

Highlights: 2010 Home Mortgage Disclosure Data

1. Introduction

The last five years have seen tremendous changes in the volume and composition of mortgage lending in the United States. The impact of Dodd-Frank legislation on the concentration of mortgage lending, ongoing debate on what role the Government Sponsored Enterprises (GSEs) should play in the mortgage markets, and more general questions about the long term viability of the 30-year fixed rate mortgage provide an interesting backdrop to looking at recent mortgage market data. The mortgage application level data collected annually as prescribed in the Home Mortgage Disclosure Act of 1975 (HMDA) by the Federal Financial Institutions Examination Council provides an opportunity to observe trends in mortgage lending over the past five years. As has been done each year since 2005, the Federal Reserve Board (FRB) has prepared a lengthy article describing the 2010 HMDA data.¹ In this paper we present statistics from the 2010 data, as well as provide an examination of several important trends evident in the HMDA data during the period 2006-2010. Finally, we examine the trends in lending by race and ethnicity nationally and within selected geographies.

2. Overall Market

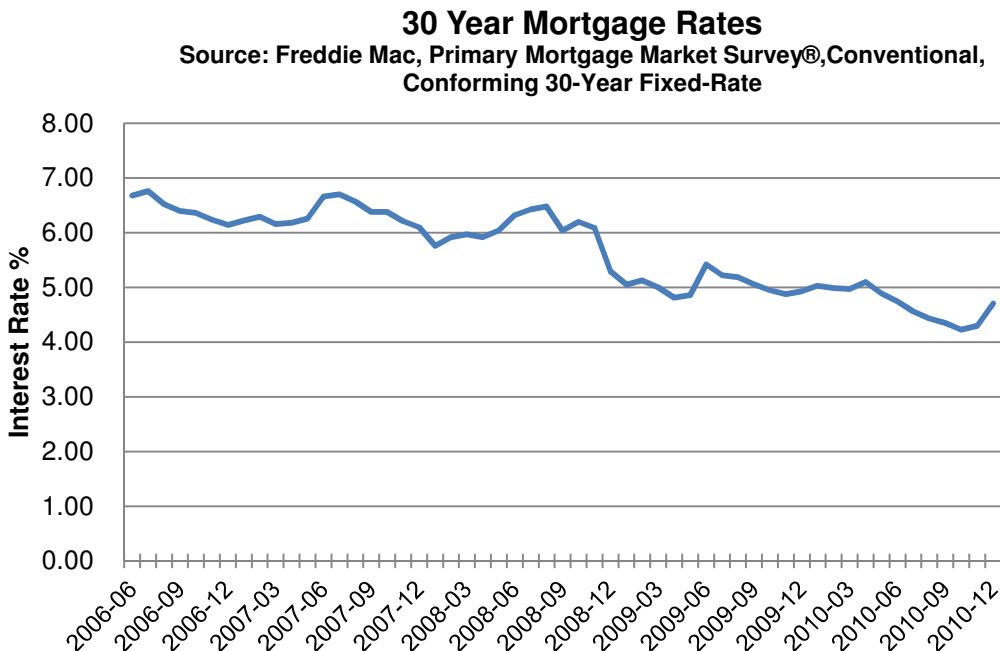
At the national level, 2010 saw the continuation of a number of trends in the residential mortgage market. Overall originations were down approximately 12% to 7.4 million from 8.4 million in 2009; and 42% from a high of 12.8 million in 2006. Refinance activity continued to outpace purchase money mortgages, reflecting continued low interest rates and tighter lending standards relative to 2006.²

Table 1: Total Originations by Purpose, 2006-2010			
Year	Total Purchase	Total Refinance	Total Originations
2006	6,726,281	6,082,128	12,808,409
2007	4,641,158	4,809,508	9,450,666
2008	3,073,530	3,474,817	6,548,347
2009	2,673,938	5,765,787	8,439,725
2010	2,462,720	4,969,622	7,432,342
Source: 2006-2010 HMDA Data			

¹ See Avery, Robert B., Neil Bhutta, Kenneth P. Brevoort and Glenn B. Canner, September 22, 2011, "The Mortgage Market in 2010: Highlights from the Data Reported under the Home Mortgage Disclosure Act," forthcoming, *Federal Reserve Bulletin*, Volume 97, http://www.federalreserve.gov/pubs/bulletin/2011/pdf/2010_HMDA.pdf

² According to Freddie Mac's 10K report for 2010, the average credit score of credit guaranteed loans originated was 712 in 2006 and 707 in 2007. By 2009 and 2010 the average score was 755. In 2006, the weighted average original LTV was 73% and in 2010 the same weighted average original LTV was just 67%. See the 2008 10K at http://www.freddiemac.com/investors/er/pdf/10k_031109.pdf and the 2010 10K at http://www.freddiemac.com/investors/er/pdf/10k_022411.pdf.

