

## Updated Assumptions Used to Estimate Single-Family Mortgages Originated and Outstanding, 1990 – 2009 Q1

Except where noted below, all assumptions used to generate estimates of single-family mortgages originated and outstanding are as described in the paper, *Single-Family Mortgages Originated and Outstanding: 1990 – 2004*.

### Originations

Table 1 in that paper was revised and is reprinted below. The primary change is to the estimates from the Federal Housing Finance Agency's Mortgage Interest Rate Survey (MIRS). Previously, that data was based on percent of transactions; the revised estimates are based on transactions weighted by gross dollars. Data has been added through 2009 Q1.

**Table 1**  
**Jumbo Share of Conventional Single Family Mortgage Originations, 1990 – 2009 Q1**  
**(Percent)**

Year	IMF Estimate	MIRS Estimate	HMDA Estimate	FHFA Estimate
1990	23.64	19.01	28.80	23.82
1991	22.50	17.44	26.34	22.09
1992	21.83	17.24	21.28	20.12
1993	22.69	16.96	22.63	20.76
1994	25.69	20.29	25.62	23.87
1995	25.81	19.77	23.37	22.98
1996	26.48	22.39	22.93	23.93
1997	26.07	22.30	26.40	24.92
1998	27.84	21.33	23.40	24.19
1999	27.74	22.80	24.62	25.05
2000	26.97	24.21	26.64	25.94
2001	20.09	20.19	22.52	20.93
2002	19.79	20.80	26.30	22.30
2003	16.48	17.77	20.49	18.25
2004	17.47	24.12	27.83	23.14
2005	18.27	27.41	32.27	25.98
2006	16.11	22.53	32.35	23.66
2007	14.32	19.35	24.55	19.41
2008	6.53	11.19	21.36*	13.03
2009 Q1	5.17	13.39	23.35*	13.97

Source: FHFA based on data from Inside Mortgage Finance Publications, FHFA's MIRS, and FFIEC.

\* 2008 HMDA data will not be released until September 2009. FHFA estimate is based on historical relationship between MIRS, IMF and HMDA from 1990 through 2007.

Table 2 (page 9) was extended for 2005 through 2009 Q1

**Table 2 (Extended)**  
**Adjustable Rate Mortgage (ARM) Share of**  
**Conventional Single-Family Loans, 2005 – 2008**  
**(Percent)**

<b>Year</b>	<b>ARM Share of Non-Jumbo Loans</b>	<b>ARM Share of Jumbo Loans</b>
<b>2005</b>	<b>26.60</b>	<b>63.10</b>
<b>2006</b>	<b>25.13</b>	<b>53.32</b>
<b>2007</b>	<b>11.26</b>	<b>41.78</b>
<b>2008</b>	<b>7.95</b>	<b>27.28</b>
<b>2009 Q1</b>	<b>0.28</b>	<b>8.69</b>

Source: FHFA based on data from FHFA's MIRS.

### **Outstandings**

Data in Table 6 (page 13) was re-estimated for 1998 to 2004. The revised estimates include subprime loans. Estimates for 2005 through 2009 Q1 have been added.

**Table 6 (Revised)**  
**ARMs as a Share of Conventional**  
**Single-Family Mortgages Serviced**  
**(Percent)**

<b>Year</b>	<b>MBA Mortgage Delinquency Survey</b>	<b>FHFA Estimate</b>
<b>1998</b>	<b>14.05</b>	<b>14.05</b>
<b>1999</b>	<b>14.93</b>	<b>14.93</b>
<b>2000</b>	<b>14.06</b>	<b>14.06</b>
<b>2001</b>	<b>13.83</b>	<b>13.83</b>
<b>2002</b>	<b>13.99</b>	<b>13.99</b>
<b>2003</b>	<b>18.79</b>	<b>18.79</b>
<b>2004</b>	<b>23.13</b>	<b>23.13</b>
<b>2005</b>	<b>26.07</b>	<b>26.07</b>
<b>2006</b>	<b>26.04</b>	<b>26.04</b>
<b>2007</b>	<b>23.38</b>	<b>23.38</b>
<b>2008</b>	<b>21.19</b>	<b>21.19</b>
<b>2009 Q1</b>	<b>20.38</b>	<b>20.38</b>

