relative performance across other dimensions, the tables detail LTV ratios and FICO scores using the following groupings:

LTV Ratio Groups FICO Score Groups Missing Missing Less than 60 Less than 620 60 – 69.9 620 – 639.9 70 – 74.9 640 – 659.9 75 – 79.9 660 – 679.9 80 680 – 699.9 80.1 – 84.9 700 – 719.9 85 – 89.9 720 – 739.9 90 740 and over 90.1 – 95.9 95 – 96.9 97 – 104.9 105 and over