Interest rates, as reflected in Freddie Mac’s Primary Mortgage Market Survey for 30-year fixed rate mortgages, ranged from a high of 5.10 in April 2010 to a low of 4.23 in October 2010.³ Despite interest rates being slightly lower in 2010 than in 2009 (when rates ranged from 5.42 to 4.81), refinance activity slipped from 68 percent of total activity in 2009 to 67 percent in 2010.



HMDA-reportable originations during 2010 were dominated by first lien mortgages with a volume of 7.3 million loans. With the decline in house prices and the contraction of non-agency lending in 2007 and 2008, the volume of HMDA second lien mortgages continued its steep post-2006 decline registering only 137,811 funded loans by 2010, at just 1.9 percent of mortgage activity as compared to 19.4 percent of total activity in 2006.

Table 2: Originations Lien Status, 2006-2010			
Year	Total First Lien	Total Second Lien	Total Originations
2006	10,321,751	2,486,658	12,808,409
2007	8,183,679	1,266,987	9,450,666
2008	6,220,812	327,535	6,548,347
2009	8,272,072	167,653	8,439,725
2010	7,294,531	137,811	7,432,342

Source: 2006-2010 HMDA Data

The government and government sponsored agencies continue to be instrumental in residential mortgage markets. As displayed in Table 3, Fannie Mae, Freddie Mac (the GSEs) and Ginnie Mae (securitizing FHA loans originated) and Farmer Mac combine for 41% of the market in 2010. In 2006, when the subprime market’s share of originations was at its height, the agency share of the market had declined to

³ <http://www.freddiemac.com/pmms/pmms30.htm>

just 18%. The last two years have seen a significant resurgence in agency activity. While loans sold directly to Freddie Mac and Fannie Mae have a share in excess of 40%, revised estimates by the FRB indicate the true share might be over 55%.⁴

Table 3: Agency Purchasers, 2006-2010							
Year	Total Originations	Agency Purchases					Agency Share of Total Originations
		Fannie Mae	Ginnie Mae	Freddie Mac	Farmer Mac	Total Agency	
2006	12,808,409	1,305,502	166,235	807,401	215	2,279,353	18%
2007	9,450,666	1,361,667	199,682	883,548	275	2,445,172	26%
2008	6,548,347	1,202,226	525,534	747,292	167	2,475,219	38%
2009	8,439,725	1,703,705	669,411	1,396,690	342	3,770,148	45%
2010	7,432,342	1,428,830	582,363	1,045,240	124	3,056,557	41%

Source: 2006-2010 HMDA Data

FHA and VA programs also continue to play a heightened role in the market. For purchase originations, FHA/VA lending accounted for approximately 45% of purchase originations and 24% of first-lien originations.

Table 4: FHA/VA Originations by Purpose, 2006-2010			
Year	FHA/VA		
	Purchase	Refinance	Total
2006	395,460	122,567	518,027
2007	394,902	196,847	591,749
2008	919,578	525,254	1,444,832
2009	1,207,033	1,002,513	2,209,546
2010	1,082,884	659,420	1,742,304

Source: 2006-2010 HMDA Data

3. Market Concentration

The trend towards higher market concentration by the largest lenders continued in 2010. The top 10 mortgage originators accounted for 38% of all originations during the year; up from 34% in 2006. After a number of years of considerable change in the composition of the top 10 originators resulting from acquisitions, bankruptcies, etc., the top 10 originators were largely unchanged from 2009 to 2010, although their rank order did change.⁵

⁴ Table 3 likely underrepresents the share of Freddie Mac and Fannie Mae purchases, as noted in Avery (2010) at 25. Either the loans might be sold to the GSEs in subsequent years (and not in the current HMDA) or they may be sold through other lenders and later receive a credit wrap from the GSEs.