Source: FHFA based on data from MBA

There has been a change in the assumption used to decompose jumbo and non-jumbo conventional mortgages outstanding into ARMs and FRMs. Data for 1990 through 2009 Q1 have been re-estimated assuming that, for each year, the jumbo share of outstanding ARMs is equal to the dollar-weighted average of the jumbo share of ARMs originated in the previous five years. For 1990-1994, only data starting in 1990 is used in the

calculation, resulting in a period of less than five years. Table 7 (below) shows the weighted average jumbo share of ARMs originated in the previous five years and the resulting estimates for jumbo and non-jumbo ARMs outstanding.

**Table 7 (Revised)**  
**5-Yr Moving Average Jumbo Share of Conventional ARM Originations and**  
**Jumbo Share of Outstanding Conventional ARMs**

<b>Year</b>	<b>5-Yr Moving Average Jumbo Share of ARM Originations</b>	<b>FHFA Estimate: Jumbo Share of Outstanding ARMs</b>	<b>FHFA Estimate: Jumbo ARMs Outstanding</b>	<b>FHFA Estimate: Non-Jumbo ARMs Outstanding</b>
<b>1990</b>	<b>34.5%</b>	<b>34.5%</b>	<b>\$75,250</b>	<b>\$142,866</b>
<b>1991</b>	<b>34.0%</b>	<b>34.0%</b>	<b>\$79,147</b>	<b>\$153,347</b>
<b>1992</b>	<b>33.7%</b>	<b>33.7%</b>	<b>\$84,337</b>	<b>\$165,807</b>
<b>1993</b>	<b>35.8%</b>	<b>35.8%</b>	<b>\$141,962</b>	<b>\$254,585</b>
<b>1994</b>	<b>37.3%</b>	<b>37.3%</b>	<b>\$156,460</b>	<b>\$262,693</b>
<b>1995</b>	<b>38.7%</b>	<b>38.7%</b>	<b>\$179,438</b>	<b>\$283,794</b>
<b>1996</b>	<b>40.6%</b>	<b>40.6%</b>	<b>\$199,733</b>	<b>\$291,851</b>
<b>1997</b>	<b>42.5%</b>	<b>42.5%</b>	<b>\$182,894</b>	<b>\$247,498</b>
<b>1998</b>	<b>45.6%</b>	<b>45.6%</b>	<b>\$233,229</b>	<b>\$278,410</b>
<b>1999</b>	<b>48.5%</b>	<b>48.5%</b>	<b>\$290,530</b>	<b>\$308,105</b>
<b>2000</b>	<b>51.8%</b>	<b>51.8%</b>	<b>\$319,242</b>	<b>\$297,278</b>
<b>2001</b>	<b>54.2%</b>	<b>54.2%</b>	<b>\$369,362</b>	<b>\$311,811</b>
<b>2002</b>	<b>55.4%</b>	<b>55.4%</b>	<b>\$441,832</b>	<b>\$355,274</b>
<b>2003</b>	<b>52.4%</b>	<b>52.4%</b>	<b>\$646,444</b>	<b>\$586,417</b>
<b>2004</b>	<b>49.9%</b>	<b>49.9%</b>	<b>\$881,652</b>	<b>\$886,143</b>
<b>2005</b>	<b>47.6%</b>	<b>47.6%</b>	<b>\$1,093,563</b>	<b>\$1,202,784</b>
<b>2006</b>	<b>43.6%</b>	<b>43.6%</b>	<b>\$1,120,918</b>	<b>\$1,452,577</b>
<b>2007</b>	<b>42.8%</b>	<b>42.8%</b>	<b>\$1,055,310</b>	<b>\$1,410,368</b>
<b>2008</b>	<b>41.3%</b>	<b>41.3%</b>	<b>\$896,531</b>	<b>\$1,274,246</b>
<b>2009 Q1*</b>	<b>41.3 %</b>	<b>41.3 %</b>	<b>\$857,277</b>	<b>\$1,218,454</b>

Source: FHFA based on data from Inside Mortgage Finance Publications, FHFA's MIRS, and FFIEC.

\* 2009 Q1 estimate assumed to be 5-yr moving average through year-end 2008.