⁵ Citibank re-entered the top 10 during 2010, displacing Provident Funding. In 2007, concentration among the top 10 lenders reached 44%, dominated by some of the largest lenders in the subprime market segment including Countrywide, Washington Mutual and Wells Fargo.

Table 5: Top 10 Mortgage Lenders, 2010					
Lender	Count of Originations	Share of Originations	Count with Reported Rate Spread	Share of Originations with Reported Rate Spread	Average Level of Reported Rate Spreads
WELLS FARGO & CO	1,048,154	14%	12,095	1%	2.24
BANK OF AMER CORP	581,267	8%	9,137	2%	2.15
JPMORGAN CHASE & CO	315,913	4%	2,391	1%	1.87
U S BC	175,596	2%	8,447	5%	3.38
QUICKEN LOANS, INC.	134,640	2%	452	0%	1.68
CITIGROUP	132,923	2%	3,526	3%	5.64
FIFTH THIRD BC	115,087	2%	571	0%	1.73
SUNTRUST BK	99,870	1%	193	0%	2.21
FLAGSTAR BK FSB	98,186	1%	1,788	2%	1.73
METLIFE	88,614	1%	47	0%	1.70
Total Top 10	2,790,250	38%	38,647	1%	2.71
All Other Lenders	4,642,092	62%	180,996	4%	3.23
Total	7,432,342	100%	219,643	3%	3.14

Source: 2010 HMDA Data

4. Regional Markets

At the regional level, several interesting trends were evident over the period from 2006 to 2010. While overall origination volume was down in all nine regions reported by HMDA, the South Atlantic and Mountain regions fell by 57% and 51%, respectively; nearly twice the rate of the declines in the West North Central and New England regions, at 17% and 23% respectively.

Table 6: Originations by Region and Year ⁶						
Region	Year					Change from 2006-2010
	2006	2007	2008	2009	2010	
New England	573,403	425,793	314,877	488,105	439,405	-23%
Mid Atlantic	1,261,249	980,943	680,705	860,588	755,704	-40%
East North Central	1,758,798	1,348,676	1,010,802	1,370,098	1,211,481	-31%
West North Central	727,048	593,475	481,654	678,055	603,383	-17%
South Atlantic	3,023,238	2,120,598	1,347,380	1,549,837	1,309,868	-57%
East South Central	586,244	511,914	400,161	461,747	389,451	-34%
West South Central	1,070,633	870,978	650,511	738,551	670,298	-37%
Mountain	1,288,567	885,291	590,081	762,319	636,466	-51%
Pacific	2,401,134	1,619,705	964,935	1,406,579	1,352,417	-44%
Total	12,690,314	9,357,373	6,441,106	8,315,879	7,368,473	-42%

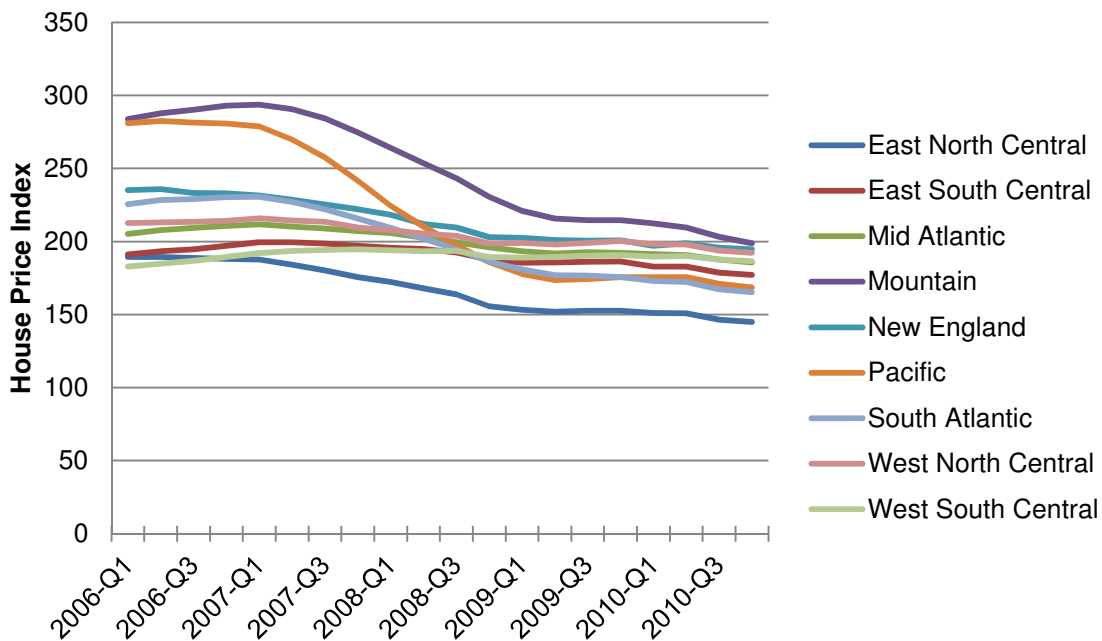
Source: 2006-2010 HMDA Data

⁶ This table excludes loans from Puerto Rico and where the State of origination was missing.

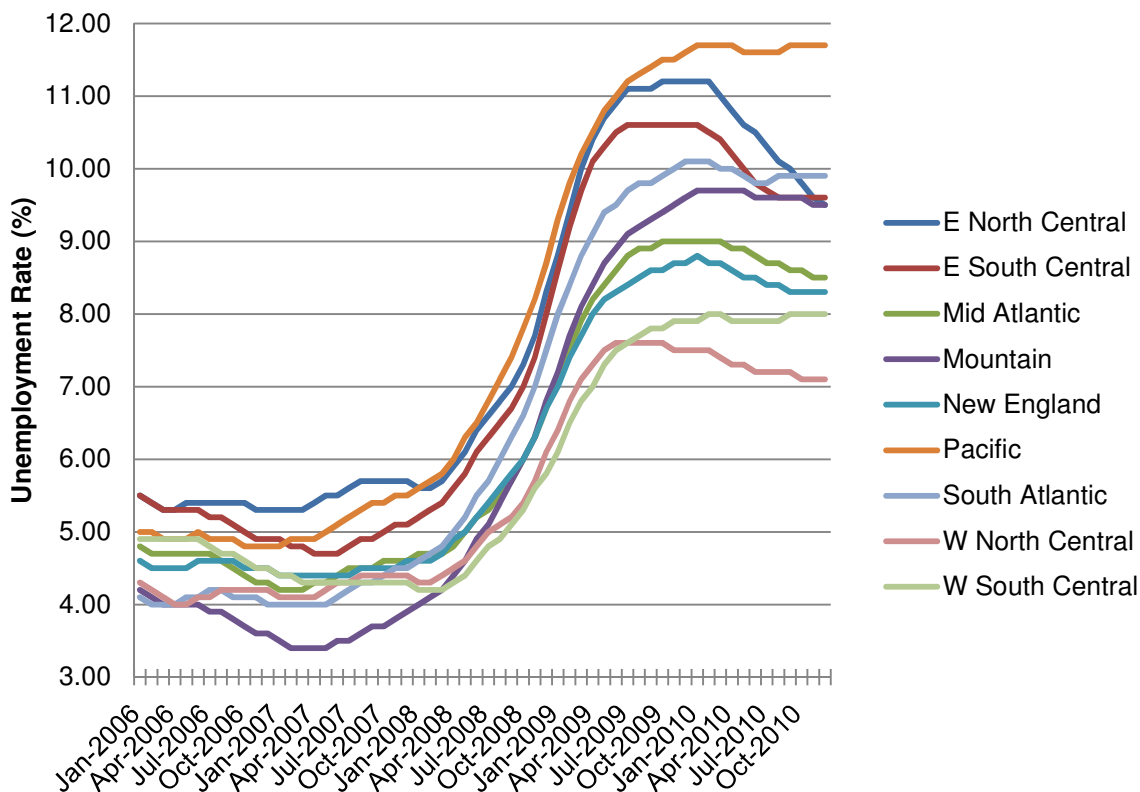
The differences in changes in origination volume by region during the period may be explained, in part, by changes in home prices and unemployment. The following two charts present the Federal Housing Finance Agency's house price index and Bureau of Labor Statistics unemployment rates, respectively, over the period 2006-2010 for the same nine regions. It appears that regions with the largest declines in mortgage originations, South Atlantic and Mountain, appear to have relatively larger declines in the housing prices and relatively larger increases in unemployment during the period. Conversely, the regions with the smallest declines in mortgage originations, West North Central and New England, also enjoyed relatively lower declines in housing prices and relatively smaller increases in unemployment during the period.

Census Region Seasonally Adjusted Quarterly House Price Indexes (2006-2010)

Source: Federal Housing Finance Agency, Expanded Data Indexes



Unemployment Rate 2006-2010 by Census Region Seasonally Adjusted; Source: Bureau of Labor Statistics



Additionally, the increased prominence of FHA loans was not reflected equally across the nine regions. The volume of FHA originations in the Pacific region increased dramatically between 2006 and 2010, from 17,341 to 226,809. As a result, the Pacific region moved from 8th in FHA origination volume in 2006 to the 2nd highest ranking region in 2010, lagging in volume behind only the South Atlantic region.

Region	Year					Change from 2006-2010
	2006	2007	2008	2009	2010	
New England	9,896	12,857	42,718	73,302	57,836	484%
Mid Atlantic	36,406	43,751	109,159	176,638	136,167	274%
East North Central	72,061	84,208	201,511	279,498	194,557	170%
West North Central	29,980	34,664	97,560	154,226	113,520	279%
South Atlantic	78,618	100,667	267,640	358,191	273,129	247%
East South Central	31,117	36,785	83,515	108,447	84,264	171%
West South Central	66,687	70,174	139,923	192,212	158,672	138%
Mountain	39,941	48,774	147,658	215,683	164,200	311%
Pacific	17,341	23,918	141,435	261,449	226,809	1208%
Total	382,047	455,798	1,231,119	1,819,646	1,409,154	269%

Source: 2006-2010 HMDA Data

This may reflect an underlying demand for mortgages requiring relatively smaller down payments (higher loan-to-value ratios) and a general decrease in the supply of mortgage alternatives other than FHA that could meet this need.

5. Denial Rates

Interestingly, overall denial rates in 2010 were at their lowest levels of the last five years in nearly every region. For those borrowers who complete HMDA loan applications, a lower percentage is denied. This may reflect, however, that borrowers are discouraged from applying for loans either because their homes are worth less than the existing mortgages so that refinance options are not available or because their creditworthiness would not meet current standards for successful originations. The current change in the Administration's Home Affordable Refinance Program (HARP) is meant to address the first of these issues.⁷

Table 8: Denial Rates by Region and Year - All Applicants					
Region	2006	2007	2008	2009	2010
New England	26%	29%	27%	20%	19%
Mid Atlantic	29%	32%	31%	25%	24%
East North Central	30%	32%	30%	20%	22%
West North Central	27%	28%	25%	18%	18%
South Atlantic	27%	32%	32%	24%	24%
East South Central	29%	31%	30%	23%	26%
West South Central	28%	30%	29%	23%	23%
Mountain	25%	30%	30%	21%	20%
Pacific	26%	31%	31%	21%	20%

Source: 2006-2010 HMDA Data

This pattern of declining denial rates was also observed in the denial rates for ethnic and racial groups. Denial rates in 2010 were at the lowest observed during the period for each group.⁸ This should not, however, be interpreted to mean that access for credit has improved for these targeted minority groups.⁹

Table 9: Denial Rates by Race/Ethnicity and Year					
Race/Ethnicity	2006	2007	2008	2009	2010
African American	37%	45%	47%	36%	35%
Hispanic	30%	38%	41%	30%	28%
Asian	22%	26%	26%	20%	19%
Non-Hispanic White	23%	26%	26%	19%	19%

Source: 2006-2010 HMDA Data

After peaking in 2007 and 2008, denial rates on conventional mortgage applications in 2010 returned to levels below 2006 for both purchase and refinance applications, albeit on significantly lower overall application volume.

⁷ See details of the new program at <http://www.fhfa.gov/webfiles/22721/HARP%20release%20102411%20Final.pdf>

⁸ The denial rates by race/ethnicity and by region are presented in the Appendix.

⁹ See Courchane, Marsha J. and Peter M. Zorn, "The Differential Access to and Pricing of Mortgages: 2004 – 2009," Forthcoming, *Real Estate Economics*, 2011.

Table 10: Denial Rates by Loan Purpose by Year			
Year	Conventional		
	All	Purchase	Refinance
2006	28%	20%	34%
2007	32%	21%	39%
2008	31%	21%	37%
2009	22%	20%	23%
2010	22%	19%	22%

Source: 2006-2010 HMDA Data

Denial rates alone, however, do not likely tell the whole story. In comparison to 2006, lending standards in 2010 were relatively tight and overall consumer credit worthiness was lower due to unemployment levels, declining wages, and insufficient time to recover from derogatory credit experiences. A number of these factors are examined by Brevoort and Cooper.¹⁰ Given this environment, it is likely that lower denial rates were driven, in part, by self-selection out of the market by at least some less-qualified consumers.

Denial rates on FHA loan applications in 2010, while below the 2008 peak, were still above 2006 levels. Perhaps this was to be expected given the significant increase in volume of FHA loan applications during the period. Further, the denial rates on FHA purchase applications during the period were both lower and less varied than denial rates on FHA refinance applications.

Table 11: Denial Rates by Loan Purpose by Year			
Year	FHA		
	All	Purchase	Refinance
2006	17%	15%	22%
2007	25%	19%	32%
2008	30%	18%	42%
2009	25%	16%	33%
2010	25%	17%	36%

Source: 2006-2010 HMDA Data

Denial rates by race/ethnicity demonstrated a number of thought provoking trends. Overall denial rates in 2010, as shown in Table 9, were at their lowest levels of the last five years for African American, Hispanic, Asian and Non-Hispanic White applicants. This finding was consistent across nearly all regions for each of these race/ethnicity groups (see Appendix 1). Also consistent with the overall results, denial rates peaked in 2007 and 2008 for each of these race/ethnicity groups.

Denial rates in 2010 demonstrated a relatively high level of intra-race/ethnicity group variability (column variability) across the Census regions (see Table 12). For example, African American loan applicants experienced widely divergent denial rates across the regions; from a high of 41% in the East South Central region to a low of 24% in the Mountain region. Hispanic, Asian and Non-Hispanic White applicants experienced similar intra-group variability across regions. Additionally, denial rates in 2010

¹⁰ "Foreclosure's Wake: The Credit Experiences of Individuals Following Foreclosure" Kenneth P. Brevoort, Senior Economist, Federal Reserve Board, and Cheryl R. Cooper, Research Associate II, The Urban Institute. Available at: <http://www.federalreserve.gov/pubs/feds/2010/201059/201059pap.pdf>

displayed significant variability across race/ethnicity groups: ranging from 35% for African American applicants to 19% for Asian applicants.

Table 12: 2010 Denial Rates by Race/Ethnicity and Region							
Region	African American	Hispanic	American Indian	Pacific Islander	Asian	Other Race	Non-Hispanic White
New England	32%	28%	33%	25%	17%	25%	18%
Mid Atlantic	38%	33%	38%	33%	23%	31%	21%
East North Central	39%	31%	35%	29%	19%	31%	19%
West North Central	32%	25%	31%	22%	18%	25%	16%
South Atlantic	35%	30%	35%	28%	20%	29%	21%
East South Central	41%	29%	33%	28%	22%	35%	23%
West South Central	35%	31%	30%	25%	21%	29%	20%
Mountain	24%	26%	31%	22%	20%	28%	18%
Pacific	27%	24%	25%	23%	17%	25%	18%
All Regions	35%	28%	31%	25%	19%	28%	19%

Source: 2010 HMDA Data

While the researchers at the Federal Reserve noted in their December 2010 FRB Bulletin that “the HMDA data do not include sufficient information to determine the extent to which these differences stem from illegal discrimination” this inter-group variability in denial rates was observed in the earlier years of the study period (see Appendix 1).¹¹ Inter-group variability reflects the variation within a region across the racial and ethnic groups (row variability).

While many of these patterns were consistent within and across race/ethnicity groups, an area of divergence can be seen in the comparison of Conventional and FHA denial rates by race/ethnicity group. African American, Hispanic and American Indian applicants experienced lower intra-group denial rates on FHA applications as compared with Conventional Conforming applications, while the opposite was true for Asian, Non-Hispanic White, and Other applicants.

Table 13: Denial Rates by Loan Type and Race/Ethnicity, 2010			
Race/Ethnicity	FHA	Conventional Conforming	All
African American	33%	41%	36%
Hispanic	25%	31%	28%
American Indian	27%	34%	31%
Pacific Islander	25%	26%	25%
Asian	23%	18%	19%
Other Race	39%	26%	28%
Non-Hispanic White	22%	19%	20%
All	25%	21%	22%

Source: 2010 HMDA Data

¹¹ “The 2009 HMDA Data: The Mortgage Market in a Time of Low Interest Rates and Economic Distress”, Robert B. Avery, et. al., *Federal Reserve Bulletin*, December 2010. Available at: http://www.federalreserve.gov/pubs/bulletin/2010/pdf/2009_HMDA_final.pdf

6. Conclusions

The 2010 HMDA data reflects a number of changes important to residential mortgage markets. These include the following:

- Increased concentration among top lenders
- Increased importance of agency originations (including conventional, conforming products securitized through Freddie Mac and Fannie Mae) and FHA products securitized through Ginnie Mae
- Tightened underwriting standards (including higher qualifying credit scores and lower average loan-to-value ratios)
- Potential self-selection out of the mortgage markets by consumers who do not believe they could meet current standards for either refinance loans (due, perhaps to having outstanding unpaid principal balances in excess of their home's value or due, perhaps to having creditworthiness below current acceptable underwriting guidelines)
- Significant reduction in the availability of second lien loans
- Significant reductions in private market securitizations
- The intra-group and inter-group differences in raw denial rates by race/ethnicity groups suggests continued regulatory focus on fair lending issues.

In conclusion, there are many lessons to be learned from observation of market trends in residential mortgage lending. The problems observed in housing markets over the past few years have not dissipated. Delinquencies and foreclosures remain high. Litigation costs remain significant. Borrowers have lost not only significant wealth due to falling house prices, but have also lost confidence in their ability to improve their economic situation. As noted recently by Lawrence Summers, "Losses on owner-occupied housing have reduced consumers' wealth by more than \$7 trillion over the past five years, and uncertainty about homes' future value as well as the inability to refinance at reasonable rates deters household outlays on durable goods. The continuing weakness of the housing sector is an important source of risk for major U.S. financial institutions, significantly raising the costs of the loans they offer."¹²

Continuing to analyze these markets, to learn from the past, and to make decisions that improve the future are important goals for all of us.

For assistance with analysis of HMDA data, mortgage origination, pricing, or servicing data, compliance or credit risk issues in either regulatory or litigation disputes, please contact the Financial Economics Practice of Charles River Associates:

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¹² See Lawrence Summers, *The Washington Post*, October 24, 2011, "How to Stabilize the Housing Market."

Appendix 1: Denial Rates by Race/Ethnicity and Region by Year

African American										
Year	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	All Regions
2006	37%	37%	42%	41%	35%	41%	39%	33%	35%	37%
2007	45%	45%	49%	46%	43%	45%	45%	42%	43%	45%
2008	46%	48%	51%	48%	45%	48%	45%	42%	47%	47%
2009	34%	40%	38%	33%	36%	39%	37%	28%	32%	36%
2010	32%	38%	39%	32%	35%	41%	35%	24%	27%	35%
Hispanic										
Year	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	All Regions
2006	34%	31%	32%	31%	27%	26%	33%	31%	30%	30%
2007	43%	39%	38%	35%	37%	31%	38%	38%	40%	38%
2008	43%	41%	41%	35%	42%	34%	40%	41%	41%	41%
2009	30%	34%	31%	26%	32%	28%	33%	28%	28%	30%
2010	28%	33%	31%	25%	30%	29%	31%	26%	24%	28%
Asian										
Year	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	All Regions
2006	21%	23%	22%	25%	20%	19%	18%	21%	23%	22%
2007	23%	25%	24%	29%	25%	22%	23%	29%	26%	26%
2008	22%	27%	26%	27%	28%	26%	25%	31%	25%	26%
2009	18%	23%	19%	19%	22%	21%	20%	22%	19%	20%
2010	17%	23%	19%	18%	20%	22%	21%	20%	17%	19%
Non-Hispanic White										
Year	New England	Mid Atlantic	East North Central	West North Central	South Atlantic	East South Central	West South Central	Mountain	Pacific	All Regions
2006	22%	25%	25%	23%	21%	24%	22%	21%	21%	23%
2007	25%	27%	27%	25%	25%	26%	23%	25%	25%	26%
2008	24%	28%	26%	23%	26%	26%	23%	26%	26%	26%
2009	18%	22%	18%	16%	21%	20%	18%	19%	19%	19%
2010	18%	21%	19%	16%	21%	23%	20%	18%	18%	19%

Source: 2006-2010 HMDA Data

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